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PREFACE

For the second decade in a row, the University of Criminal Investigation and Police Studies in Belgrade organized the international scientific conference "Archibald Reiss Days" in November 2023. This thirteenth gathering of eminent experts in the fields of law, criminal investigation, police and security sciences, informatics, and forensic engineering is one of the most important scientific events at the University of Criminal Investigation and Police Studies, in the Republic of Serbia, and beyond.

The Conference featured 42 papers by 86 authors from eight countries: Bosnia and Herzegovina, Hungary, North Macedonia, Romania, the Russian Federation, the Slovak Republic, Sweden, and Serbia.

Within the general theme of the Conference titled "Investigating and Proving Contemporary Forms of Crime: Scientific Approach," the presented papers dealt with current socio-political topics, topics related to the development of criminal investigation disciplines, analyses of national and international legal regulations, issues of organization and jurisdiction of the police and police organizational structures and standards, political and criminal law topics, as well as topics related to the development and advancement of modern IT technologies and forensic sciences.

Introductory papers were organized in such a way that they reflect a multidisciplinary approach, which is one of the conference's traditional characteristics. Keynote speakers included eminent university professors from the Republic of Serbia and abroad, Constitutional Court judges, ministers in the Government of the Republic of Serbia, and researchers with decades of experience and long-term participation in both the organization and implementation of the "Archibald Reiss Days" Conference.

The Conference Proceedings is a unique document that speaks to the relevance and quality of both the topics and the presenters. In light of the modern challenges of democratic society and the general state of criminality, it should make a significant contribution to the development of scientific and professional thought in the aforementioned scientific fields.

The Scientific Committee hopes that the conference will continue to exist in its traditional form while also making improvements in the future. They express the desire for previous authors to continue being the main contributors to the conference, emphasizing the need to attract a greater number of scholars and practitioners from various scientific disciplines that are, in both a narrower and broader sense, related to the general theme of the conference.

President of the Scientific Committee

Prof. Ivana Bodrožić, PhD

CRIMINALIZATION OF ASSISTING SUICIDE VIEWED THROUGH THE PRISM OF THE RIGHT TO LIFE

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Introduction

The right to life is the most fundamental right guaranteed by the Constitution of the Republic of Serbia and a number of international treaties. It belongs to the range of human rights that cannot be derogated from (Kolarić, 2008:11). However, there are inherent limitations to the right to life. Therefore, the dilemma arises whether the right to life, one of the non-derogatory rights in which certain inherent limitations are incorporated, is of an absolute character. If deprivation of life is allowed in some situations, does that, by the nature of things, deny it its absolute character? There are numerous decisions of the European Court of Human Rights that we will deal with on this occasion and try to determine how a right that is limited by its very definition (Article 2, paragraph 2 of the ECHR) can be of an absolute nature. A special place will be taken by the analysis of the decision of the Federal Constitutional Court of Germany, in which we find that the criminalization of assisting suicide is unconstitutional. Also, of great importance is the ECtHR decision *Mortier v. Belgium*, which for the first time examined whether the act of euthanasia was in accordance with the ECHR and where the nature and scope of the state's positive obligations (material and procedural) based on Article 2 were clarified in a very specific context.

Article 24 of the Constitution of the Republic of Serbia (Constitution of the Republic of Serbia, Official Gazette of the Republic of Serbia, Nos. 98/2006, 115/2021), titled "Right to life," emphasises that human life is inviolable. Paragraph 2 states that there shall be no death penalty in the Republic of Serbia, and Paragraph 3 expresses that cloning of human beings shall be prohibited. Article 23, titled "Dignity and free development of individuals," proclaims that human dignity is inviolable and everyone shall be obliged to respect and protect it. It also stresses that everyone shall have the right to the free development of their personality if this does not violate the rights of others guaranteed by the Constitution.

Article 2 of the European Convention for the Protection of Human Rights and Fundamental Freedoms (Law on the Ratification of the European Convention for the Protection of Human Rights and Fundamental Freedoms, Official Gazette of Serbia and Montenegro – International Agreements, Nos. 9/2003, 5/2005, and 7/2005-corr., and Official Gazette of the Republic of Serbia – International Agreements, Nos. 12/2010 and 10/2015) guarantees the right to life. Also significant are Protocols No. 6, concerning the abolition of the death penalty in times of peace, and No. 13, concerning the abolition of the death penalty in all circumstances. It is stressed that everyone's right to life is protected by the law. No one can be deprived of life intentionally except in the execution of a sentence by a court following one's conviction of a crime for which this penalty is provided by law.

This provision is amended by Protocols Nos. 6 and 13 to the ECHR. In accordance with Article 1 of Protocol 6, titled "Abolition of the death penalty," the death penalty is abolished. No one shall be condemned to such penalty or executed. In accordance with Article 2, "Death penalty in time of war," a

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state may make provision in its law for the death penalty concerning acts committed in time of war or of imminent threat of war, and such penalty can only be applied in the instances laid down in the law and in accordance with its provisions. The state shall inform the Secretary General of the Council of Europe of the relevant provisions of that law.

In accordance with Article 1 of Protocol No. 13, titled "Abolition of the death penalty," the death penalty is abolished. No one can be condemned to such penalty or executed. Namely, the member states of the Council of Europe, convinced that everyone's right to life is a basic value in a democratic society and that the abolition of the death penalty is essential for the protection of this right as well as for the full recognition of the inherent dignity of all human beings, wishing to strengthen the protection of the right to life guaranteed by the Convention for the Protection of Human Rights and Fundamental Freedoms signed in Rome on 4 November 1950 as well as noting that Protocol No. 6 to the Convention, concerning the abolition of the death penalty, signed in Strasbourg on 28 April 1983, does not exclude the death penalty in respect of acts committed in time of war or of imminent threat of war, resolved to take the decisive step in order to abolish the death penalty in all circumstances and agreed on Protocol No. 13.

This right is limited by its own definition. Article 2 Paragraph 2 envisages that deprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is absolutely necessary (in defence of any person from unlawful violence; in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; in action lawfully taken for the purpose of quelling a riot or insurrection). Article 8 of the ECHR guarantees the right to respect for private and family life. It emphasises that everyone has the right to respect for his private and family life, his home, and his correspondence. It also stresses that there shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, protection of health or morals, or protection of the rights and freedoms of others.

The ECtHR practice recognises three fundamental obligations of a state concerning the protection provided by Article 2. These are the state's obligation to refrain from deprivation of life (negative obligation), the state's obligation to take all reasonable measures within its jurisdiction with a view to protecting a person's right to life, not only from the injuries inflicted by the state and its officials but also from those inflicted by private persons (positive obligation), and the state's obligation to carry out an efficient and purposeful investigation in the cases of deprivation of life in order to clarify the specific event and punish the perpetrators. Carrying out an efficient and purposeful investigation is of special importance in cases involving forced disappearances and/or persons deprived of freedom by the state who subsequently went missing or were found dead. The right to life also protects individuals from being exiled or extradited to a country where they can be faced with a serious threat of injury to their right to life (Grdinić, 2006:1089).

The European Court of Human Rights takes the stance that the right to life is one of the "inviolable, inalienable" human rights that are guaranteed to everyone, in all circumstances and all places, and that it cannot be subjected to any derogation. It is one of the rights through which freedom is established and one that entails the state's positive obligation to take all necessary measures in order to protect the life of a person under its jurisdiction (LCB v. The United Kingdom, 9 June 1998, Paragraph 36).

This positive obligation of the state also includes substantive and procedural legal aspects.

From a substantive legal perspective, the positive obligation of the state is to take all necessary measures with a view to preventing violent death, which entails the establishment of a legal framework aimed at providing efficient protection from threats to the right to life (Osman v. The United Kingdom, 28 October 1998, Paragraphs 115 and 116).

Efficient criminal and other legal norms are therefore necessary in order to provide discouragement from committing criminal offences against life, and so are procedural mechanisms for the prevention, suppression, and punishment of any violation of these norms (Streletz, Kessler and Krenz v. Germany, 22 March 2001, Paragraph 86).

This obligation extends to taking preventive measures for the protection of life, especially in respect of dangerous activities that potentially pose a risk to life (Oneryildiz v. Turkey, 30 November 2004, Paragraph 107).

From the procedural legal perspective, the positive obligation of the state in the situation when a person is deprived of life is to carry out an independent and efficient investigation in order to clarify the specific event and punish its perpetrators, which entails the existence of an efficient judicial system within which the procedure, of a character not necessarily criminal, will be carried out (McKerr v. The United Kingdom, 4 May 2001, Paragraph 111).

New, pioneering endeavours in Strasbourg legal reasoning have caused a serious dilemma in respect of understanding the right to life as an absolute right. Bearing in mind that these verdicts pertain to the field of criminal legislation, we insist on the necessity of reassessing the claim that the protection of the right to life in criminal law is independent, complete, and primary, and emphasising that the legitimacy of individual incriminations is brought into question (Stojanović, Kolarić, 2020:23), which indicates that the right to life is not protected absolutely but only in some of its aspects.

Analysing Article 2 and the limitations inherently built into the ECHR, we point out that the death penalty as a form of limitation to one's right to life is no longer permitted in countries with the heritage of the Council of Europe's democratic values. The question of death penalty is a *par excellence* question of criminal law because it primarily deals with criminal sanctions and type of punishment. However, considering the fact that it is now prohibited virtually in entire Europe, we find any discussion of this topic anachronous. In Serbia, death penalty was erased from the system of criminal sanctions by the 2002 amendments to the Criminal Law of the Republic of Serbia (Law on Amendments and Additions to the Criminal Code, Official Gazette of the Republic of Serbia, No. 10/2002).

Furthermore, Article 2 Paragraph 2 emphasises that deprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is absolutely necessary (in defence of any person against unlawful violence; in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; in action lawfully taken for the purpose of quelling a riot or insurrection). The listed situations would allow for the use of lethal force on the part of persons entrusted by the state with carrying out certain tasks such as protection of public order and peace, protection of legal order as well as of the country's integrity, and similar duties (as a rule, these persons are members of the police or army force, or special units). In its decisions and verdicts, the ECtHR terms such persons as 'state agents' (Grdinić, 2006:1091).

In respect of Article 2 Paragraph 2, Strasbourg has built an abundant practice (Kolarić, 2018:58) and a large number of scientific, professional, and review papers has been written. Therefore, in the present text, we shall focus on new trends and tendencies, offering a fresh perspective on the right to life.

Design/Methods/Approach

The work will be divided into several parts. The first part will deal with the provisions that guarantee the right to life in the most important international sources and the provision of Article 24 of the Constitution of the Republic of Serbia, with a special emphasis on the ECHR and the limitations of that right arising from the Convention itself. The second part opens the legal-philosophical dilemma of whether a person's right to self-determination provides an opportunity for a person to decide on his own death. In this connection, Article 119 of the Criminal Code of Serbia is being considered in particular. The third part provides an overview of the practice of the ECtHR, as a basis for passing a final judgment on the character of Article 2 of the ECHR and Article 24 of the Constitution of the Republic of Serbia. And in the fourth part, we have a discussion, followed by conclusions. The author uses the legal-dogmatic method, the method of comparative, formal-logical analysis and the case study method.

Proceeding from the provisions of the Constitution of the RS and the provisions of the ECHR, as well as the basic features of criminal law and Article 3 of the Criminal Code, which states that the protection of human beings and other basic social values is the basis and limit for determining criminal acts, prescribing criminal sanctions and their application, to the extent in which it is necessary to suppress those acts, we come to a conclusion about the character of the right to life.

The topic is of importance both nationally and internationally and can resolve numerous newly opened dilemmas related to criminal-law protection.

Right to Life and Right to Dignity and Free Development of Individuals Decision of the German Federal Constitutional Court

The legal-philosophical debate on the relations between the two rights guaranteed by the highest legal act – an individual's right to dignity and free development and the right to life – is offered by a decision of the German Federal Constitutional Court (BverfG, Judgment of the Second Senate of 26 February 2020).

The Federal Constitutional Court pointed out that an individual's dignity and free development also include individuals' right to decide on their own death. This right further entails the right to take one's own life or, depending on the circumstances, resort to the assistance voluntarily offered by a third person to this effect. When an individual using this right decides to end his or her life, having reached this decision based on the personal assessment of the quality and purpose of existence, the state and society principally must respect such a decision as an act of autonomous self-determination. Therefore, the incrimination of assisting suicide in Paragraph 217 of the StGB is unconstitutional (Kolarić, 2023:128). This certainly does not prevent the legislator from enforcing special rules pertaining to assisted suicide. In regulating this issue, the legislator must allow enough space for an individual to use the right to decide on their own death. Namely, as the Federal Constitutional Court points out in its decision following Paragraph 217 of the Criminal Code, criminal sanctioning is envisaged for every person that, intending to provide assistance as professional service in another person's suicide, provides, procures, or creates the opportunity for the person to commit suicide. An initiative for the assessment of this provision's constitutionality has been launched by German and Swiss associations offering services of assisted suicide to seriously ill persons who wish to end their lives, with the help of such associations, doctors, and lawyers offering advice regarding any suicide-related issues.

The logic of the Court was as follows.

Firstly, the general right of a person guarantees everyone the right to choose whether, on the basis of their proper informed decision, they will take their own life. Dignity and free development of an individual are emphasised as basic human rights, originating from the perception of human beings as capable of self-determination and personal responsibility. Rooted in the belief that personal autonomy and individual development constitute an inalienable part of human freedom, the guarantee of human dignity includes, in particular, the protection of one's own individuality, identity, and integrity. Self-determination allows an individual to control his or her life in accordance with his or her wishes without being forced to live in a way irreconcilable with the individual's ideas about the self and personal identity. The right to decide on one's own death is not limited to situations of serious and incurable illnesses, nor does it apply only to certain stages of life or disease. It is guaranteed at all stages of a person's existence.

Secondly, the right to take one's own life also entails the freedom to ask and, if offered, use the assistance offered to this effect by a third person.

Hence Paragraph 217 of the Criminal Code interferes with the general right of a person who wishes to die, although the said provision does not directly refer to such persons.

It is interesting that the Decision of the German Federal Constitutional Court emphasises that the right to suicide is constitutionally recognised, and therefore motives cannot be subjected to assessment (e.g., the diagnosis of the incurable illness cannot be asked for); what can potentially be done is to check whether the individual's decision to commit suicide is serious and permanent. Such tendencies call for a reassessment of certain incriminations that have been present in our criminal legislation for a long time. To this effect, the question arises as to whether incriminating killing on request, i.e., merciful deprivation of life, is justified in our criminal law. The verdict of the German Federal Constitutional Court does not make mention of any killing on request, which is still prohibited in Germany. However, looking into some of the ECtHR's decisions and reasons listed by the German Court in its attempts to explain why assisting suicide should be allowed, i.e., that serious and stable will is required, brings forth the question of why it is not applicable to killing on request.

The Decision highlights that not any interpretation of Paragraph 217 can bring it in line with the Constitution. For what reason? The interpretation that narrows down the scope of implementation for Paragraph 217 to the effect that assisted suicide services should be allowed under certain circumstances would be in contravention to the legislator's intention and the legality principle, i.e., its *lex carta* segment. This refers to the situations in which persons use their right to self-determination and free will, as well as to the doctors who, in accordance with this provision, cannot be exempt from punishment in any conceivable interpretation. This is a general provision, applicable to every party. No privileges in terms of lesser culpability are determined in this way.

The Court highlights that the legislator does not have to entirely refrain from regulating assisted suicide but should do so in such a way as to protect the personal autonomy of every individual reaching decisions on his or her proper life. The legislator should therefore protect a person's right to self-determination. As Paragraph 341 also stresses, enough space should be left for an individual to exercise the constitutionally granted right to abandon life, based on the individual's free decision and with the assistance of others. To this effect, the coherence and compatibility of regulations should be provided, including the Law on Health Care[2] as well as the regulations pertaining to psychoactive controlled

2 Corresponding German regulations have led medical associations to refuse to provide assistance in suicide and prohibit it with obliging professional codes. Hence, the question is justifiably posed as to what that verdict means for the area regulated by medical law. It should be noted that doctors can refuse to offer such assistance and that this right of theirs can

substances. Potential abuses should be prevented, but it should also be pointed out that no one can ever be obliged to assist another person's suicide. Long and thorough work is required from the legislative body, as well as reliance on the experience of other countries and good practices. Society should be well-informed about offering assistance in suicide.

From a legal-philosophical point of view, the position of the German Federal Constitutional Court is that every person has the right to make important decisions relying on individual fundamental religious or philosophical beliefs about the value of life.

Assisting Suicide in the Criminal Code of Serbia

In our criminal law, assisting suicide is incriminated by Article 119 of the Criminal Code of the Republic of Serbia. The incrimination is referred to as inducement to commit suicide and assisted suicide. Bearing in mind the accessorily legal nature of complicity and the fact that suicide is not a criminal offence, the legislator decided, considering the social danger of complicity, to describe these acts as a separate criminal offence.

Their basic form is inducing to commit suicide or assisting suicide. If assisted suicide is provided under the conditions set forth in Article 117 of the Criminal Code, the form is privileged, which is justified in criminal-political terms, considering the fact that the person to whom assisted suicide is provided suffers from an incurable illness.

More severe forms occur when the act described in Paragraph 1 has been performed on a person under age or a person in a state of considerably diminished responsibility, whereas the most severe form occurs when it has been performed on a child or an unaccountable person. A special form is cruel and inhumane treatment of a person in a position of subordination to or dependence on the offender. Such form is in effect indirect inducement to commit suicide (Stojanović, 2012:418).

Selection from the Practice of the European Court of Human Rights

Does one's right to self-determination also include the right to decide on one's death?

In the case of Haas v. Switzerland (Haas v. Switzerland, 31322/07, 20 January 2011), the ECtHR already admitted that one of the aspects of private life is an individual's right to decide on the manner and moment of ending his or her life, under the condition that the individual is in such a position as to form his or her judgement freely and act in accordance with it.

The Grand Council verdict in Gross v. Switzerland (Gross v. Switzerland, 67810/10, 30 September 2014) established violation of Article 8 since the Swiss law is not sufficiently clear in respect of the permissibility of assisted suicide. The case refers to the complaint by an elderly lady who wished to end her life without having any clinical disease, which she filed for not being able to obtain the permission from the Swiss authorities for the lethal dose of medications with which to end her life. The Court sustained that, envisaging the possibility of obtaining a prescription for the lethal dose, the Swiss law had not provided sufficient guidelines to clearly indicate the scope of this right. Such an uncertain situation probably caused the applicant a great degree of suffering. The Court sustained that the appli-

be codified and regulated by appropriate documents. However, taking all the facts into account, they should play a role in providing that kind of assistance. No other profession can give a better diagnosis, cure or recognise pain, and provide more adequate information on the possibility of treatment.

cant's wish to be provided with the lethal dose of medications, enabling her to end her life, fell within the scope of her right to respect for private life, in accordance with Article 8. The Court observed that, in line with the Swiss Criminal Code, assisting suicide was only punishable when the perpetrator of such action had "selfish motives." In accordance with the practice of the Federal Supreme Court of Switzerland, a doctor has the right to prescribe the lethal medication in order to allow the patient to commit suicide if certain special conditions are fulfilled, as listed in the medical-ethical guidelines adopted by the Swiss Academy of Medical Sciences. In particular, alternatives for offering help should be considered, the patient has to be capable of making decisions, and his or her wish needs to be carefully thought out without any pressures from the outside. However, these guidelines do not have the form of law. Additionally, as they only apply to those patients whose doctors have reached the conclusion that the illness would result in death in several days or weeks, the applicant in this particular case was left outside the scope of their application. The Swiss Government did not present any other material offering evidence of whether and under what circumstances a doctor has the right to issue the lethal dose prescription to a patient not suffering from any terminal illness. The Court considered that this lack of clear legal guidelines had a discouraging effect on doctors, who would otherwise be inclined to provide the required prescription to the person in a situation similar to that of the applicant. This is also confirmed by the fact that the doctors she addressed refused her request because they were afraid of long court proceedings and possible negative professional consequences. Uncertainty in respect of the outcome of her request, in the situation relevant to a particularly significant aspect of her life, caused the applicant a considerable degree of pain. This situation need not have happened had there been clear state-approved guidelines to define the circumstances entitling doctors to issue the requested prescription, in the cases when individuals of their own free will made a serious decision to end their life although they were not threatened by imminent death due to any specific illness. To this effect Article 8 of the Convention was violated. At the same time, the Court did not take any stand on the question of whether the applicant should have been given the opportunity to obtain the lethal dose of the medication, enabling her to end her life. The opinion of the Court was that it was primarily the duty of national authorities to issue comprehensive and clear guidelines on deciding about this question.

To the effect of changes and new tendencies that might bear relevance to substantive criminal law, we cannot avoid mentioning the decision of the ECtHR in the case of Mortier v. Belgium (Mortier v. Belgium, 78017/17, 4 October 2022), which for the first time questioned whether an act of euthanasia was in accordance with the ECHR, also clarifying the nature and scope of the state's positive obligations (material and procedural) based on Article 2 in a very specific context. The applicant was a Belgian citizen born in 1976. The case referred to the death of the applicant's mother, who was euthanised without any notification issued to him or his sister. The applicant's mother had suffered from chronic depression for about 40 years. In 2011, she consulted Professor D. and informed him of her intention to resort to euthanasia. Despite the doctor's repeated advice, she did not wish to inform her children about her request for euthanasia. The applicant filed the complaint based on Articles 2 and 8 of the Convention.

What surprised was the claim that Article 2 of the ECHR had not been violated; the case was instead one of positive obligation as the euthanasia of the applicant's mother, who had suffered from depression for about 40 years, was in accordance with the law that approved euthanasia. The Court claimed that the presented evidence did not reveal any violations of the provisions of Article 2 of the Convention in this case of an act performed in accordance with the established legal framework. Article 8 was not violated either – the right to respect for private and family life. The Court determined that the doctors assisting the applicant's mother had done what was reasonable, in accordance with the law,

their obligation of confidentiality and professional secrecy, as well as the ethical guidelines, in order to ensure the woman contacted her children about her request for euthanasia.

This verdict is significant because the Court questioned for the first time whether the act of euthanasia was in accordance with the Convention, and it clarified the nature and scope of positive obligations (material and procedural) of the state as regards Article 2, in this highly specific context of a patient who requested euthanasia not because she was suffering from any physical pain or the threat of imminent death, but because she was suffering mentally. Referring to the case law pertaining to ending one's life, what the Court took into consideration in this context was the right to respect for private life, guaranteed by Article 8, and the concept of personal autonomy it entails. The right of an individual to decide on how and when his or her life should end is one of the aspects of the right to respect for private life. Decriminalising euthanasia was aimed at offering individuals free choice to avoid what, in their opinion, would be an undignified and unsettling end of life. Human dignity and human freedom are at the very core of the Convention. The Court concluded that, although the right to death could not be derived from Article 2, the right to life contained in this Article could not be interpreted as *per se* prohibition of the conditional decriminalisation of euthanasia. However, in order to be compatible with Article 2, this decriminalisation had to be accompanied by sufficient and appropriate protection measures to prevent abuse and thus provide respect for the right to life. As regarded material positive obligations in the matter, the Court examined the existence of a legislative framework for the procedure prior to euthanasia, which met the conditions set out in Article 2, and whether such procedure was followed in the circumstances of the case. In the opinion of the Court, such a legislative framework has to allow for the patient's freedom and full knowledge in deciding to request to end his or her life. When the legislator has decided against providing an independent prior re-examination of a specific act of euthanasia, the Court is more thorough in considering the question of material and procedural protection measures. Furthermore, the law has to provide stronger measures of protection related to the decision-making process in the cases of patients suffering from mental instead of physical pain, whose death is not expected shortly. For instance, in this case, the Court would give particular importance to the time that should have been allowed between the written request and the act of euthanasia (at least a month according to the Belgian law), to chief physician's duty to consult other doctors (at least two according to the Belgian law), as well as to the demand that different doctors who are consulted have to be independent. In the opinion of the Court, the positive obligations arising from Article 2 implied that the prerequired independence of the consulted doctors referred not only to the lack of any hierarchical or institutional relations, but also to the formal and practical independence, in terms of the consulted doctors' mutual relations and their relations with the patient. In this case, the Court also noticed that the law in question was the subject of several thorough re-examinations, before it was enacted by the National Council and also later by the Constitutional Court. The Court concluded that the given legal framework had provided protection of the patient's right to life, as demanded by Article 2, and that euthanasia had been carried out in accordance with that framework.

However, as regards the procedural aspect of Article 2, violation was ascertained as the doctor who had performed euthanasia was allowed to vote on its legality. The Court explained that the request for an efficient official inquiry also applied to the cases in which the performed act of euthanasia was the subject of a criminal complaint filed by a relative of the deceased, convincingly pointing out the presence of suspicious circumstances. When it comes to the need for a criminal investigation in the cases of euthanasia, the Court considered that this was generally not necessary when death had resulted from euthanasia carried out in accordance with the legislation allowing for such an act and imposing strict requirements on it. However, competent authorities would have to open an investigation to allow for the facts to be established and, if needed, for responsible persons to be identified and punished if there is a criminal complaint from a relative of the deceased indicating suspicious circumstances, as

there was in this case. In the opinion of the Court, where there was no prior but only subsequent re-examination of euthanasia, this re-examination had to be carried out in a particularly rigorous manner so as to fulfil the obligations stipulated by Article 2 of the Convention. The obligation of independence is of the highest importance. In this specific case, the Court analysed subsequent re-examination by the body responsible for monitoring compliance with the procedure and with the conditions set by the Law on euthanasia. The Court observed that the law did not prevent the doctor who performed euthanasia from being part of this body and voting on whether his own acts were compatible with the material and procedural demands of the national law. The Court considered that leaving abstention from voting exclusively to the personal discretion of the member involved in the discussed case of euthanasia could not be regarded as sufficient to provide the independence of the body. Considering the crucial role played by the re-examination body, the re-examination system did not warrant its independence, notwithstanding the real impact the doctor might have had on the body's conclusions in this case.

Conclusion

The right to life is a universal right of an individual, incorporated into and guaranteed by a series of documents enacted regionally and internationally, but answering the question of whether the right to life can be considered absolutely or only partly protected requires analyses of all relevant international agreements on human rights. After this analysis, we can conclude that the ECtHR regards this right as a core human right that cannot be derogated, but that the right is not absolute and that instead merely some aspects of the right to life enjoy absolute protection. The fact that today views are different of the right of an individual, as an intellectual-moral being, to self-determination, dignity, and free development indicates that the state and society should take those measures that aim at achieving this right and provide protection from any potential abuse. So, for instance, as regards assisting suicide, the legislator's role is to provide protection in accordance with Article 23 of the Constitution of the Republic of Serbia, which includes the protection of the right to self-determination in any decision pertaining to one's own life. This entails the arrangement of procedures, the obligation to offer information, the reliability of offered services of assisted suicide, as well as the prohibition of particularly dangerous forms of assisting suicide. The legislator can potentially incriminate any procedure in contravention of those established by the law and stipulate criminal sanctions.

In conclusion, new tendencies in the science of criminal law open up possibilities for re-examining the incriminations that refer to inducement to commit suicide and assisting suicide, at least in one of their aspects, as well as to merciful deprivation of life.

New tendencies also point out to different interpretations of human rights as regards the relation between a citizen's right to self-determination and the state. The approach is more liberal, and it highlights the decisions of an individual acting of his or her own free will, whereby the right to autonomy of the will is respected. It is interesting to mention that the German Parliament devoted attention to this decision only after 14 months, which is why we do not expect that other authorised law proponents and legislative bodies will tackle the trend readily.

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STOCHASTIC MODELING OF THE NETWORK INTRUSION DETECTION THRESHOLD

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Introduction

Intrusion detection systems (IDSs) are primarily focused on identifying potential incidents, i.e. unauthorized access, information retrieval, and log-in attempts. In addition, IDSs are also used for other purposes, such as identifying various problems related to certain security policies, recording all existing and potential threats, and deterring users from violating security policies (Eskin, 2000; Fengmin, 2003). Therefore, it can be said that the basic role of IDSs is to register all the important information and knowledge related to the observed events, to inform the security administrators about the recorded events and to generate the corresponding reports. These systems use several different response techniques, which include, among other things, detecting the intrusion and stopping the attack itself, changing the security environment, or changing the content of the attack (Čisar P. , Maravić-Čisar, Popović, Kuk, & Vuković, 2022; Čisar, Popović, Kuk, & Vuković, 2022).

In anomaly detection, two approaches are commonly used: algorithms with adaptive and non-adaptive (fixed) thresholds. Most authors (Sorensen, 2004; Spathoulas & S. Katsikas, 2010) are of the opinion that systems with fixed thresholds are not robust enough and that tests with such thresholds will give unsatisfactory results with normal network traffic variations. On the other hand, the adaptive approach is a way that has a positive effect on reducing the number of false positives (Jovanović et al., 2018). However, the adaptive approach also has the disadvantage that the security system based on this approach can be fooled by applying an adequate attack strategy. Otherwise, several different versions of adaptive algorithms are used in practice, developed with the intention of improving the efficiency of intrusion detection (Čisar & Maravić-Čisar, 2010a; 2010b; 2012)

The basic assumption in this article is the interpretation of network traffic in the form of time series, whose pronounced fluctuations show potential intrusions into the system. Therefore, in order to successfully detect them, an adaptive threshold in the form of a random variable (RV) is introduced, with which such intrusions can be registered. Also, it is easy to see that the observed time series have

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non-linear and non-stationary dynamics, which is usually reflected in the increasing complexity of their stochastic structure. In order to describe their dynamics, the so-called General Split-BREAK (GSB) process is proposed here, which has already been applied in modelling various time series with persistent and accentuated fluctuations. The basic form of this stochastic model was introduced by (Stojanović, Popović, & Popović, 2011; 2014; 2015), where RVs with Gaussian distribution are used as an innovation series. Then, some recently and more general results of the Split-BREAK process, with Laplacian and Cauchy distributions, respectively, are reported by (Jovanović, Stojanović, Kuk, Popović, & Čisar, 2022), as well as (Ljajko, Stojanović, Tošić, & Božović, 2023). It is worth to point out that, for the purpose of practical application to intrusion detection, some of these forms of GSB processes are considered and then compared for their effectiveness.

Definition and Main Properties of the GSB Process

Basic assumptions about the GSB process can be made based on its corresponding time series, as is given below. Specifically, the GSB process consists of the following three components:

i) (ε_t) is an innovation series, that is, independent identically distributed (IID) random variables (RVs) with some stochastic distribution of absolute-continuous type;

ii) (m_t) is a series of martingale means given by recurrence relation:

$$m_t = m_{t-1} + q_{t-1}\,\varepsilon_{t-1} = m_0 + \sum_{j=0}^{t-1} q_j \varepsilon_j, \tag{1}$$

where is almost surely (as) $m_0 \overset{as}{=} \mu\ (const)$, $\varepsilon_{-1} = \varepsilon_0 \overset{as}{=} 0$, and

$$q_t = I(\varepsilon_{t-1}^2 > c) = \begin{cases} 1, & \varepsilon_{t-1}^2 > c \\ 0, & \varepsilon_{t-1}^2 \leq c \end{cases} \tag{2}$$

is the Noise-Indicator with the critical value $c > 0$;

iii) (y_t) is a the basic GSB series given as an adaptive decomposition:

$$y_t = m_t + \varepsilon_t. \tag{3}$$

In practice, the innovations (ε_t) are interpreted as a noise series, that is represent deviation (fluctuating) component of the GSB process. Depending on the choice of stochastic distribution, we further distinguish three forms of these innovations, with Gaussian, Laplacian and Cauchy distributions. In the following Table 1 are shown their basic stochastic characteristics: density functions, denoted with $f_\varepsilon(x)$, as well as means and variances, which are well-known statistical measures of average and dispersion, respectively. It can be easily noticed that all these distributions depend on the corresponding parameters that can also be observed in Table 1. At the same time, it is worth emphasizing that the symmetry of these distributions is assumed, so that all of them, expecting a Cauchy distribution, have zero-means. Finally, variances of the Gaussian and Laplace distributions also depend on these parameters, but the variance of the Cauchy distribution is infinite.

Table 1 *Key stochastic characteristics of innovations* (ε_t) *of the GSB process*

Distribution	**Gaussian**	**Laplacian**	**Cauchy**
Density $f_\varepsilon(x)$	$\frac{1}{2\sigma\sqrt{\pi}}\exp\left(-\frac{x^2}{2\sigma^2}\right)$	$\frac{1}{2\lambda}\exp\left(-\frac{\lvert x\rvert}{\lambda}\right)$	$\frac{\lambda}{\pi(x^2+\lambda^2)}$
Mean	0	0	∞
Variance	σ^2	$2\lambda^2$	∞

The second component, the martingale mean series (m_t), represents predictive and stability component of the GSB process, that is the values without emphatic fluctuations. The main role in this has the parameter $c > 0$, named *the critical value of reaction*, which indicates significance of previous realizations of innovations (ε_t) to be included in Equation (1). More precisely, when $q_{t-1} = 0$, the martingale mean m_t is equal to its previous value m_{t-1}, and the main GSB series (y_t), given by Equation (3), is then realized with 'low' fluctuation. This means that there is no intrusion into a specific security system. Otherwise, the case $q_{t-1} = 1$ indicates a pronounced fluctuation of the series (y_t), and thus there is a reason that there was an intrusion and the activation of the corresponding alarm. It is worth pointing out that the series (m_t) and (y_t) depend on the time moment $t \in T$ in which they are observed. In that way, using the previously obtained results on the GSB process, the basic distributional properties of these series (except in the case of Cauchy distributed innovations) can be shown as follows:

ι) Both series (m_t) and (y_t) have the constant and equal mean $E(m_t) = E(y_t) = \mu$.

ιι) The variances of series (m_t) and (y_t) are, respectively,

$$Var(m_t) = 2ta_c\lambda^2,\ Var(y_t) = 2(ta_c + 1)\lambda^2, \quad t \geq 0, \tag{4}$$

where $a_c = E(q_t) = E(q_t^2) = P\{\varepsilon_t^2 > c\}$.

ιιι) The correlation functions of series (m_t) and (y_t) are, respectively,

$$\rho_m(s,t) = \frac{\min(s,t)}{\sqrt{s \cdot t}},\ \rho_y(s,t) = \frac{a_c \min(s,t) + 1}{\sqrt{(a_c s + 1)\cdot(a_c t + 1)}}.$$

According to the presented results, it follows that series (m_t) and (y_t) have the non-constant variances, dependent on the time (t) in which they are observed. Therefore, the correlation functions $\rho_m(s,t)$ and $\rho_y(s,t)$ depend on both time variables t, s, which confirms the non-stationarity of these time series. We emphasize that the condition of non-stationarity is fully consistent with the characteristics of real traffic flows in a certain information system. On the contrary, the stationarity is very important and useful property of time series. It enables, among other things, a simple estimation of the parameters of the corresponding stochastic model. For these reasons, we define another important GSB series, the so-called increment series:

$$X_t = y_t - y_{t-1}, \qquad t = 1, \ldots, T. \tag{5}$$

Using Equations (1)-(3), increments can be represented as follows:

$$X_t = \varepsilon_t - \theta_{t-1}\varepsilon_{t-1}, \tag{6}$$

where $\theta_t = 1 - q_t = I(\varepsilon_{t-1}^2 \leq c)$. In that way, the series (X_t) is stationary stochastic process that operates in two regimes:

ι) Emphasized fluctuations of innovations (ε_t) in the previous moment of time imply equality $\theta_{t-1} = 0$. Thus, Equation (6) becomes $X_t = \varepsilon_t$.

ιι) If the square of fluctuations ε_{t-1} do not exceed the critical value c, it follows $\theta_{t-1} = 1$. Thus, the value of X_t is given as a linear integrated MA(1) process:

$$X_t = \varepsilon_t - \varepsilon_{t-1}.$$

Obviously, the series (X_t) has a structure similar to the ordinary first-order moving average (abbr. MA(1)) processes, which can be applied in their examination. With earlier assumptions, the basic properties of this series, obtained by some simple computation, can be expressed as follows:

Theorem 1. Let (X_t) be the time series defined by Equations (5) and (6). The mean and the variance of this series are, respectively,

$$E(X_t) = 0, \qquad \mathrm{Var}(X_t) = E(X_t^2) = \begin{cases} \sigma^2(b_c + 1), & (\varepsilon_t) \text{ is Gaussian} \\ 2\lambda^2(b_c + 1), & (\varepsilon_t) \text{ is Laplacian} \end{cases},$$

where $b_c = 1 - a_c = P(\varepsilon_{t-1}^2 \leq c)$. In addition, the correlation function of this series is given as follows:

$$\rho_X(h) := \frac{\mathrm{Cov}(X_t, X_{t+h})}{\mathrm{Var}(X_t)} = \begin{cases} 1, & h = 0 \\ -\dfrac{b_c}{b_c + 1}, & h = \pm 1 \\ 0, & \text{otherwise.} \end{cases}$$

As will be seen below, the specific structure of the stationary series (X_t) is important in practical application of the GSB process, as well as in estimating its parameters. As an illustration, Figure 1 shows realizations of the above-mentioned GSB time series, obtained by Monte Carlo simulations of the series (ε_t) with Gaussian distribution.

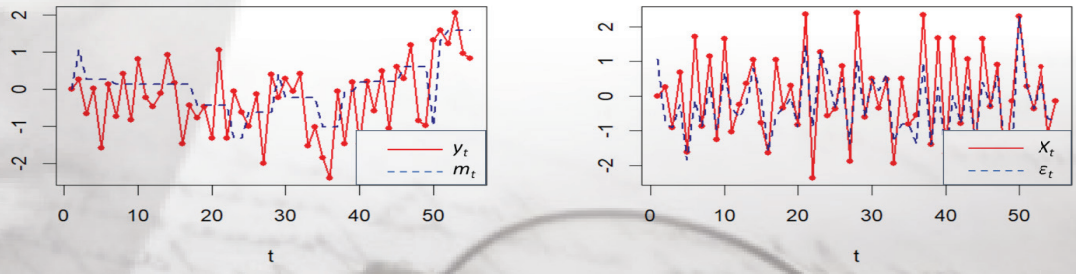


Figure 1 *Dynamics of the GSB series with Gaussian innovations. (Parameters values are: $\mu = 0$ and $c = \sigma = 1$.)*

Parameters Estimation Procedures

In this part, we are discussed the procedures for estimating (unknown) parameters of the GSB process, primarily the critical value $c > 0$ which determines the stochastic threshold of our model. In that cause, an increment series (X_t) is commonly used, because it represents the only observable and

stationary series of GSB processes. Since the series (X_t) is close to the standard MA models, similar estimation procedures are used here. Nevertheless, the specificity of the series (X_t) requires some additional estimation procedures, as well as the examination of the quality of the estimators thus obtained. In the following, we will briefly describe these procedures, first for the Gaussian and Laplace innovations (ε_t).

The first form of estimation give the so-called *moments-based estimators*, obtained from the theoretical moments of the basic GSB series. Using Theorem 1, that is, by solving the expression for the first correlation of the series (X_t) on $b_c \in (0,1)$, the estimator of this parameter is easily obtained as follows:

$$\tilde{b}_c = -\frac{\hat{\rho}_X(1)}{1+\hat{\rho}_X(1)}. \tag{7}$$

Here, $\hat{\rho}_X(1) = (\sum_{t=1}^{T} X_t X_{t-1})/(\sum_{t=1}^{T} X_t^2)$ is the sample autocorrelation of (X_t), and according to Equation (7) it is easy to see that b_c is the appropriate estimate if and only if $0 < \tilde{b}_c < 1$, that is, $-0.5 < \hat{\rho}_X(1) < 0$.

Thereafter, using the estimator $\tilde{b}_c$, in the cases of Gaussian and Laplacian innovations (ε_t), the appropriate parameters σ^2 and λ^2 are, respectively:

$$\tilde{\sigma}^2 = \frac{1}{T(\tilde{b}_c+1)}\sum_{t=1}^{T} X_t^2, \tilde{\lambda}^2 = \frac{1}{2T(\tilde{b}_c+1)}\sum_{t=1}^{T} X_t^2. \tag{8}$$

It is worth pointing out that in (Jovanović, Stojanović, Kuk, Popović, & Čisar, 2022) and (Stojanović, Bakouch, Ljajko, & Božović, 2023) is proven that the estimators $\tilde{b}_c$, $\tilde{\sigma}^2$ and $\tilde{\lambda}^2$ are strictly consistent and asymptotically normal. Moreover, in the case of Gaussian innovations the RVs $(\varepsilon_t/\sigma)^2$ have a chi-square distribution χ_1^2. Thus, the estimate of the critical value $\tilde{c}$ can be simply obtained from the equality:

$$\tilde{c} = \tilde{\sigma}^2 \cdot F_{\chi_1^2}^{-1}(\tilde{b}_c), \tag{9}$$

where $F_{\chi_1^2}(x)$ is the corresponding cumulative distribution function (CDF). Similarly, when (ε_t) are with Laplacian $(0,\lambda^2)$ distribution, the critical value estimator $c = \tilde{c}$ can be easily found from the equation:

$$P\{\varepsilon_t^2 \le c\} = \tilde{b}_c,$$

whose solution is

$$\tilde{c} = \left[F_{\varepsilon}^{-1}\left(\frac{\tilde{b}_c+1}{2}\right)\right]^2, \tag{10}$$

and $F_{\varepsilon}(x)$ is the CDF of the Laplacian innovations (ε_t).

It can be shown that moment-based estimators are not the most efficient estimators of GSB process parameters. In order to obtain more efficient estimators of the observed parameters, the so-called modified Gauss-Newton estimation procedure for nonlinear functions can be used. First, we can write Equation (6) as:

$$\varepsilon_t = X_t + \theta_{t-1}\varepsilon_{t-1}, t = 1, \dots, T,$$

or, in the functional form,

$$\varepsilon_t(X,\theta) = X_t + \theta_{t-1}\varepsilon_{t-1}(X,\theta).$$

Using the estimator $\tilde{b}_c$, obtained according to the previously mentioned procedure, for an arbitrary $t = 1,2,\dots,T$ can be recursively computed values:

$$\tilde{\theta}_t := I\left(\varepsilon_{t-1}^2(X,\tilde{\theta}) \le \tilde{c}\right),$$
$$\varepsilon_t(X,\tilde{\theta}) := X_t + \tilde{\theta}_{t-1}\varepsilon_{t-1}(X,\tilde{\theta}), \tag{11}$$

where the initial values are $\tilde{\theta}_0 = 1$ and $\varepsilon_0(X,\tilde{\theta}) = \varepsilon_{-1}(X,\tilde{\theta}) = 0$. Additionally, if we define a series:

$$W_t(X,\theta) = \theta_t W_{t-1}(X,\theta) + \varepsilon_{t-1}(X,\theta), \tag{12}$$

where $t = 1, 2, \dots, T$, and $W_0(X,\tilde{\theta}) = 0$, using the mentioned properties of RVs (θ_t) and (ε_t), it follows that $(W_t(X,\theta))$ is a stationary and ergodic series of RVs with:

$$E\left(W_t(X,\theta)\right) = 0,$$
$$\mathrm{Var}\left(W_t(X,\theta)\right) = E\left(W_t(X,\theta)\right)^2 = \begin{cases} \sigma^2/(1-b_c), & (\varepsilon_t) \text{ is Gaussian} \\ 2\lambda^2/(1-b_c), & (\varepsilon_t) \text{ is Laplacian} \end{cases},$$

and correlation function $\rho_W(h) = b_c^{|h|}, h = 0, \pm 1, \dots$ Now if we define the so-called residual series:

$$R_t(X,\theta) = W_t(X,\theta) - b_c W_{t-1}(X,\theta), \tag{13}$$

it can be shown (see, c.f. (Jovanović, Stojanović, Kuk, Popović, & Čisar, 2022)) that $R_t(X,\theta)$ are mutually non-correlated RVs. Thus, Equation (13) represents a linear autoregressive (AR) process $(W_t(X,\theta))$ with innovations $(R_t(X,\theta))$. From here, by applying the regression procedure, another estimator of the threshold parameter $b_c \in (0,1)$ can be obtained:

$$\hat{b}_c = \left(\sum_{t=0}^{T-1} W_t(X,\tilde{\theta}) W_{t+1}(X,\tilde{\theta})\right)\left(\sum_{t=0}^{T-1} W_t^2(X,\tilde{\theta})\right)^{-1}. \tag{14}$$

Here, according to Equations (12) and (13), the above values can be iteratively calculated:

$$W_t(X,\tilde{\theta}) := W_t(X,\theta)|_{\theta=\tilde{\theta}} = \tilde{\theta}_t W_{t-1}(X,\tilde{\theta}) + \varepsilon_{t-1}(X,\tilde{\theta}),$$
$$R_t(X,\tilde{\theta}) := R_t(X,\theta)|_{\theta=\tilde{\theta}} = W_t(X,\tilde{\text{ë}}) - b_c W_{t-1}(X,\tilde{\text{ë}}).$$

Similar to previous moment-based estimators, the estimator $\hat{b}_c$ allows to obtain an estimator of the critical value $c = \hat{c}$, as a solution of the equation:

$$P\{\mathring{\text{a}}_t^2 \le c\} = \hat{b}_c. \tag{15}$$

Let us notice that the previously obtained estimators $\tilde{b}_c$ (as well as $\hat{b}_c$), that is, the modelled values of innovations $(\mathring{\text{a}}_t)$, defined by Equation (11), can be used to obtain the estimators of parameter ë. Thereby, it is well-known that for the Gaussian, as well as the Laplace innovations $(\mathring{\text{a}}_t)$, the so-called maximum likelihood (ML) method provides the most efficient estimates of the parameter ë. In the case of our GSB process with Gaussian innovations, the ML estimator can be obtained according to Equations (1) and (2), that is, based on the maximization of the log-likelihood function:

$$L(y_1,\dots,y_T;\sigma^2) = \ln\prod_{t=1}^{T}\left[\frac{1}{2\sigma\sqrt{\pi}}\exp\left(-\frac{\varepsilon_t^2}{2\sigma^2}\right)\right] = -\frac{T}{2}\ln(2\pi\sigma^2) - \frac{1}{2\sigma^2}\sum_{t=1}^{T}\varepsilon_t^2$$

By solving equation $\partial L(y_1,\dots,y_T;\acute{o}^2)/\partial\acute{o}^2 = 0$ the estimator of the parameter $\acute{o}^2$ is obtained as the sample variance of the series $(\mathring{a}_t)$:

$$\hat{\sigma}^2 = \frac{1}{T}\sum_{t=1}^{T}\varepsilon_t^2(X,\hat{\theta}). \qquad (16)$$

In the case of Laplacian innovations $(\mathring{a}_t)$, the ML estimator can be obtained by maximization of the log-likelihood function:

$$\ell(y_1,\dots,y_T;\lambda) = \ln\prod_{t=1}^{T}\left[\frac{1}{2\lambda}\exp\left(-\frac{|y_t - m_t|}{\lambda}\right)\right] = -T\ln(2\lambda) - \frac{1}{\lambda}\sum_{t=1}^{T}|\varepsilon_t(X,\tilde{\theta})$$

In the same way as in the previous one, solving equation $\ell(y_1,\dots,y_T;\ddot{e})/\partial\ddot{e} = 0$, as well as Equation (3), give the estimator of scale parameter $\ddot{e}$ as the mean absolute deviation (MAD):

$$\hat{\lambda} = \frac{1}{T}\sum_{t=1}^{T}|\varepsilon_t(X,\tilde{\theta})|. \qquad (17)$$

Finally, estimators of the mean of the GSB process, that is, the parameter $\grave{\imath} = E(y_t)$ can be obtained as the sample mean of series (y_t):

$$\tilde{\mu} := \bar{y}_T = \frac{1}{T}\sum_{t=1}^{T} y_t. \qquad (18)$$

This is unbiased estimator, that is, $E(\tilde{\mu}) = E(\bar{y}_T) = \mu$, but it can be easily shown that its variance is unbounded. In order to obtain a more efficient estimator for the parameter μ, a sample mean of the mean series $\bar{y}_t$, when $t = 1,\dots,T$, can be taken, i.e., the following estimator can be used:

$$\hat{\mu} := \frac{1}{T}\sum_{t=1}^{T}\bar{y}_t = \frac{1}{T}\sum_{t=1}^{T}\omega_t y_t. \qquad (19) \qquad (19)$$

Here, $\omega_t := H(T) - H(t-1)$ and $H(t) := \sum_{j=1}^{t} j^{-1}, t = 1,\dots,T$ are the harmonic numbers, with $H(0) = 0$. The estimator $\hat{\mu}$ is also unbiased for the parameter μ, but its weights are more pronounced at the 'older' time points of the realization of the series (y_t). This is also consistent with the fact that the covariances of RVs y_t depend on these 'older' time indices. For these reasons, the estimator $\hat{\mu}$ is more efficient than $\tilde{\mu}$, which can be shown using a procedure similar as in (Jovanović, Stojanović, Kuk, Popović, & Čisar, 2022) and (Stojanović, Bakouch, Ljajko, & Božović, 2023). It is shown here that the asymptotic values of variances of the estimators $\tilde{\mu}$ and $\hat{\mu}$ are, respectively:

$$\tilde{V} := V(\tilde{\mu}) = \frac{a_c Var(\varepsilon_t)T}{3} + O(T^{-1}) \longrightarrow +\infty, T \to +\infty,$$
$$\hat{V} := V(\hat{\mu}) = a_c Var(\varepsilon_t)H^2(T) + o\left(H^{-2}(T)\right) \longrightarrow +\infty, T \to +\infty.$$

Thus, the estimator $\hat{\mu}$ is (asymptotically) more efficient than $\tilde{\mu}$, because it is valid:

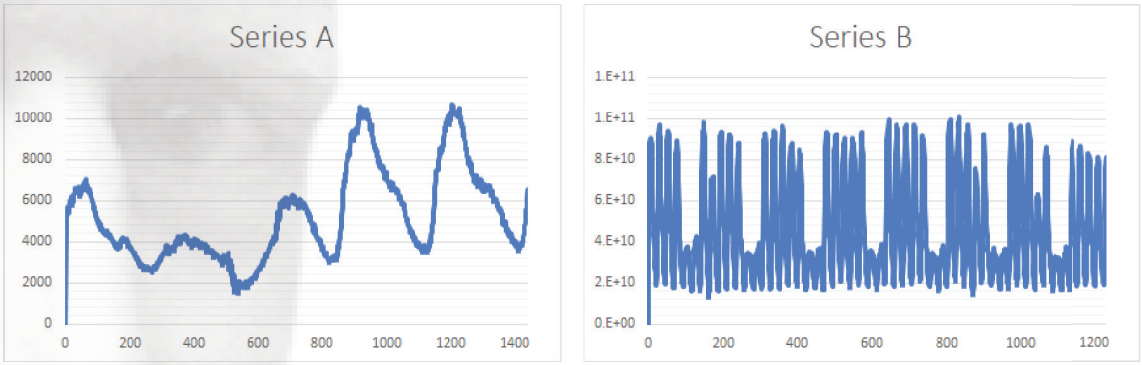
$$\lim_{T\to+\infty}\frac{V(\hat{\mu})}{V(\tilde{\mu})} = \lim_{T\to+\infty}\frac{H^2(T)}{T} = 0.$$

Finally, let us point out that the Cauchy distribution has a special problem of its "heavy tail", which prevents the previously described estimations of the parameters of the GSB process. For instance, estimation procedures based on moments cannot be applied in this case, because the mean and variance

of the Cauchy distribution do not exist, while maximum likelihood estimation (MLE) requires some complex calculations. For these reasons, the so-called empirical characteristic function (ECF) method will be used here (see, e.g. (Ljajko, Stojanović, Tošić, & Božović, 2023)), but due to the certain complexity of this method, it will not be described here in detail.

Application in the Network Intrusion Detection

In the following is given the application of the GSB process in the dynamic analysis of aggregate traffic and potential detection of unusual amounts of traffic that may be a sign of unauthorized access. Internet traffic data (in bits) used for analysis in this paper comes from an ISP and represents open data set from the web site Datamarket.com. In this analysis, these data are divided into two subsets. First, named Series A, represents aggregate traffic (in bits) in the backbone of the UK academic network. Data are collected at five-minute intervals, during exactly five days of observation, between 19 November 2004 at 09:30 and 24 November 2005 at 09:25. Second one, named Series B, corresponds to the hourly data of the transatlantic link with centres in 11 European cities, collected from 06:57 on 7 June to 11:17 on 31 July 2005. In this way, traffic samples of length $T_1 = 1440$ and $T_2 = 1330$, respectively, were obtained, the dynamics of which can be seen in the following Figure 2.



(a) (b)

Figure 2 *Dynamics of aggregate traffics (in bits):* **(a)** *Series A;* **(b)** *Series B.*

Based on them, it can be clearly concluded that there are pronounced and permanent fluctuations in both series. They are especially emphasized in Series A, where there is a distinct aperiodicity in its dynamics. On the other hand, in the case of Series B, there is a periodic dynamic of the volume of traffic, which is expected with this kind of data. The basic statistical indicators of both series are given in the following Table 2.

Table 2 *Basic statistical indicators of aggregate network traffic*

Statistics	Series A		Series B	
	Traffic	Log-volumes	Traffic	Log-volumes
Mean	5188.7	8.4672	4.57E+10	24.3906
Median	4445.0	8.3995	3.55E+10	24.2936
Mode	N/A	N/A	N/A	N/A
Sample variance	4,802,193	0.1759	6.67E+20	0.3099
Stand. deviation	2191.4	0.4195	2.58E+10	0.5567

Skewness	0.7745	-0.0110	0.7270	0.2036
Kurtosis	2.7757	2.4321	2.0864	1.7674
Minimum	1529	7.3324	1.32E+10	23.3068
Maximum	10,671	9.2753	1.01E+11	25.3371

In addition to the basic traffic data, Table 2 also shows descriptive statistics of the so-called log-volumes:

$$y_t^{(j)} := \ln\left(T_t^{(j)}\right), t = 0, 1, \ldots, T_j, j = 1,2. \qquad (20) \tag{20}$$

where $(T_t^{(j)})$ are aggregate traffics (in bits) of observed Series A and B. Log-volumes also represent an aggregate indicator, obtained as a natural logarithm of the traffic data volumes. As is pointed from several authors, e.g. (So, Chen, Chiang, & Lin, 2007), their usage changes the interpretation of activity shocks, because unexpected values are not affected by the growth trend in their dynamics. Also, the variance of log-volatility shocks is more uniform across the sample, that is, the timeline of the observed data, which can be seen from Table 2, too. In addition, the corresponding Split-MA(1) processes for both series are read as follows:

$$X_t^{(j)} := y_t^{(j)} - y_{t-1}^{(j)} = \ln\left(T_t^{(j)}/T_{t-1}^{(j)}\right), t = 1, \ldots, T, j = 1, 2,$$

i.e., they represent the so-called log-returns of aggregate traffic volumes.

We further consider the possibility of using the GSB process as a suitable stochastic model of logarithmic volume dynamics. According to them, as well as using Equations (1) and (3), the martingale means $(m_t^{(j)})$ and innovations $(\varepsilon_t^{(j)})$ can be obtained by iterative procedure:

$$\begin{cases} \varepsilon_t^{(j)} = y_t^{(j)} - m_t^{(j)}, \\ m_t^{(j)} = m_{t-1}^{(j)} + \varepsilon_{t-1}^{(j)} I\left\{\left(\varepsilon_{t-2}^{(j)}\right)^2 \geq \tilde{c}\right\}, \end{cases} \qquad (21) \tag{21}$$

where $j = 1,2$ and $\tilde{c}$ is the estimated critical value, obtained by using Equation (11). As initial values in (21), values $\varepsilon_0^{(j)} = \varepsilon_{-1}^{(j)} = 0$, as well as $m_0^{(j)} = y_0^{(j)} = \hat{\mu}$, $j = 1, 2$ were taken. The estimated values of basic statistical indicators of the increments $(X_t^{(j)})$, $j = 1, 2$, as well as two modelled series, martingale means $(m_t^{(j)})$, $j = 1, 2$ and innovation series $(\varepsilon_t^{(j)})$, $j = 1, 2$, are shown in the following Table 3.

Note first that both Series A and B have similar statistical indicators, which indicates a certain similarity in their dynamics and other stochastic characteristics. This can be seen by comparing statistical indicators of the increments $(X_t^{(j)})$, $j = 1, 2$, and the innovation series $(\varepsilon_t^{(j)})$, $j = 1, 2$. It is noticeable that the sample means of both series are close to zero, that is, they have the property of symmetry of their empirical distributions.

Table 3 *Statistical indicators of increments, martingale means and innovations of the GSB processes*

Statistics	Series A			Series B		
	$\left(X_t^{(1)}\right)$	$\left(m_t^{(1)}\right)$	$\left(\varepsilon_t^{(1)}\right)$	$\left(X_t^{(2)}\right)$	$\left(m_t^{(2)}\right)$	$\left(\varepsilon_t^{(2)}\right)$
Mean	2.25E-04	8.4747	-0.0074	5.93E-04	24.410	-0.0274
Median	-8.26E-04	8.4031	-0.0102	-2.80E-02	24.359	-0.0279
Mode	N/A	8.6716	N/A	N/A	24.267	N/A
Sample variance	8.70E-04	0.1779	0.0034	0.0283	0.3127	0.0766

Stand. deviation	0.0295	0.4218	0.0582	0.1681	0.5592	0.2767
Skewness	-2.2574	-0.0900	-0.0436	1.3059	0.3127	1.0009
Kurtosis	2.3966	2.4052	2.1456	1.9767	1.5896	2.8703
Minimum	-0.2992	7.3700	-0.3951	-0.4726	23.429	-0.8103
Maximum	0.1580	9.2753	0.2082	0.6074	25.238	1.1539

As an illustration, Figure 3 shows the empirical distribution of both innovation series, as well as their fitting with the three distributions mentioned earlier. It is noticeable that fitting with non-Gaussian distributions (Laplace and Cauchy) is somewhat more adequate than the standard Gaussian distribution.

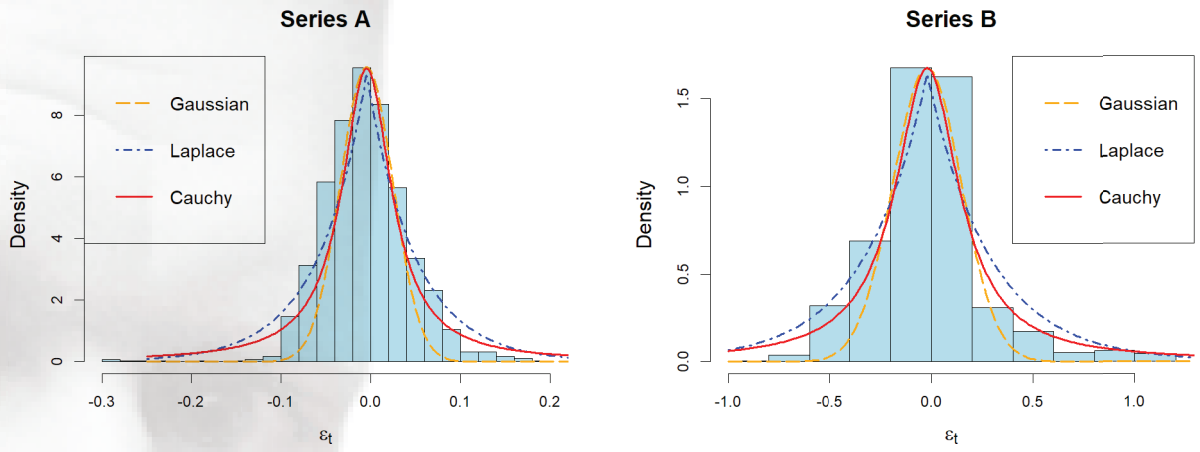


Figure 3 *Empirical distribution of GSB process innovations (given by histograms) according to theoretical distributions (given by lines).*

In the following, using the previously described estimation procedure, the parameters of both time series are estimated. Table 4 shows the estimates obtained by applying the above-mentioned procedures, that is, two kinds of parameters estimates. Additionally, some other estimates, such as the first-order sample correlation $\hat{\rho}_X(1)$, and the estimates of the threshold parameter b_c, are also shown. We can notice that the condition $-0.5 < \hat{\rho}_X(1) < 0$ is satisfied in both series cases, which enables the estimation of the parameter b_c.

Table 4 *Estimated parameters values of the log-volumes series*

Parameters estimates		Series A	Series B
Mean value	$\tilde{\mu}$	16.832	12.672
	$\hat{\mu}$	17.004	12.587
Sample correlation	$\hat{\rho}_X(1)$	-0.1911	-0.3948
Threshold parameter	$\tilde{b}_c$	0.2362	0.6523
	$\hat{b}_c$	0.3766	0.5546
Critical value	$\tilde{c}$	0.0196	0.2868
	$\hat{c}$	0.0459	0.1487
Scale parameter	$\tilde{\lambda}$	0.5201	0.5069
	$\hat{\lambda}$	0.4520	0.5113

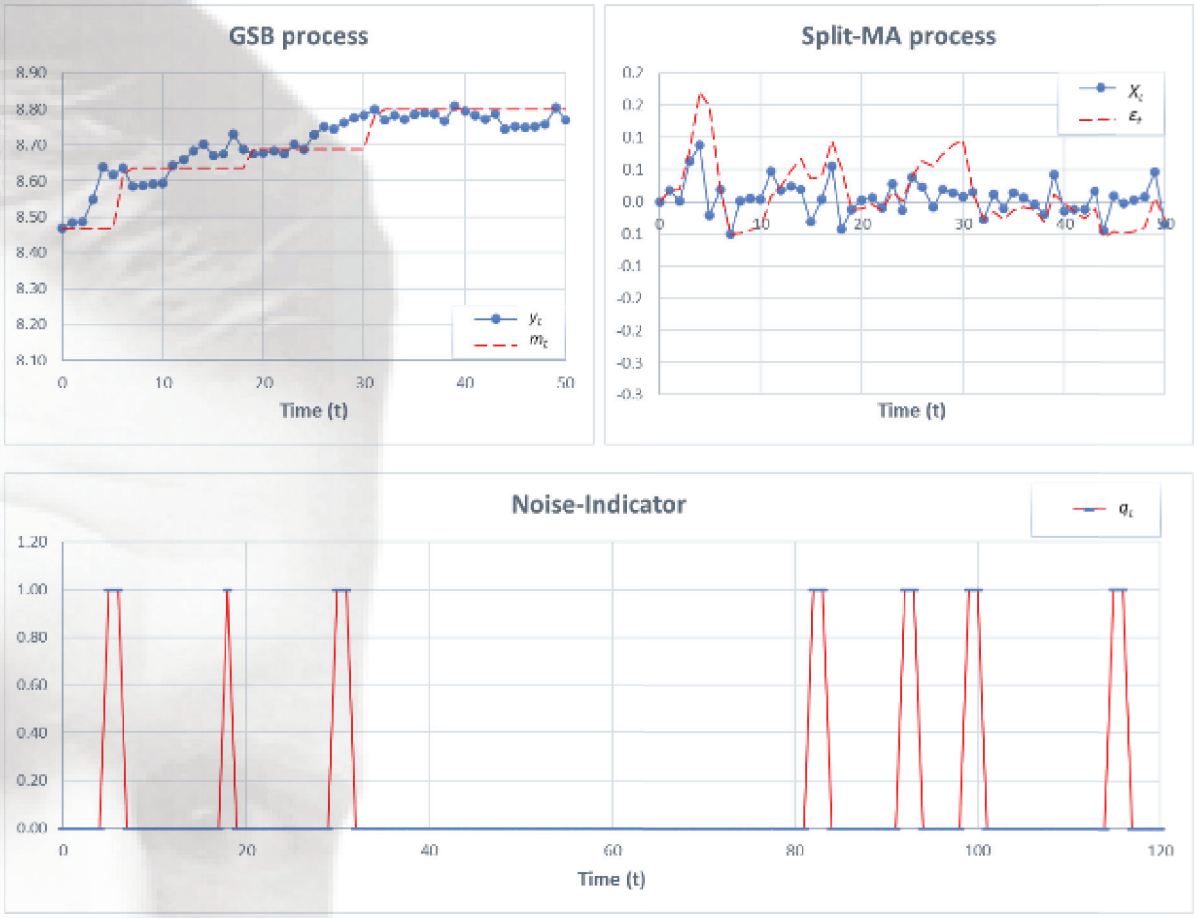


Figure 4 *Plots above: Dynamics of empirical and modeled data for Series A; Graph below: Realization of the Noise-Indicator of Series A.*

The agreement between the modelled and actual data can be seen in above plots of Figures 4 and 5, where in addition to the observed log-volume values ($y_t^{(j)}$), the modelled martingale mean values ($m_t^{(j)}$), increments ($X_t^{(j)}$) and innovations ($\varepsilon_t^{(j)}$) are also shown. It is noticeable high agreement between these series, which can be explained by the theoretical findings presented in Section 2. Namely, the martingale means ($m_t^{(j)}$) are constant in the case when there were no pronounced fluctuations of the series ($y_t^{(j)}$) in the previous time period. Conversely, when fluctuations are pronounced, there is a change in the value of the martingale means, in which case the values of the series ($X_t^{(j)}$) and ($\varepsilon_t^{(j)}$) are then equal.

Finally, the simplest way to detect pronounced fluctuations is based on the value of the Noise-Indicator, that is, the 0-1 series (q_t), which in this case take unit values. As its name suggests, the indicator (q_t) "reacts" to pronounced (and unexpected) changes in network traffic values. Therefore, the case $q_t = 1$ can be considered as "situation" when there is an unusual change in the fluctuations of the observed data series. As an illustration of the aforementioned facts, the realizations of the Noise-Indicators ($q_t^{(j)}$), $j = 1,2$, for both series are shown in the below graphs at Figures 4 and 5. Moreover, as already mentioned earlier, in the case of Series B, there are periodic changes in its values, which can also be observed in the realizations of the indicator ($q_t^{(2)}$).

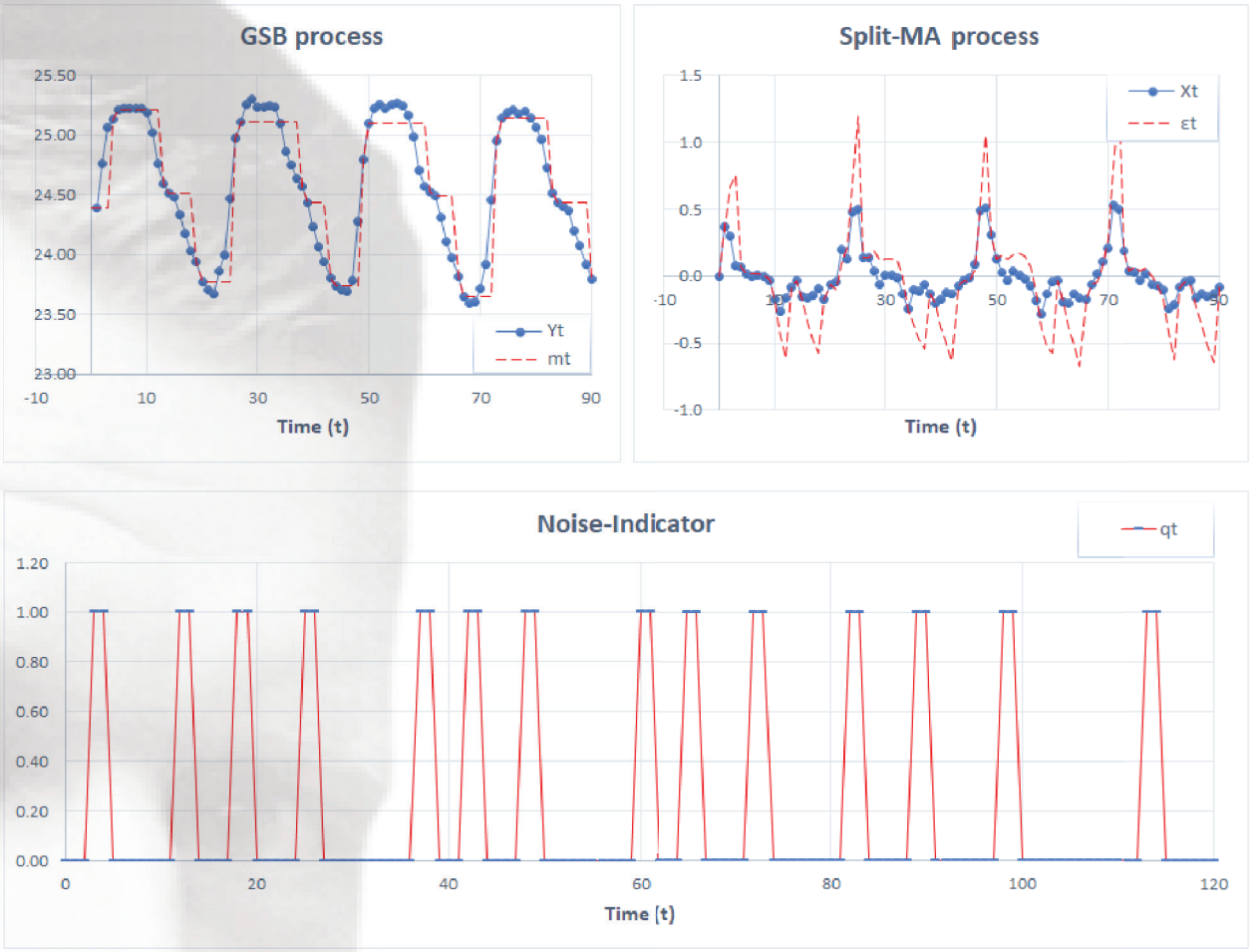


Figure 5 *Plots above: Dynamics of empirical and modeled data for Series B; Graph below: Realization of the Noise-Indicator of Series B.*

Conclusion

The application of the GSB process presented here confirms its possibility in modelling actual the network intrusion detection. It is worth to notice that one of the advantages of this kind of stochastic modelling is that it allows the simultaneous use of both stationary and non-stationary components. Thereby, the asymptotic behavior of these series and the corresponding estimates thus obtained are of particular importance. It should also be noted that the proposed parameter estimation procedure can be implemented algorithmically in a relatively simple way. Finally, let us notice that for threshold parameter estimation some other methods can be used, such as the Empirical Characteristic Function (ECF) method described in (Stojanović, Milovanović, & Jelić, 2016). Certain modifications of this approach are certainly desirable in some future research, in order to more successfully detect various types of attacks on computer networks and other important information systems.

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EDUCATION OF MIGRANT AND REFUGEE CHILDREN IN SERBIA AS PROTECTION FROM CRIMINAL ACTIVITIES

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Purpose

The purpose of this text is to point out the necessity of educating children in migratory movements through Serbia, on the still functioning so-called Balkan migratory route towards destination countries of the EU. The decisions that European countries have made in the last five years trying to manage the refugee crisis have made the movement of refugees, children and adults more difficult and more dangerous. In many European countries, in addition to closing the borders for migrants, the procedures for determining the detention of children have been simplified, and the reunification of children with their parents has been made difficult or impossible. Therefore, Save the Children report (Save the Children International, 2020) warns that these new migration policies should not be created at the cost of children's lives.

It is not known exactly how many migrant children there are in Serbia, because only those in the reception centres were counted and registered ("Deca migranti i izbeglice", 2023). In 2019, 5,241 migrants stayed in them, and we estimate that there are around 2,500 more outside them, while children make a constant 10 percent. About 10 percent of the 27,000 migrants who entered Serbia in 2019 are unaccompanied teenagers, and the number increases by several hundred every month. The trend of increase in the number of migrants started in June 2023, but it is not characteristic only for Serbia, but for the whole of Europe. Five countries from which migrants come dominate, namely Afghanistan, Syria, Pakistan, Morocco and Burundi. Most migrants come from Afghanistan and Syria - 34.82 and 34.50 percent respectively, while Pakistanis are in the third place with 4.35 percent. 3,300 migrants were staying in 15 reception centres for migrants and asylum centres in Serbia in August 2023, and it is assumed that another 500 migrants are currently outside the centres in Serbia. More than 7,000 migrants were displaced in the area of Subotica, the Subotica Forest, and the border place Horgoš, and they were all taken to reception centres. The large difference in the number of the reported and caught attempts to cross the border illegally points to the existing crimes within the context in which people smugglers profit. The largest number, 91 percent, are adult men between the ages of 20 and 40, followed by adult women, but there are also families and unaccompanied minor migrants (Commissariat for Refugees and Migration, 2022).

When it comes to unaccompanied minor migrants, the Commissariat for Refugees and Migration immediately informs the centres for social work, which, by law, take over temporary guardianship in order to protect all children's rights that exist, both in Serbia and according to the UN Charter (Asylum Protection Center, 2018). The Asylum Centre in Vranje is exclusively intended for housing

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refugees from Ukraine. Last year, in 2022, there were 76 of them in the facility in Vranje, of which 20 were school-age children, who have been attending classes regularly since September 1, 2022, which is 26.3 percent of children attending school (Commissariat for Refugees and Migration, 2023).

Migrant[2] and refugee[3] children are members of a marginalized group, which might be almost completely excluded from the entire social environment and education without targeted governmental effort. Moreover, they are systematically exposed to violence by other migrants, smugglers and the police, and other risky life-threatening situations. Although education is a basic human right, migrant and asylum-seeking children[4] face obstacles in accessing any education during the refugee journey due to language barriers and ethnic differences, unresolved legal status, experience of wars, surviving violence, cumulative stress and trauma, and lack of social adaptation.

The biggest challenge is the fact that at any given time there are between 400 and 500 children who have set off on their way to Western Europe alone, i.e. that even around 10 percent on an annual basis for 2019 are unaccompanied children. The largest number of them are boys from Afghanistan, the youngest are ten years old, while the majority are teenagers, from 15 to 18 years old. They are the most vulnerable category, because they are completely unprotected, under the attack of human traffickers, smugglers, repeatedly exposed to all kinds of abuse. Contrary to the stereotypical assumption that these are probably children who ran away from home in a youthful desire for freedom from family constraints in search for adventures, most often they are actually under pressure by their parents and family members who deliberately sent them on their way to Western Europe to escape from hunger and poverty (Mršević & Janković, 2023), and thereby practically hand them over to smugglers. "The families normally ask one member, usually the oldest brother, to go to Europe in search for better living conditions and resources to help the entire family" while some of them "left the country either because of the persecutions operated by the Talibans or because they were afraid to be recruited for the army" (Šantić et al., 2017: 234). On the so-called the Balkan route, they travel to Western Europe for an average of four and a half years, not knowing the local languages, many of them do not even know any other language than their mother tongue. During that period, the "majority of these migrants are technically stranded in Serbia" (Šantić et al., 2017: 237), unable to continue their journey between strictly guarded borders, run out of money and become particularly vulnerable to violence and a series of group criminal activities and actions of individuals. All boys and girls who stay in our country for a long time should start and attend classes, as well as be helped in mastering the education material by young volunteers who are also translators. "School is the only healthy and safe place for them, offering security that is very important and that is our position that children should be included in primary school as soon as possible when they arrive," says the Centre for Protection and Assistance to Asylum Seekers (Ćatić, 2023). A multicultural approach is one of the ways that gives the best results, because it emphasizes the importance of tolerance and acceptance and enables mutual respect, openness and broadening of horizons among different groups (Solarević & Pavlović, 2018). That is why those who stay in Serbia even for a short time, bring back good memories from here.

2 A migrant is a person who temporarily or permanently moves from one geographical area or country to another for various reasons, such as economic opportunities, education, seeking asylum, marriage or other personal or social factors. In this paper, the term "migrant" is used in a broader sense, including different types of human movements.

3 Law on Asylum and Temporary Protection in Art. 2 paragraph 1 to 6 states that a refugee is a foreigner who, due to a justified fear of persecution because of his race, gender, language, religion, nationality or belonging to a certain social group or because of his political beliefs, is not in the country of his origin and is unable or because of that fear does not want to place himself under the protection of that state, as well as a stateless person who is outside the state of his habitual residence and who cannot or because of that fear does not want to return to that state.

4 Law on Asylum and Temporary Protection in Art. 2 paragraph 1 to 4 states that the asylum seeker is a foreigner who submitted a request for asylum on the territory of the Republic of Serbia, on which a legally binding decision has not been made.

Design/Approach

The inclusion of migrant children in the formal education system of the Republic of Serbia is a long-term project implemented by the Ministry of Education, Science and Technological Development with the support of international organizations and civil society organizations, because the international standard is accepted, that "integrating migrants is not an option but a necessity – and one that benefits everyone, creating more inclusive and sustainable cities for all" (OSCE, 2023). It is well known that "one of the main components of any migration and integration policy is the integration of children and young people into the education system, which lays and strengthens the foundations of integration into society for current and future generations. But "apart from the legal obligation, the moral obligation of an adequate and humane attitude towards migrant children, in the uncivilized conditions of their upbringing, should not be neglected" (Solarević & Pavlović, 2018: 239). Examples of good practice have shown that successful integration into the school (educational) system reduces the economic and social marginalization of migrants and creates opportunities for social mobility (Solarević & Pavlović, 2018).

In the first two months of 2016, new developments led to the official closure of the Balkan route. The Serbian authorities have initiated a program of integration for refugee children in order to allow them to attend regular schools, and training for foster parents to adopt unaccompanied minors (Šantić et al., 2017). However, the majority of migrants, mostly young males with a significant component of minors at the beginning refused to move to the centres from the so-called "Afghan Park" (near Belgrade's Bus station) where the illegal crossings were organized. Their wish was not to attend any education program but rather, to move north as quickly as possible while having fear of being deported to another country if regularly registered in that camp.

The education system of the Republic of Serbia faces two key challenges in terms of their education. The first challenge is that children are in transit through Serbia and the length of their stay is unpredictable. Another challenge is the way of organizing and implementing teaching in schools in combined classes of students, but also within reception centres, as well as supporting students through supplementary work after inclusion in elementary school. Experiences in conducting both forms of teaching are positive because it contributes to the reduction of prejudices and stereotypes about migrant children, as well as more effective realization of their legal education in the official education system (Đorđević et al., 2018).

Migrant children and refugees who travel on the so-called Balkan route to the cities of Western Europe are exposed to systemic violence, and the perpetrators are most often the police and smugglers, according to the research entitled "Wherever we go, they do us harm", which was carried out under the auspices of Save the Children organization, Centre for Interdisciplinary Studies of the University of Sarajevo and the Faculty of Political Sciences from Belgrade. During that journey, it often happens that the police beat them, strip them to their bare skin, unleash dogs on them, use electric shock batons or leave them without food and water, shoes and clothes. Children usually have no one to report this violence to. There are children who spend their entire childhood in such conditions and grow up on migrant routes, as journeys to some of them last up to nine years. On the way to the expected countries of destination, children on the move are often physically exhausted, psychologically traumatized and in need of medical assistance and protection (Burgund Isakov et al., 2022). Unaccompanied children are at a particularly high risk of violence, abuse and other problems, so it is necessary to conduct a timely assessment and determine their best interests, adequately assess their age and provide them with special support during their stay in Serbia and the entire process of managing the case. It is clear that the needs of young refugees and migrants, especially adolescents, have not been fully met until now (UNICEF

Srbija, 2021). Children who migrate to Europe using the Balkan route are exposed to violence that threatens their health, well-being, and even their lives. According to children's testimonies, the most frequent perpetrators of violence are border police and smugglers with whom children travel.

Violence in migrant camps is very present, and unaccompanied boys are especially exposed to it, when they were accommodated together with adults. Those children spoke about the violence they suffered, witnessed or threatened, and mostly about the experiences of trying to cross different borders, from where they were forcibly returned, but also about the violence of smugglers in the camps, even about the killing of children and adults on the way.[5] Children say smugglers sometimes kill or leave children and adults in conditions where they could not survive on their own, and their bodies remain as a warning to other children traveling that way. Some of them tried nine or ten times to cross the border of Bosnia and Herzegovina or Croatia and were forcibly returned (Burgund Isakov et al., 2022).

Four of the 48 children interviewed described how they themselves were abducted during the migration journey, and many more talked about other children who were abducted by gangs and then demanded a ransom from their families - most often during their stay in Iran and Turkey. Although they usually did not talk about peer violence, professionals who are in contact with them testified that this type of violence was also present. In addition to other forms of violence, sexual violence is very present, which was witnessed or heard from other children in numerous cases. Although no children said they had been sexually abused, two-thirds said they had seen children being raped. "Beautiful children" were especially exposed to abuse. The fact that in such a way the opinion is formed that these children somehow provoked the abusers themselves "because they are beautiful", thus becoming sex toys who in return are promised some benefits and privileges such as, for example, a free trip (Đorđević, 2023).

Many express the belief that no one can help them, while some of them believe that they cannot even help themselves. Adults in their immediate environment who have power, either to help - such as police officers, or to organize their journey - such as smugglers, are actually, according to children's testimonies, the most frequent perpetrators of violence. Children also often talk about examples of self-harm, suicide attempts, alcohol and drug abuse as strategies that children use to cope with the stress, difficulties, and terrible experiences they are exposed to (Burgund Isakov et al., 2022).

Findings

Migrant children have the same right to education as every child in the world. The right to education of migrant children rests on the basic rights guaranteed by the United Nations Convention on the Rights of the Child (Art. 23, 28 and 29), the Constitution of the Republic of Serbia (Art. 71), the Law on the Basics of the Education System (Art. 3 and 23), the Law on Asylum (Art. 38 and 41) and the Law on Prohibition of Discrimination. This implies a legal obligation (Solarević & Pavlović, 2018) to include migrant children in the education system of the Republic of Serbia, respecting the right to education, free time, play and recreational activities, participation in cultural life (Solarević & Pavlović, 2018). Although education is a basic human right, migrant and asylum-seeking children during the refugee journey, all that has been said points to the fact that children face numerous and often insurmountable obstacles in accessing any kind of education.

5 BBC reported on missing migrant children in Europe: Almost 20 percent of unaccompanied migrant children who were accepted by Kent County Council in Southeast England in 2022 are missing ("Channel Crossings", 2022). And they are certainly not the only missing migrant children, nor is it the only or rare place where they lose their lives.

Bearing in mind that migrant children move in a criminal environment where various illegal activities are a daily occurrence, there is a justified fear that under the influence of such an environment, sooner or later they themselves will opt for such activities. Therefore, the education of migrant children is not only their human right, but can be seen in the light of possible positive effects on the possible reduction of their willingness to engage in criminal activities (Konstantinović-Vilić et al., 2012).

Migrant children in Serbian educational institutions acquire functional knowledge and skills in order to adapt to a new environment, socialization, relief from stress, a sense of security and freedom (Đorđević et al., 2018). Education reduces their sense of exclusion and helplessness that can contribute to criminal behaviour, enables children to integrate into society, develop social skills and adopt community norms and values, which reduces the risk of involvement in criminal organizations and their illegal activities (Mršević & Janković, 2021a). Mental health is improved by education that enables children to develop skills to cope with stress and anxiety, which can reduce the tendency towards anti-social behaviour. Also, education encourages the development of critical thinking, which can help children refrain from impulsive or risky actions (Konstantinović-Vilić et al., 2012). Educated children have a greater chance to use better work opportunities and economic opportunities at a slightly older age, which reduces the motivation to participate in criminal activities as a way to achieve their life ambitions. Research supports the idea that there is a positive relationship between education and crime reduction (Levesque, 2020). This research analyses how risk factors and protective factors, including education, influence adolescent criminal behaviour, noting the positive impact of education on reducing adolescent criminal behaviour. It is important to note that although education has a positive impact, criminality is a complex phenomenon that depends on many factors, including economic, social, cultural and personal circumstances that are all quite unfavourable in the case of migrant children. The provision of education alone will not necessarily automatically prevent crime, but it is part of society's preventive efforts with the aim of a comprehensive and sustainable effect of reducing the crime of migrant children.

Through the educational process, it is important for refugee and migrant children to receive psychological and language/social support, both for themselves and their parents. At psychological workshops, they are offered explanation that education brings economic, social and health benefits, and that it is the most important tool in the fight against discrimination. What is always emphasized, when working with children and parents, is first of all, that the right to education is their right, like that of every child in the world, and that what they are learning here will be of practical use to them wherever they go (Marinković, 2020). It is noticed however, that domestic authorities still do not recognize the special type of violence that girls are exposed to in the form of the custom of early marriage, because it is considered by their families as the best way of female children to be taken care of. The girls themselves say that they live in an environment where there are not many opportunities for education and advancement, because they come from countries that prevent girls from continuing their education after primary school (Đorđević, 2023).

International organizations are also involved in some education programs for refugee and migrant children. In cooperation with the Ministry of Labour, Employment, Veterans and Social Affairs and the Commissariat for Refugees and Migration of the Republic of Serbia, UNICEF is working to strengthen the child protection system by supporting sector coordination, providing technical assistance and improving the competencies of all service providers for quality and timely child care. UNICEF supports the Ministry of Education, Science and Technological Development, school administration, local institutions and partners in enrolling refugee and migrant children in schools and promoting regular school attendance and non-formal education activities, as well as providing training and the development of appropriate information materials in the languages of refugees and migrants (UNICEF Srbija,

2022). The European Union (EU) and UNICEF announced in March 2021, the start of a 5-million Euros worth program to mitigate the impact of COVID-19 on the most vulnerable children and their families in the Western Balkans and Turkey (UNICEF Srbija, 2021). Through the partnership, around 490,000 children and parents will be provided with better access to public services that promote development, education, health services and early childhood care as part of the recovery from COVID-19.

In the Western Balkans and Turkey, UNICEF's cooperation with the European Union aims to protect children's rights to education, health and protection and to ensure that national systems that provide these services are fairer, more inclusive and meet the needs of the most vulnerable children and parents. The slogan was launched: "The formation of the COVID generation cannot be allowed" (UNICEF Srbija, 2021). This program helps provide continued access to essential child care services for nearly half a million children and parents. This will include providing digital tools and quality digital content to families in remote areas, supporting continued health and nutrition services, and improving the availability of early childhood development services.

The EU and the UNICEF multi-sector program will strengthen efforts to improve access to basic services, introduce new types of support for children and families and build the capacity of frontline workers in different sectors. Funding for the program is part of the EU's aid package to the Western Balkans for the response to COVID-19. This support will ensure the continuity of basic services in the field of health, child protection and education for children and their families.

Besides this short-lasting project based educational programs, in order to include migrant children and asylum seekers in the formal educational system of Serbia, significant measures have been taken over the past years. At the end of 2016, a working group was formed to deal with this issue. International organizations and civil society organizations participated in the work of the Working Group. Relatively soon after the formation of the Working Group, and in coordination with the school authorities, 21 children from the Asylum Centre in Krnjača started attending classes at the Branko Pešić Primary School in Zemun, while four girls were enrolled in the secondary Agricultural School in Belgrade. With the support of civil society organizations, these children were provided with transportation and appropriate school supplies, and a certain number of translators - cultural mediators - were hired to help the children during classes. More than 500 children of migrants and asylum seekers started attending 27 schools across Serbia at the beginning of September 2017, and it is planned that in the coming period another seventy children will start attending classes in three schools in Bujanovac and one in Belgrade (Grujičić, 2017).

The expert instruction for the inclusion of refugee and asylum-seeker children in the education and training system regulates in more detail the way of enrolling students and the way in which they should be helped to join the primary and secondary educational process. It represents the first step in building a wider institutional system of support for migrant children within the framework of educational integration. "Migrant children are enrolled when their parents, or other legal representatives or the competent institution submits a request for enrolment to the school, which is obliged to respond within 5 days. Proof of previous schooling in the country of origin, if the student has it, is attached to the request, so that the child can be enrolled in the appropriate class in accordance with the previously acquired level of education. Migrant children who did not have proof of previously acquired education were enrolled by submitting only a request and a certificate of a medical examination" (Solarević & Pavlović, 2018: 23).

When assigning migrant children care was taken to ensure that they are in classes with children of local citizens, as well as not to be in classes with children with special needs, in order to ensure that all additional attention of teachers is devoted exclusively to their adaptation and integration. Development of an adequate individual plan student support is one of the key prerequisites for the effective

integration of migrant children into the regular flow of the Serbian education system. Support for continuing education also takes place through special project programs such as Akelius (Miljković, 2022). That project was launched by a joint initiative of UNICEF Serbia, the Ministry of Education, Science and Technological Development and the Commissariat for Refugees and Migration in order to support the continuous education of migrant children in Serbia. The Faculty of Philosophy in Niš - Department of English Studies was involved in the project for the implementation of the English Language Learning Program for children aged 6-18, and operational support is provided by the organization Indigo. Our teachers employed in schools where migrant children are included, and who have experience working with children and young people from the refugee and migrant population, provide support in mastering the teaching content in regular classes for children aged 6-14 (Ministry of Education, Science and Technological Development, 2020). Another sixteen school children in the Reception Centre in Vranje are included in the project "Akelius platform - support for the education of refugee and migrant children in Serbia - responding to the COVID-19 crisis through online learning" which was launched in June 2020 as a joint initiative of UNICEF and the Akelius Foundation.

Teachers from local schools provide children in three reception centres with continuous online learning support, and ten-week online English language courses are also organized. UNICEF provided 112 tablets that the children use during support classes and language courses, which also strengthens their digital competences. It is expected that around 300 refugee and migrant children will receive this type of support by the end of the project. "Their English language courses are taught by students in their final years of study at the Department of English at the Faculty of Philosophy of the University of Niš, and support in their learning is provided by teachers - mentors who work in local schools where children are regularly enrolled here." It is said that it is very important for children to go to school, to learn everything that is taught there, including English language (Miljković, 2021). The Ministry of Education, Science and Technological Development, apart from formal education, also provides support in the process of informal education of migrant students. English language courses were successfully completed by 51 students from the population of migrants and asylum seekers in the Republic of Serbia, who were enabled to attend initial English language courses through the Akelius project. Through the Akelius project, three centres for the accommodation of migrants/asylum seekers, which have the largest number of children and families in the accommodation, Krnjača, Vranje and Šid (Commissariat for Refuges and Migration, 2021), were supported, and support in learning English was provided for a total of 88 students attending classes within the formal education system in Republic of Serbia. 135 children in 14 elementary and two secondary schools in the territory of the Republic of Serbia are currently included in the regular system of education and upbringing from reception and asylum centres.

In the Republic of Serbia, migrant and refugee children have access to education just like local children, in accordance with the protection of the rights of workers and migrants and their family members, the Convention on the Rights of the Child, and other international documents, as well as national regulations. During December 2022, 182 migrant and refugee students were included in the education system. They attend a total of 51 schools - 33 primary, 16 secondary schools, and two preschool institutions. Of the total number of enrolled children, 68 are from Ukraine. Children attend classes in the following school administrations: Belgrade, Novi Sad, Leskovac, Sombor, Valjevo, Kraljevo, Novi Pazar, Zrenjanin, Užice ("Deca migranti i izbeglice", 2023).

In the course of 2022, 12 mentors were hired who represent the link between the Ministry of Education and the schools attended by migrant and refugee children. Mentors provide continuous support to schools, and thus to migrant and refugee students, in order to make the education system of the Republic of Serbia as accessible to them as possible. Seven translators have been hired through the EU Support for Migration Management in Serbia to help translate teaching material into the student's

native language, primarily for those students who have not yet mastered Serbian language enough to fully follow all the teaching content. Translations of didactic materials were carried out when refugees from war-affected areas began to arrive in Serbia. After the adaptation period, children are included in the education system. Considering that this is not the first time that schools work with refugee students, they are prepared to work with them. Two translators are in charge of translating the materials into the Ukrainian language, so students from Ukraine have access to school materials in their native language ("Deca migranti i izbeglice", 2023).

Originality/Value

Making migrant integration work is a key step for building prosperous communities based on anti-discrimination and equality, where everyone belongs and thrives.
(OSCE, 2023)

Bearing in mind that children and adolescents have the right to equal access to quality, inclusive learning opportunities, the conclusion is that governments must increase efforts to enrol migrant children in mainstream schools, including improving school capacity and providing language support to children and their guardians. It is also necessary to strengthen the child protection system in order to prevent all forms of violence, exploitation and abuse (Mršević & Janković, 2019). It is also necessary, through the education system, to increase the resistance of the environments receiving migrant children from dicriminatory and racist prejudices (Mršević & Janković, 2021b).

There are countries where xenophobia is developing towards migrants, but Serbia is an open society. Serbia knows what it means to be a refugee, having had such situations twice. That is why Serbia wants to act responsibly towards migrants, and pays special attention to minors passing through our country (Đorđević, 2018). Governments of countries receiving refugees have a key role in supporting children so that issues such as anxiety and sadness do not develop into long-term mental health problems, developing destructive, aggressive and self-aggressive behaviour. Governments must redouble efforts to enrol children in schools and address barriers that prevent children from attending school, including increasing school capacity and providing language support to children and their caregivers (Adamenko, 2023).

Regarding access to education, student registration, the principle of equal treatment, prevention of xenophobia and intolerance, the Republic of Serbia fulfils its obligations in accordance with the International Convention on the Protection of the Rights of Workers and Migrants and Members of Their Families, the Convention on the Rights of the Child and other international and national documents, all with the aim of ensuring the conditions for the education of migrant children. By engaging educational institutions in Serbia, from the 2016 year, 98% of children from the migrant population are included in the education system. Professional instructions for the inclusion of refugee students in the education system were adopted in 2017 (Ministry of Education, 2022). The child protection system was strengthened to prevent all forms of violence, exploitation and abuse.

According to the guidelines provided by the European Union, integration should be viewed as a "dynamic, long-term and permanent two-way process of mutual adjustment". The existing normative framework related to the field of integration is contained in Article 46 of the Law on Asylum (Official Gazette of RS, No. 24/2018), and in Article 16 of the Law on Migration Management (Official Gazette of RS, No. 107/2012). Those two articles in principle guarantee the right to integration of persons granted asylum, but not subsidiary protection. It is positive that the Draft Law on Asylum and Tem-

porary Protection, among other things, foresees an almost complete equalization of available rights for persons enjoying refugee status and persons enjoying subsidiary protection, including the right to assistance during integration through education.

The goals of the Refugee and Migrant Crisis Response Plan also contain a strong educational component. In order to provide support for the prevention and mitigation of the impact of Covid-19, UNICEF plans to: provide quality child protection support for 1,100 children, provide prevention and response services to gender-based violence for 1,500 women, girls and boys, enable 500 children benefit from a strengthened and more inclusive formal education system, also provide access to maternal and child care and nutrition services for 300 children under the age of 5, provide culturally appropriate basic necessities, including clothing, baby hygiene products and hygiene kits for women and girls (UNICEF Srbija, 2021).

These measures include providing instruction in the host language, building and maintaining relationships with parents of migrant children, devoting more resources to schools with a high concentration of migrants to allow them to be flexible to student needs, and discouraging associated segregation practices to abilities and socio-economic factors (Janta & Harte, 2016).

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INTERNATIONAL LEGAL REGULATION AND PROSECUTION OF CRIMES OF AGGRESSION

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Purpose

In light of current international events, it would be important to once again examine the international legal meaning of the crime of aggression. In this regard, the subject paper retrospectively considers the progressive development and systematization of rules on the prohibition of aggression in international law. As a fundamental form of "leadership crime" directed against international peace, aggression is considered through the analysis of relevant international legal sources, starting from the Versailles Peace Treaty, through the Covenant of the League of Nations and other contractual acts concluded after the First World War, to the Nuremberg Statute of the International Military Court, the Charter of the United Nations, and General Assembly Resolution 3314 of 14 December 1974, which for the first time in history provides its international legal definition in a comprehensive manner. Considering that the purpose of the paper is not limited exclusively to the definition of aggression present in international public law, the paper will provide an adequate explanation of the meaning of aggression in international criminal law, which resulted from the definition of aggression adopted at the Revision Conference of the International Criminal Court held in 2010 in Kampala, where it was formally included in the text of the Rome Statute (Article 8*bis*), which opened up space for the prosecution of this international crime.

Design/Methods/Approach

The paper is conceptually designed in such a way as to follow the evolution of the legal regulation of the matter of aggression. Considering the various forms of manifestation of this crime in international practice so far, it is clear that it is necessary to re-examine its meaning by determining the range of definitions accepted in international public and international criminal law. In this regard, historical, legal, comparative, linguistic, and teleological methods are used in the work. The paper examines the meaning of aggression through the analysis of relevant international legal acts concerning the general prohibition of aggression at the international legal level. Special emphasis is placed on the analysis of its meaning within the framework of the Rome Statute and the possibility of its prosecution after the establishment of the jurisdiction of the International Criminal Court in 2018.

Evolution of the Legal Regulation of the Aggression

Aggression as an idea was represented in the teachings of ancient philosophers such as Plato and Aristotle, for whom waging war was a "state of mind" or a "natural way to acquire goods" as an integral part of state economic practice. In Roman times, it was considered that aggression could be justified

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by a legitimate aim *(bellum justum et pium esse).* This emphasized the formal side of the war, which could be waged in accordance with Roman law. In the Middle Ages, aggression acquires a broader connotation within the medieval natural law teachings on just and unjust war. In the early patristic teachings of well-known Christian theologians such as St. Augustine, the state is born from aggression, and in order to be valid, it must be ruled with justice. For the Christian theologian and scholastic Thomas Aquinas, justice comes not only from divine laws *(lex divine)* but also from natural laws *(lex naturalis)*, which recognize the legal force and legitimacy of laws in the domain of nature and the human community *(lex humana),* in which reason rules. During the following centuries, these theological ideas were elaborated in legal philosophy and the doctrine of international law, and more or less all theorists and philosophers who dealt with the state and law, such as Thomas More, Hugo Grotius, Alberico Gentili, Francisco de Victoria, Thomas Hobbes, Francis Bacon, Gottfried Wilhelm Leibniz, Baruch Spinoza, Richard Zuch, Christian Wolff, Emmerich de Vattel, Jean-Jacques Rousseau, Montesquieu, Immanuel Kant, and others, promoted their own ideological concepts about just and unjust war (Rivijer, 1898: 215-217; Brownlie, 1963: 5-18; May, 2016:273). In the history of international law, the Peace of Westphalia established in 1648 was an important event for the development of international relations and therefore, for the development of the concept of aggression. This historical event marked the official recognition of the principle of state sovereignty and legal equality, which excluded aggression as a type of unauthorized state act. Aggression meant the violation of international agreements and was directly aimed at the very survival of states. Because of this, it was considered to be opposed to the maintenance of international peace and the established balance of power (Lassaffer, 2004). Although it was justified by various quasi-legal reasons, the aggression had no basis in international law. In other words, for the sake of defense against aggressors, in the period of several centuries after the Peace of Westphalia, the great powers created "sacred" and other types of alliances in order to decide on the basis of their own discretion whether a situation represents aggression or not, when, in order to defend and with an appeal to *casus belli,* to decide on the use of force in international relations. Such a situation lasted until the First World War, when the idea of its legal arrangement matured. After the end of the First World War, the issue of the legal regulation of aggression was put on the agenda of international lawyers and politicians (Le Fir, 1934: 309; Popović, 1931: 178; Radojković, 1934: 194; Sukijasović, 1967: 49; Vasilijević, 1968: 15; Perazić, 1986: 53; Dimitrijević, 2020: 190, etc.). At that time, the idea prevailed in the international community that world peace cannot be preserved without the establishment of a fairer international order and system of collective security. At the base of that new order, the cornerstone should have been the prohibition of aggression, i.e., waging an aggressive war. The attempt to try German Emperor Wilhelm II based on the provisions of the Versailles Peace Treaty, which confirmed the responsibility of Germany and its allies for waging a war of aggression, was unsuccessful. The emperor should have been declared responsible more on the basis of ethical norms "for a supreme offense against international morality and the sanctity of treaties". However, that did not happen because the emperor fled to the Netherlands, which refused to extradite him. Since until then the international community had not regulated the crime of aggression and waging an aggressive war, it was questionable whether the emperor could be tried *ex post facto*. The debate on this issue did not lead to completely satisfactory results, and the prevailing view was that retroactive trial was not possible for criminal acts that were not legally regulated. Therefore, the issue of international legal regulation of aggression has been postponed for a future period. At the Peace Conference in Paris during April 1919, the Pact of the League of Nations was adopted, which was then included in the Versailles Peace Treaty and other peace treaties concluded after the First World War. By the Pact, the member states were obliged to respect the independence and territorial integrity of each member state and, before resorting to war, they were obliged to try to resolve mutual disputes peacefully by diplomatic means (Article 10). The Pact, however, did not fully specify the scope of this guarantee, which is why the question of the illegal use of force in international relations remained open. Thus, on the one

hand, the Covenant of the League of Nations left the possibility of waging war in the event that a period of three months has passed since the arbitration decision was made or after the unanimously adopted report of the Council of the League of Nations (Article 12, paragraph 1 and Article 15, paragraph 7), that is, when the member state refuses to enforce the judgment (Article 13, paragraph 1), as well as when the dispute falls under the exclusive jurisdiction of the states (Article 15, paragraph 8). On the other hand, the Covenant of the League of Nations did not allow recourse to war if peaceful means such as arbitration, a court or the Council of the League of Nations were provided for the settlement of disputes, or if three months had not passed since the date of their decision, i.e., the unanimously voted report of the Council of the League of Nations (Article 12, paragraph 1). Also, the Covenant does not allow resorting to war against a party that agreed with such decisions and reports of the Council (Article 13, paragraph 4), nor resorting to war by a non-member against a member of the League of Nations (Article 17, paragraphs 1 and 3) (Mc Dougal & Feliciano, 1961: 131). Since the Covenant of the League of Nations did not distinguish in a relevant way the connection between aggressive acts and the possibility of waging a legal war (which later proved disastrous in the international community), attempts to correct this situation were made at other levels of the League of Nations. Thus, during the conclusion of the Treaty on Mutual Assistance of 1923, a negative definition of the term aggression was formulated based solely on the subjective criterion of the existence of aggressive intent. As this was not acceptable, the formulation of aggression was further elaborated by Article 10 of the Protocol for the Pacific Settlement of International Disputes (Geneva Protocol) from 1924. According to the Geneva Protocol, any state that the Council of the League of Nations unanimously designates as such is an aggressor. This specifically meant that the aggressor was only a state that acted contrary to the Covenant of the League of Nations and this Protocol. Such a limitation was not satisfactory because it arbitrarily allowed the possibility of aggression against non-contracting states. However, the Geneva Protocol still confirms that the League of Nations system for settling disputes by peaceful means ensures the suppression of international crimes and that war of aggression constitutes a violation of the solidarity that exists in the international community, which in itself is an international crime. The Geneva Protocol was criticized in the Council due to the absence of real decision-making power of the League of Nations on these issues, which is why it did not enter into force. Efforts to legally regulate aggression, however, continued outside the League of Nations system. Thus, during 1924, within the framework of the Conference on Disarmament, a draft Treaty on Disarmament and Security was prepared in which the approach from the Geneva Protocol was confirmed. A further step forward was made by the Treaty on Mutual Guarantees (the so-called Rhine Pact), concluded between Germany, France, Great Britain, Belgium, and Italy in 1925, in Locarno. In addition to treaty guarantees of non-aggression, the Rhine Pact contained specific wording for ordinary and qualified forms of aggression. In this sense, a distinction is made between two groups of acts of aggression. The first includes attack, invasion, and waging a war of aggression, while the second group includes crossing the state border, opening hostilities, and concentrating armed forces on the territory of the demilitarized zone. In case of violation of the provisions of the Rhine Pact on the prohibition of aggression, the possibility of addressing the Council of the League of Nations was envisaged. The next act that should be highlighted refers to the Declaration concerning wars of aggression adopted in September 1927 by the Assembly of the League of Nations. It declared that war was an "international crime". In the Resolution adopted in February of the following year at the Sixth International Conference of American States in Havana, it is prescribed that "war of aggression constitutes an international crime against the human species". Although the reactionary politics of the great powers prevailed in this period, the great powers nevertheless contributed to the progressive development of the regulation of the prohibition of waging aggressive war. Thus, the General Treaty for the Renunciation of War (Brian-Kellogg Pact) of 1928, which was created after long-term negotiations between France and the United States of America, prohibited war as a means of resolving international disputes. Unlike the Pact of the League of

Nations, which leaves the possibility of waging war, albeit in exceptional situations, the Bryan-Kellogg Pact rejects this possibility because it establishes that states, accepting its provisions, "renounce war as a tool of their national policies in mutual relations" (Article 1) (Pržić, 1934: 191–196). Therefore, aggressor states cannot emphasize the justification of their attack on another state, and any state that resorts to armed activities is considered an aggressor. The weakness of the mentioned approach was reflected in the lack of institutional mechanisms for its application, which left the possibility for different arbitrary interpretations (and which was demonstrated in international practice by Japan's invasion of Manchuria, Italy's attack on Ethiopia, and German aggression against Austria and Czechoslovakia) (Avramov, Kreća, 2008: 588). Further attempts to regulate aggression followed in the proposal of the Act on the Definition of Aggressors, which was made into a supplementary protocol for the needs of the Conference on the Reduction and Limitation of Armaments of 1933. The definition of aggression contained in this document includes a declaration of war against another state, an armed invasion without a declaration of war, an invasion by land, sea, or air forces without or against government authorization, bombing the territory of other states, blockade of a coast or port, and providing support to armed groups formed on one's own territory for invasion (YILC, 1951: 36). Article 2 of the proposal stipulates that no reasons of a political, military, economic, or other nature can serve as a justification or excuse for any type of aggression. Although this proposal (better known in diplomatic history as the Litvinov-Politis definition or Soviet definition) served to draft the Act on the Definition of Aggressors, the proposal itself was not adopted. However, the definition of aggression from this proposal was found in several important treaties that the then Soviet Union concluded with other countries, the most important of which is the multilateral Convention for the Definition of Aggression signed in London in July 1933, which promoted the so-called the *principle of priority* by which the aggressor is considered to be the state that first started with some of the prohibited aggressive acts included in the Litvinov-Politis definition. Unfortunately, even this approach to the regulation of aggression did not experience any wider success and support from the international community, which again does not mean that in the light of later events it did not represent a turning point in the history of defining aggression and its consequences, which is also noticeable in the work on regulation after the Second World War (Broms, 1977: 311). However, the overall evaluation of the international legal regulation of aggression under the auspices of the League of Nations and at the aforementioned international conferences held between the two world wars speaks in favor of the fact that the established system of international security has proven to be ineffective. Namely, due to the lack of support from the great powers, the League of Nations was left without the possibility to effectively intervene against states that threatened international peace. Such a situation led to the Second World War, in which the idea of waging an aggressive war was embodied in bloodshed all over the world. At the conference held in London in October 1942, the Allied Governments announced that a United Nations War Crimes Commission would be set up for the investigation of war crimes. In the Moscow Declaration of 1943, the three main Allied Powers (United Kingdom, United States, USSR) issued a joint statement that the German war criminals should be judged and punished in the countries in which their crimes were committed, but that, "the major criminals, whose offences have no particular geographical localization", would be punished "by the joint decision of the Governments of the Allies". At the international conference of the Allied Powers held in August 1945 in London, the Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis was reached (International Humanitarian Law Databases, 2023). At the same time, the International Military Tribunal in Nuremberg was established, and its Charter was adopted. According to the Charter, this Tribunal was supposed to serve for "fair and quick trial and punishment of the main war criminals of the European axis" (Bartoš, 1954: 384). Its jurisdiction was based on existing customary international law and treaties that condemned crimes against peace, war crimes, and crimes against humanity (Ferenz, 2015: 188). Although the Charter did not contain a definition of "aggressive war" (nor was there such a finding in the judgment), neverthe-

less, the Tribunal, after reviewing the facts and evidence, determined that certain defendants had planned and waged aggressive wars against twelve nations and were therefore guilty of a number of different crimes such as murders, exterminations, and other inhuman acts committed not only against members of different armies but also against the civilian population. The Tribunal held that the issue should not be considered further because wars of aggression were "wars in violation of international treaties, agreements or assurances." The term "assurance" means any peace pledge or guarantee given by states (even unilaterally) (YILC, 1950: 276; Trial of the Major War Criminals before the International Military Tribunal, 1947: 216). Hence, according to Article 6(a) of the Statute of the International Military Tribunal, the crime of aggression is classified as a crime against peace, which includes the planning, preparation, initiation, or waging of a war of aggression or a war in violation of international treaties, agreements, or guarantees, or participation in a common plan or conspiracy for the execution of one of the aforementioned acts (Nirnberška presuda, 1948: 11; Prljeta, 1992). The illegality of wars of aggression follows from this definition. The International Military Court established that such wars were prohibited by international law even before the adoption of the Charter (primarily on the basis of international customs), which, according to it, was important not only for determining the responsibility of the state but also for conducting individual criminal proceedings against war criminals in accordance with the legal principle – *nullum crimen sine lege, nulla poena sine lege.* Although it was perfectly fine from the point of view of the legitimacy of the trial, from the point of view of international criminal law, such a position was not completely consistent because it was not realistically based on the aforementioned principle of legality in all its segments (Brownlie, 1963: 150–166; Dinstein, 2005: 118; Škulić, 2015: 22). A similar formulation of aggression is contained in the Control Council Law No. 10 of 1945 and in the Charter of the International Military Tribunal for the Far East in Tokyo (*Historical Review of Developments Related to Aggression*, 2002). This Tribunal was established in 1946 by the proclamation of American General McArthur, who was the Supreme Commander in the Far East for the Allied Powers. Before this Military Tribunal, some of the accused were convicted of planning, preparing, launching, or waging a "declared or undeclared war of aggression" (Ferencz, 2000: 48; UN Preparatory Commission for the International Criminal Court, 2002: 44–114). This legal outcome was soon legitimized in the United Nations system, first through General Assembly Resolution 95 (I) of 11 December 1946, and then through the work of the International Law Commission, which codified the Nurenberg Principles from the Nuremberg Charter and the judgment of the International Military Tribunal (Kaseze, 2005: 128; Bartoš, 1954: 386; Anggadi, French & Potter, 2012: 146; YILC, 1950; Trial of the Major War Criminals before the International Military Tribunal, 1947). Although with that confirmation it was considered that the existence of aggression was generally accepted in customary law, its precise definition was missing. Therefore, within the United Nations system, it was decided to leave the issue to the Security Council, which would decide on the existence of aggression in each specific case (UNCIO, 1945: 448: 448; Gavranov, 1969: 26). This approach has fueled justified doubts about the possibility of finding any satisfactory solution. However, already at the Fifth Session of the General Assembly in 1950, where one of the main topics was the discussion of the rights and duties of states in the event of an outbreak of hostilities, the awareness of higher common interests prevailed. The general political climate in the world, which was "overshadowed" by the crisis on the Korean Peninsula, also contributed to this. The largest number of countries, especially those from the Third World, expressed their willingness to finally regulate aggression under the auspices of the United Nations. Recognizing the complexity of the issues posed by aggression, especially in the conditions of the exacerbated Cold War crisis, the General Assembly, through its Special Committee formed in 1967, gradually managed to secure the acceptance of the draft definition of aggression. On the proposal of the Sixth Committee, the General Assembly adopted Resolution 3314 (XXIX) on 14 December 1974, which included a definition of aggression (GAOR, 1974: 846, etc.). Previously, the Code on Crimes against Peace and Security was drawn up within the prescribed competences of

the Commission for International Law. The original Draft of the Code of Commissions took into account the principles of the Nuremberg Statute. It included the criminal responsibility of individuals but not of abstract entities (YILC, 1951: para. 52). According to the opinion of the Commission, until a permanent international criminal court is established, the Code should be applied by domestic courts. After the Commission completed the first Draft of the Code at its third session held in 1951, it submitted the text to the General Assembly for consideration (YILC, 1951: paras. 55, 57). A revised Draft of the text was adopted at the sixth session of the International Law Commission in 1954. Questions related to punishment were omitted from the text, as it was considered that this issue could be resolved at a later stage (YILC, 1954: para. 49–51, 54). After that, the General Assembly formed a Special Committee to draft the Code on Crimes against International Peace and Security. In the period from 1953 to 1996, the Committee changed its composition, scope, and way of working, facing several issues of state and individual responsibility. (GAOR, 1952: para. 35; 1957: 51; 1974: 846, etc.). Finally, the Draft was adopted in 1996 (YILC, 1996). It did not cover the state's responsibility for aggression, but only the responsibility of individuals (McCormack & Simpson, 1994: 1–55). Article 16 of the Code stipulates that "an individual who, as a leader or organizer, actively participates in or orders the planning, preparation, initiation or conduct of aggression committed by the state, shall be liable for the crime of aggression". However, analyzing the essential content of the crime of aggression and the individual responsibility that this crime entails, it cannot be said that this responsibility is not related to the responsibility of the state that committed the act of aggression through individuals. Hence, it is rightly claimed that the state act of aggression is the *conditio sine qua non* for the individual criminal responsibility of an individual (for so-called *accessory liability*). All the more so because the state as an abstract entity is incapable of acting alone, which is why aggression can only be carried out with the active participation of individuals who have the power to plan, prepare, launch, or implement aggression (highest state officials)? The International Military Tribunal in Nuremberg clearly recognized this reality, stating that "crimes against international law are committed by people, not abstract entities, and only by punishing individuals who commit such crimes can the provisions of international law be enforced" (Nazi Conspiracy and Aggression: Opinion and Judgment, 1947: 51). In the period after the adoption of the Draft Code on Criminal Offenses against Peace and Security of Mankind, the Commission for International Law made a significant step towards the adoption of the draft Statute of the International Criminal Court. At the Diplomatic Conference held in Rome in July 1998, this draft was adopted (Rome Statute), and at the same time, the International Criminal Court (ICC) was established as a permanent international tribunal based in The Hague. (Crawford, 1994). The Rome Statute entered into force upon ratification by the requisite sixtieth state on 1 July 2002. It enjoyed a certain authority because it contained the views of eminent international legal experts and representatives of the most important legal systems in the world, and at the same time, solutions that confirmed the existing customary rules and legal principles in the matter of international criminal law. Hence, it is most likely generally accepted that the crime of aggression exists in international customary criminal law, although its precise definition for the purposes of determining individual criminal liability remains a subject of dispute (Jia, 2015: 569, 571). All the more so because after the Nuremberg and Tokyo trials, there was no prosecution for aggression, and this crime remained in an undefined state until the establishment of the ICC. Article 5 of the Rome Statute limits the jurisdiction of the Court *ratione materiae* in such a way that it is mentioned that the Court has jurisdiction to judge only the most serious crimes, which have been declared as such by the entire international community *(crimina juris gentium)*. In addition to war crimes, crimes against humanity, and genocide, the most serious international crimes also include aggression. In international criminal law, these crimes are considered "core crimes", which, *stricto sensu,* entail direct criminal liability (Max Planck Encyclopedia of Public International Law, 2009: 871–882). However, regarding the crime of aggression, the Rome Statute did not go further and did not define this crime, which left room for its different interpretations in

state judicial practice (Krivokapić, 2017: 66–67). In order to overcome this situation, the Rome Statute provided that the jurisdiction of the ICC would not be exercised for the crime of aggression until a generally accepted definition of this crime was adopted. In this sense, Article 5, paragraph 2 of the Rome Statute provides: "The Court is competent for the crime of aggression after the regulations adopted in terms of Art. 121 and 123, establish the elements of being of this criminal offense, and thus fulfill the previous conditions for establishing the jurisdiction of the Court. Those regulations must be in accordance with the relevant provisions of the Charter of the United Nations". Therefore, during 2002, the Assembly of the member states of the Rome Statute formed the Special Working Group on the Crime of Aggression (SWGCA), which dealt with the issue of aggression. Since the crime of aggression is closely related to the use of force by the state, unlike war crimes, genocide, and crimes against humanity, in which individual criminal responsibility is independent of the existence of state responsibility, it was necessary to amend the Rome Statute. This amendment was postponed until the first Review Conference, which, according to Article 123 of the Rome Statute, should have been held seven years from the date of its entry into force. The first Revision Conference of representatives of member states of the Rome Statute was held on 11 June 2010 in Kampala (Uganda). It adopted the Resolution No. 6 with the new Article 8*bis*, which finally defined the crime of aggression. At the same time, Annex III of this Resolution contains seven "Understandings" that should serve as a supplementary means of interpreting the adopted amendments (Heller, 2012: 1–19). The adoption of the definition of the crime of aggression in the Rome Statute represents a major progressive step that could pave the way for the prosecution of crimes against peace in the future, especially after the activation of the ICC's jurisdiction starting from 17 July 2018 (Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, 2010; Official Records, 2017; Dixon, McCorquodale & Williams, 2011: 543–544; McDougall, 2013: 205–280).

Definition of Aggression According to Resolution 3314 (XXIX) of the UN General Assembly

Article 1 of Resolution 3314 (XXIX) defines aggression synthetically as "the use of armed force by one state against the sovereignty, territorial integrity or political independence of another state or, which is in any other way inconsistent with the Charter, as stated in this definition". Before listing specific cases of aggression, Article 2 of the Resolution states that "the initial use of armed force in violation of the Charter constitutes *prima facie* evidence of the commission of an act of aggression". According to this part of Article 2, aggression is limited to immediate armed aggression. However, the provision does not exclude the possibility of a *lato sensu* interpretation, because in the second part of the provision it is stipulated that the Security Council retains the discretionary authority to qualify the situation in a different way, which is stated by the wording that, "The Security Council may, in accordance with the Charter, conclude that the declaration that if one act of aggression was committed, it would not be justified taking into account other important circumstances, including the fact that the respective acts or their consequences are not sufficiently dangerous". Article 3 of the Resolution lists concrete examples of aggression. Enumeration of aggressive acts does not presuppose a declaration of war, so aggression is represented by: a) The invasion or attack by the armed forces of a State of the territory of another State, or any military occupation, however temporary, resulting from such invasion or attack, or any annexation by the use of force of the territory of another State or part thereof; b) Bombardment by the armed forces of a State against the territory of another State or the use of any weapons by a State against the territory of another State; c) The blockade of the ports or coasts of a State by the armed forces of another State; d) An attack by the armed forces of a State on the land, sea or air forces, or

marine and air fleets of another State; e) The use of armed forces of one State which are within the territory of another State with the agreement of the receiving State, in contravention of the conditions provided for in the agreement or any extension of their presence in such territory beyond the termination of the agreement; f) The action of a State in allowing its territory, which it has placed at the disposal of another State, to be used by that other State for perpetrating an act of aggression against a third State; g) The sending by or on behalf of a State of armed bands, groups, irregulars, or mercenaries, which carry out acts of armed force against another State of such gravity as to amount to the acts listed above, or its substantial involvement therein. The presented definition shows that the concept of aggression in general and special aspects consists of three groups of elements: 1) Objective elements that include the use of force and the initial initiation of the use of force; 2) Subjective elements that sublimate an aggressive intention or intention and, 3) Subject and object of aggression. The examples listed *exempli causa*, from a) to e), represent forms of direct armed aggression, while the examples listed under f) and g) fall under the form of indirect unarmed aggression. All examples are, as can be seen from the text of the Resolution, formally and legally equal. In Article 4 of the Resolution, it is stated that the mentioned list is not final and that the Security Council can determine that other acts also constitute aggression in the sense of the provisions of the Charter. It follows from this that the enumeration made in Article 3 of the Resolution is not limited and is even less legally binding since the Security Council, in accordance with its discretionary powers prescribed by the Charter, can in any case arbitrarily interpret which act constitutes aggression and which does not according to this Resolution. Unfortunately, the mentioned decision left the "door wide open" to legal uncertainty and thus, to voluntaristic decisions of the Security Council. In specifying aggression, Article 5 of the Resolution further clearly describes that, "no reason of any nature, political, economic, military or any other, can justify aggression". The aforementioned provision directly refers to the duty of states not to intervene in the internal or external affairs of other states. It is also significant that it stipulates that a war of aggression constitutes a crime against peace for which international legal responsibility follows. Also, the provision prohibits violation of the territory of other states or acquisition of some special benefits through aggressive actions. Article 6 of the Resolution regulates the permissible cases of use of force. This provision confirms that the Resolution should not be interpreted in a way that expands or narrows the reach of the provisions of the Charter, including the provisions related to functional powers to use force. This article of the Resolution essentially does not prejudge the functions of the Security Council provided for by the Charter (Cahin, 2003: 535; Brownlie, 2003: 705). At the same time, it indirectly differentiates between aggression and the right to self-defense prescribed by Article 51 of the Charter. The possibility of applying the right to self-defense will depend on the assessment of the existence of aggression (Dimitrijević, 2012: 157–191). If one party commits armed aggression in the manner defined above or in any other manner that qualifies as aggression, the affected party has the right to resort to individual or collective self-defense in accordance with the Charter. In Article 7 of the Resolution, the right to self-determination of peoples who were under colonial administration and who found themselves within the framework of the new system of guardianship and administration of the United Nations is affirmed. Their struggle for emancipation and independence does not fall under the term aggression. In this sense, this provision stipulates that the definition of aggression does not prejudice the realization of the right to self-determination of peoples if the peoples were forcibly deprived of that right, as well as their right to fight in this direction and to demand support in accordance with the principles of the United Nations Charter and the Declarations on the principles of international law on friendly relations and cooperation between states in accordance with the UN Charter. Article 8 of the Resolution confirms the principle of functional interpretation of its provisions in such a way that, "in interpretation and application, all provisions are interconnected so that each provision should be interpreted in connection with other provisions". Although the introductory part of Resolution 3314 (XXXIX) states that maintaining international peace and security and taking effec-

tive collective measures to prevent and eliminate threats to peace and prevent aggression is one of the basic goals of the United Nations, from the content of the Resolution, it cannot be concluded that that was also its basic intention since the system of collective security established by the Charter remained the same. This is all the more so because the Resolution does not bind states *stricto sensu*, and especially not the Security Council, in which the application of the principles and rules contained in the Resolution is conditioned by the unanimity of its permanent members (Schwebel, 1972: 446). If we add to the mentioned shortcomings the circumstance that there is no complete agreement in the international community on new forms of aggression, which, for example, imply the initial initiation of an armed conflict with the use of new methods of hybrid warfare (e.g., chemical or biological weapons of mass destruction or the execution of mass terrorist attacks), then it is completely clear that the aforementioned crimes can remain permanently unpunished. However, the prescribed obligation of states to resolve their disputes peacefully, not to use armed force against the people in exercising their right to self-determination and not to violate or appropriate the territory of other states represents a significant "progressive development" of customary rules and principles that per se have corrective importance in the application of general international law contained in the Charter of the United Nations, which were further elaborated and confirmed in General Assembly Resolution 2625 of 24 October 1970 on the principles of international law on friendly relations and cooperation between states in accordance with this Charter (Degan, 1976: 55–57; Račić, 2015: 293). Expressing the hope that the definition of aggression will lead to the prevention of acts of aggression, the Resolution emphasizes the need for simplified implementation of measures to prevent them as well as to eliminate harmful consequences for the rights and interests of victims of aggression. At the same time, it also expresses the desire to further formulate principles by which, in the light of changed circumstances, it would be possible to determine the existence of aggression (Broms, 1977: 299; Henkin et al., 1993: 896, etc.). Viewed from today's perspective, Resolution 3314 (XXXIX) did not achieve much since the permanent members of the Security Council retained their functional powers and the right of veto, which was an effective means of preventing decisions on aggression, and the Resolution itself was formally reduced to a non-binding instruction or recommendation, without a valid legal scope and with a clearly defined purpose in international practice (Šahović, 2008: 194).

Definition of Aggression According to the Kampala Amendments to the Rome Statute

In paragraph 1 of the added Article 8*bis* of the Rome Statute, crime of aggression means "the planning, preparation, initiation or execution, by a person in a position effectively to exercise control over or to direct the political or military action of a State, of an act of aggression which, by its character, gravity and scale, constitutes a manifest violation of the Charter of the United Nations" (Resolution RC/Res. 6, 2010). From the aforementioned wording, it can be concluded that the amended Rome Statute revises the standard accepted at the Nuremberg and Tokyo trials, according to which only a person who is in a position to "shape or influence" the state's policy can be held responsible for aggression. The introduction of such a provision on aggression as a "leadership crime", in paragraph 1 of Article 8*bis*, represents a real deviation from the previous international practice, which was based on treating aggression as a "supreme crime" (Heller, 2007: 477–497). Such "evolution" could be argued by the assessment of the ICC to use its capacities to prosecute those persons who are most responsible for the aggression (Hajdin, 2017: 545). After all, this is also confirmed by Article 25(3) *bis* of the Rome Statute, which further specifies who can bear responsibility for crimes of aggression, and in this connection, responsibility is conditioned "only to persons in a position effectively to exercise control over or to

direct the political or military action of a state". On the one hand, this specification to some extent transposes the standard of "effective control" present in international law on state responsibility into international criminal law because state responsibility requires that the state either issue instructions or conduct and direct armed actions, while individual responsibility requires an individual to be in a position to effectively or directly control the situation and military actions. Essentially, in this way, the definition of aggression as a "crime of leadership" is limited, since compared to other "core crimes" under the jurisdiction of the ICC, it makes the crime of aggression quite unique. On the other hand, the application of "effective control" standard only to the main perpetrators leads to a situation where other perpetrators and accomplices of the crime of aggression remain unpunished, which would be contrary to the intention of the creators of the Rome Statute and the legal legacy from the trial of the main war criminals after the Second World War. In this sense, it is emphasized that even non-officials, such as responsible industrialists or corporate actors, could be subject to criminal prosecution for the crime of aggression. This expanded interpretation also includes a political dimension of criminal responsibility for the crime of aggression, which indicates the connection that exists between this crime and acts of the state that can be included under the definition of aggression (Graziani & Mei, 2017: 57–60; Van der Vyver, 2010–2011: 17). In paragraph 2 of the Article 8*bis*, incriminating acts are listed using the enumerative method, regardless of whether war has been declared, and which, *inter alia*, include: a) The invasion or attack by the armed forces of a State of the territory of another State, or any military occupation, however temporary, resulting from such invasion or attack, or any annexation by the use of force of the territory of another State or part thereof; b) Bombardment by the armed forces of a State against the territory of another State or the use of any weapons by a State against the territory of another State; c) The blockade of the ports or coasts of a State by the armed forces of another State; d) An attack by the armed forces of a State on the land, sea or air forces, or marine and air fleets of another State; e) The use of armed forces of one State which are within the territory of another State with the agreement of the receiving State, in contravention of the conditions provided for in the agreement or any extension of their presence in such territory beyond the termination of the agreement; f) The action of a State in allowing its territory, which it has placed at the disposal of another State, to be used by that other State for perpetrating an act of aggression against a third State; g) The sending by or on behalf of a State of armed bands, groups, irregulars or mercenaries, which carry out acts of armed force against another State of such gravity as to amount to the acts listed above, or its substantial involvement therein (Resolution RC/Res. 6, 2010; Škulić, 2011: 178–180). Consequently, all the listed acts of aggression indicate that "act of aggression" means the use of armed force by a State against the sovereignty, territorial integrity or political independence of another State, or in any other manner inconsistent with the Charter of the United Nations" (Resolution RC/Res. 6, 2010; Jovašević, 2011: 226–227). Analyzing the said formulation, it is concluded that the definition of aggression in the Statute is *mutatis mutandis* harmonized with the definition of aggression contained in the General Assembly Resolution 3314 (XXIX) from 14 December 1974 (Sunga, 1998: 65). Also, according to Article 5, paragraph 2 of the Statute of the ICC, the definition is harmonized with the relevant provisions of the Charter of the United Nations, and above all, with its prohibition of the use of force in international relations (Article 2, paragraph 1(4)). However, the provision from Article 8*bis* of the amended Rome Statute does not foresee the possibility for the ICC to expand the list of acts of aggression in addition to those expressly stated in this provision, which according to Resolution 3314 of the General Assembly, the Security Council can do in relation to the established list of acts of aggression. As a rule, the ICC acts in accordance with the *nullum crimen sine lege* principle, which does not allow any deviations and exceptions from the established definition of the crime of aggression. Since Article 10 stipulates that its amendments shall not be interpreted as limiting or prejudice in any way the existing or developing rules of international law for purposes other than the purposes of the Rome Statute, it is clear that the definition of aggression was adopted at the first Revision Conference in Kampala confirmed

the will of the wider international community to permanently regulate the issue of criminal liability of individuals for the crime of aggression without affecting its legal qualification present in international public law (Rimski statut Međunarodnog krivičnog suda, 2001). However, the definition of the crime of aggression present in international criminal law gave, in a certain sense, normative weight to the definition of aggression in public international law *(ius ad bellum)*. That is why it is assumed that state acts of aggression represent an essential element of the criminal act of aggression in addition to the element of individual acts of aggression, which, according to the general international legal rule on attribution, can be attributed to the responsibility of the state for internationally wrongful acts (YILC, 2001; Kreβ, 2017: 412). In continuation of the above observations, a couple of main observations about court jurisdiction should be highlighted. Namely, the amended Rome Statute in Articles 15*bis* and 15*ter* defines two-tiered jurisdiction (when the procedure is initiated by state referrals or *proprio motu* by the prosecutor, that is, referrals by the Security Council), for the prosecution of the crime of aggression. In that sense, the Rome Statute expressly provides that the determination of an act of aggression by some authority outside the ICC does not prejudge the finding of the Court itself. In other words, the decision of the Security Council to determine an act of aggression in accordance with the functional powers from Article 39 of the United Nations Charter does not bind the ICC. The ICC has complete judicial independence in relation to the Security Council because, according to the Statute, it must make its own assessment as to whether aggression has or has not occurred. In the case of the referral of the state and the *proprio motu* investigation of the Prosecutor, there is a specially developed procedure in which the Prosecutor must first determine whether the Security Council made a decision on the act of aggression. In the event that the Security Council has determined that there is an act of aggression, the Prosecutor can continue with the investigation. If the Security Council has not made a decision on this, the Prosecutor must wait six months before he can proceed with the investigation, provided that the Pre-Trial Division has approved the commencement (Article 15*bis*) (Heinsch, 2010: 734–735). If the Security Council makes a referral to the ICC in accordance with the functional powers from Article 39 of the United Nations Charter that refer to the entire international community, the prosecutor has the authority to investigate the crime of aggression regardless of the territory where the crime was committed or the nationality of the perpetrator. In such situations, it is possible to carry out an investigation against the perpetrator in states that have different legal status, such as states that are parties and that are not parties to the Statute or that have "opt-out" statutes (Article 15*ter*). In the latter case, States parties to the Statute have the option to "opt-out" of the jurisdiction of the ICC by submitting a declaration to the ICC Secretary before committing an act of aggression. The declaration must be submitted before the act of aggression is committed. This possibility refers to the case when jurisdiction is established on the basis of a referral of the state or *proprio motu*, and where "opt-out" also covers the case of citizens of states that are not parties to the Rome Statute.

The Functional Powers of the Security Council and the Jurisdiction of the ICC in Relation to the Crime of Aggression

The topic of international legal regulation and prosecution of aggression, in addition to the analyzed issues, also includes the issue of the delimitation of the functional powers of the Security Council in relation to state acts of aggression and the jurisdiction of the ICC in relation to the prosecution of individual perpetrators of criminal acts of aggression. This delimitation generally originates from the dual nature of the international responsibility of states and individuals. In this sense, the functional powers of the Security Council should not be understood as a prejudicial download of "quasi-judicial" responsibilities because there are no realistic grounds for that in the Charter of the United Nations

(Schabas, 2004: 32–33; Gargiulo, 1999: 68, etc.). Institutional relations between the ICC and the United Nations are generally regulated by a special agreement that formally recognizes the international legal subjectivity, permanence, and independence of the Court (Relationship Agreement between the United Nations and the ICC, 2004). Article 4, point 3 of the Agreement stipulates that: "Whenever the Security Council considers issues related to the activities of the Court, the President of the Court or the Prosecutor may turn to the Council, at his invitation, to provide assistance in relation to issues within the jurisdiction of the Court". Furthermore, since 17 July 2018, since the ICC has officially acquired jurisdiction to prosecute perpetrators of crimes of aggression, the Security Council, acting in accordance with its functional powers from Chapter VII of the United Nations Charter, has the possibility to refer to the ICC a disputed situation that represents in his assessment, an act of aggression, which activates the powers of the ICC to investigate and prosecute the perpetrators of the crime of aggression. The Charter of the United Nations is the legal basis upon which the ICC can investigate such crimes without any consent requirement by the States involved. In doing so, the Security Council should respect the prescribed rule of *nullum crimen sine lege,* as well as the provisions of the Rome Statute on the jurisdiction of the ICC. In this sense, the possibility for the Security Council to indicate which crimes it believes have been committed in a given situation does not prevent the ICC from qualifying certain behavior differently. The jurisdiction of the Security Council therefore remains limited by the jurisdiction of the Court in relation to other "core crimes", which the Court might otherwise qualify. In this regard, the personal jurisdiction of the ICC remains attached to adult citizens of member states or non-member states of the Rome Statute that have accepted the jurisdiction of the Court on an *ad hoc* basis or the jurisdiction can be based on a decision of the Security Council. The territorial jurisdiction of the ICC includes criminal offenses committed on the territory of the state, that is, criminal offenses committed by a citizen on the territory of a member state of the Rome Statute. This jurisdiction can be based on an *ad hoc* basis or on the basis of a relevant decision of the Security Council. Finally, the temporal jurisdiction of the ICC applies only to crimes committed after the entry into force of the Rome Statute, i.e., after 1 July 2002, which applies to other "core crimes" except crimes of aggression (Dimitrijević et. al., 2005: 2225, etc.; *Cryer*, Friman, *Robinson & Wilmshurs, 2014: 166–169*). Considering all aspects of the jurisdiction of the ICC, it follows that when the Security Council, acting on the basis of Chapter VII of the UN Charter, presents to the Prosecutor a situation that it considers to be a crime of aggression and is under the jurisdiction of the ICC, then there are no limitations *ratione loci* and *ratione personae* that could apply in other situations since the Prosecutor can be asked to conduct an investigation against individuals in the territory of any state, including states that are not parties to the Rome Statute, and regardless of their nationality. In the absence of this referral by the Security Council, the Prosecutor would have the right to initiate an investigation *proprio motu* or at the request of a state party to the Rome Statute. In such situations, the Prosecutor should first determine whether the Security Council made a decision that determined that an act of aggression had been committed by the state in question. If such a decision is not made within six months of the date on which the Prosecutor notified the Security Council, the Prosecutor shall have the right to proceed with the investigation, provided that the ICC Pre-Trail Division has authorized him to commence the investigation. Therefore, there is no requirement for the Security Council to actively determine the existence of an act of aggression or to authorize ICC investigations for the Court to proceed. It is very important to see that Article 15bis of the amended Rome Statute created a regime based on consent, which reduced the scope of the Court's jurisdiction. Hence, where the jurisdiction of the Court is triggered by a state or by the Prosecutor *propio motu,* the Court shall not exercise its jurisdiction over the crime of aggression when committed by a national of or on the territory of a state that is not party to the Rome Statute. Also, in the event that the procedure is initiated by the state or the Prosecutor *proprio motu*, the Security Council has the right, according to Article 16 of the Rome Statute, to request the ICC not to initiate the investigation procedure, i.e., to suspend it for 12

months, which was already demonstrated in the practice of the ICC regarding the time-limited exemption of members of UN peacekeeping missions from judicial jurisdiction (Etinski, 2004: 224). The jurisdiction of the ICC for the crime of aggression was activated by Resolution No. 10, adopted at the session of the Assembly on 14 December 2017, to enter into force on 17 July 2018 with a delayed deadline (Assembly of States Parties to the Rome Statute of the ICC, Official Records, 2017). On that occasion, states interpreted the scope of the changes to the Rome Statute from Kampala rather restrictively. Namely, they established a dual regime of jurisdiction of the ICC for every case referred to it by the Security Council for resolution, regardless of the consent of the state for the crime of aggression, and also for cases when the Prosecutor acts *proprio motu* or on the basis of the request of the state, with the fact that the state on whose territory the aggression was committed and the state of citizenship of the perpetrator of this criminal act ratified the amendments to the Rome Statute (Bandov, Ogorec, 2020: 65). At the same time, it should be borne in mind that the role of the ICC in the enforcement of jurisdiction over the crime of aggression is, conditionally speaking, not independent, but that there is an influence not only of the Security Council, but also of the member states of the Rome Statute. Therefore, according to this provision, the ICC cannot initiate proceedings to determine responsibility for acts of aggression against states that have not consented to the jurisdiction of the ICC. This rule is also confirmed in Article 121(5) of the Rome Statute, which stipulates that: "In respect of a State Party which has not accepted the amendment, the Court shall not exercise its jurisdiction regarding a crime covered by the amendment when committed by that State" (Akande & Tzanakopoulos, 2017: 35–36). Accordingly, it is clear that the Rome Statute demarcated the jurisdiction of the ICC in relation to the Security Council. Namely, in each individual case in which there is a well-founded suspicion that aggression has been committed, its objective and subjective (material and mental) elements of criminal law (*actus reus* and *mens rea*) are, as a rule, determined by the ICC, while the political background and legal qualification in terms of the provisions of the Charter are determined by the Security Council, adhering to its functional powers prescribed by Chapter VII of the Charter in relation to the maintenance of international peace and security. In this sense, it is very important to note that according to Chapter VII of the Charter, for the exercise of the aforementioned functional powers, it is assumed that there is a threat to peace, a breach of peace, or an act of aggression in interstate relations. Although the Charter does not clearly define these terms anywhere, in the current practice, the Security Council has determined their presence, existence, and content in each specific case. In doing so, the Security Council often avoided taking a specific position on the legal nature of the situation (especially in the case of non-international conflicts). Such behavior was not in accordance with its obligations to preserve the peace nor with the functional authorization prescribed in Article 39 of the Charter, which foresees the prior determination of the existence of a threat to the peace, a breach of the peace, or an act of aggression (Komarnicki, 1949: 85; Oppenheim, Lauterpacht, 1952: 52; Wright, 1956: 525). When determining the existence of threats to peace, the Security Council is faced with legally unclear situations, in contrast to situations that arise as a result of a breach of peace or an act of aggression. The prevailing view in doctrine is that a threat to peace is caused by state behavior that is not necessarily characterized by military operations or operations involving the use of armed force, or even the threat of force. Namely, it is considered a threat to peace when there is an immediate danger of its violation. When determining the second condition from Article 39 of the Charter, the Security Council examines the use of any means of coercion and unjustified external influence that, by threat or application, reaches the level of disturbing the peace (UNICIO, 1945: 8). The state of breach of peace is closely related to acts of aggression, which results from the interpretation of the goals of the United Nations provided for in Article 1, paragraph 1(1) of the Charter. Violation of the peace, according to this provision, is one of the forms of aggression. Any aggression is a breach of the peace, but not every breach of the peace is aggression at the same time. It follows from this that, in order for a breach of peace to constitute an act of aggression, it would be necessary for armed aggression or an armed attack to have

been carried out, i.e., for armed force to have been used (*agression armée*). This is exactly what the difference between endangering and breaching the peace is based on. Consequently, the use of armed force in international relations, the intensity and duration of which have reached a certain level, is a necessary minimum for distinguishing threats from violations of international peace. Namely, in situations where there would be a breach of the peace, regardless of whether it is also aggression, the actions of the Security Council are practically conditioned by the provisions of Chapter VII of the Charter. In the event of a threat to the peace, the factual situation that indicates whether the threat is potential or has already occurred is also taken into account. In the first case, the procedure before the Security Council takes place based on the provisions of Chapter VI. The transformation of a potential threat into a real one leads to the transformation of the factual and legal situation, which turns the initiated procedure under Chapter VI into a procedure under Chapter VII of the Charter. When determining the third condition from Article 39 of the Charter, the Security Council is authorized to investigate whether there is aggression. Since the Charter of the United Nations does not contain a definition of aggression, nor does it define its legal term, the interpretation is made in the context of the term "aggression" used in Article 1, paragraph 1(1) of the Charter, which defines the goals of the United Nations. These goals, among other things, also refer to the maintenance of international peace and security, which is related to the provisions of Article 2, Paragraph 1(4) of the Charter, which provides for a general prohibition of the use of force and the threat of force in international relations, and Article 39 of the Charter, which foresees the activation of the Security Council in case of violation of the aforementioned prohibition. If to this is added the provision from Article 51 of the Charter that stipulates the right to self-defense against any armed attack, it would be logical that it would be possible for the Security Council to determine the existence of an act of aggression based on the threat or use of force. This presumption foresees the fact that the threat of force or the use of force under the Charter is illegal, unless it is carried out in self-defense, in the process of executing the decisions of the United Nations bodies, i.e., in the cases prescribed in Articles 106 and 107 of the Charter, which refer to the taking of measures against enemy states from the Second World War (Kreća, 2007: 170). Finally, it should be concluded that aggression inevitably causes serious and dangerous consequences for world peace and security. If armed force is used in aggressive actions, the consequences will consist of a breach of peace and immediate armed aggression. In the case of the use of some other types of aggressive actions, for example, subversive, unconventional, or hybrid forms of warfare, the consequences will be manifested through a threat to peace or through unarmed, i.e., indirect aggression. It is quite certain that in both of these cases, aggressive actions would entail international legal responsibility. However, for the first type of aggression, it would be international legal responsibility *in concreto*, while for the second type, political and not legal responsibility or condemnation would follow. This conclusion is indicated by the provisions of the Charter of the United Nations, which condition the system of collective security by prior examination of threats and violations of the peace, i.e., acts of aggression (Šahović, 1967: 57–66; Jelić, 1965: 60–72). Unfortunately, this does not lead to any encouraging conclusion, because the mere existence of the definition of aggression in international public law and international criminal law does not presuppose any special guarantee of the successful functioning of the collective security system of the United Nations (which has been repeatedly demonstrated in international practice when unilaterally undertaking so-called *humanitarian* or *pro-democratic interventions*) (Dimitrijević, 2009: 92–96). Hence, it would probably be logical to conclude that even the ability of the ICC to prosecute all perpetrators of crimes of aggression cannot be up to the task, as shown by its practice so far.

Findings

From the paper in question follows the finding that the international legal definition and prosecution of aggression were a long and arduous task with an unpredictable outcome and legal consequences. The first attempts to formulate aggression through a universally binding definition took place after the end of the First World War, within the framework of the League of Nations and at the multilateral political level. The impossibility of reaching a consensus on this issue was partially rectified after the Second World War at the trials of the main war criminals of the Axis Powers in Nuremberg and Tokyo. Then, in fact, the principles of international law on individual criminal responsibility, which were contained in the Statute and judgments of the International Military Tribunal in Nuremberg and the International Military Tribunal for the Far East, were confirmed. However, this generally did not solve the problem of aggression affecting the *ius ad bellum*. Only with the introduction of the rule on the prohibition of the use of force and the wording of Article 39 of the Charter, on the basis of which the Security Council has the discretionary right to decide on the maintenance or establishment of international peace, was a partial compromise made. This is because for the great powers and permanent members of the Security Council, the mentioned "solution" was much more acceptable than for the rest of the world, because in situations where one of the permanent members of the Security Council would be the aggressor, the possibility of Security Council decisions would be prevented by their right of veto. This certainly speaks of the true state of international relations and the fact that the use of the right of veto in the Security Council calls into question the principle of legal equality as well as the general legal principle that "no one should be a judge in his own cause" *(nemo debit esse judex in propria causa)* (Caesius, 1999: 144). Therefore, it was necessary to reach any compromise in order to continue the discussion on the legal regulation of aggression. This happened with the loosening of Cold War restraints, when the policy of *détente* between the then superpowers was promoted, which created the possibility of reaching a final agreement on the regulation of aggression in public international law under the auspices of the United Nations. With the adoption of the famous General Assembly Resolution 3314 (XXXIX) of 14 December 1974, aggression was finally defined. The definition contributed to the progressive development not only of public international law but also of international criminal law, as it served as the basis for defining the crime of aggression first in the Draft Code of Crimes against the Peace and Security of Mankind of the United Nations International Law Commission from 1996 and then in the amended Rome Statute of the ICC. This certainly made great progress in determining individual criminal responsibility because aggression cannot essentially be separated from the state's responsibility. Namely, according to the general rule, the crime for which an individual should be held accountable can also be attributed to the state if the individual worked on behalf of the state. Thus, according to the definition contained in the Draft Code of Crimes against Peace and Security, it is confirmed that the crime of aggression can only be committed with the active participation of individuals who have the power to plan, prepare, initiate, or carry out aggression (which refers to the highest state officials). This definition of aggression, along with the definition of aggressive acts contained in General Assembly resolution 3314, served as a basis for defining the crime of aggression in the amended Rome Statute of the ICC adopted in 2010 at the first ICC Revision Conference in Kampala (Uganda). In Article 8*bis* of the amended Rome Statute, aggression is described as "the planning, preparation, initiation or execution, by a person in a position effectively to exercise control over or to direct the political or military action of a State, of an act of aggression which, by its character, gravity and scale, constitutes a manifest violation of the Charter of the United Nations". With regard to specific illegal acts, which as a rule are against the prohibition of the use of force against the sovereignty, territorial integrity, and political independence of states, this additional article of the Rome Statute *mutatis mutandis* contains the acts enumerated in the definition from General Assembly resolution 3314. Given that the provisions of the Rome Statute stipulate that its amendments shall not

be interpreted as limiting or prejudicing in any way the existing or developing rules of international law for purposes other than the purposes of this Statute, it is clear that the definition of aggression adopted at the conference in Kampala confirmed the will of the wider international community to permanently regulate the issue of criminal liability of individuals for the crime of aggression without affecting its legal qualification present in international public law. Accordingly, and taking into account the objective *(actus reus)* and subjective elements *(mens rea)* of this criminal act, as well as its manifestations in reality related to its character, gravity, and scale of harmful consequences, the amended Rome Statute gave the ICC the authority to prosecute perpetrators of aggression, i.e., "persons who are in a position to effectively exercise control or direct the political or military action of the state" (which is why the crime of aggression is treated as a "leadership crime" that threatens international peace). In this way, a wider part of the international community created a new mechanism to enforce the most important rule of public international law – the prohibition of the use of force in international relations (which *per se* does not refer to the application of the right to individual and collective self-defense, as well as actions that would be authorized by the Security Council in accordance with the Charter of the United Nations). Consequently, the ICC, to a certain extent and depending on the limitations of its jurisdiction, would be able to investigate and prosecute the leaders of states responsible for the crime of aggression, that is, for the most serious forms of violence due to the illegal use of force against other states. It certainly contributes to a more efficient international legal order, but also to the efficiency of national justice systems, which, according to the principle of complementarity, retain responsibility for the fair trial of perpetrators of crimes of aggression on behalf of the entire international community (Clark, 2013). Finally, it should be noted that there is an open question regarding the legal nature of the Rome Statute, which leaves doubt regarding the aforementioned statement. Namely, in the theory of international law, opinions are divided because some believe that the provisions of the Statute are of a procedural and not substantive legal nature, which further indicates that aggression is present primarily in international customary law. *A contrario* interpretation would mean that the provisions of the Rome Statute are valid for the committed crime of aggression if the perpetrator was under the jurisdiction of the ICC at the time of the crime. In the latter case, which is more prevalent, the legality of the proceedings against the perpetrators of the crime of aggression would not be questioned except in case of violation of the provisions of the Rome Statute itself (Milanović, 2012: 23). Therefore, it seems that an authentic interpretation of this issue would eliminate possible doubts as well as on other issues concerning the acceptance of obligations from the amendments to the Rome Statute, which is, after all, an essential prerequisite for the legality of prosecuting the perpetrators of the crime of aggression, but also for achieving international peace and justice (Zimmerman, 2012).

Originality/Value

The value of this work for science derives from the historical and comparative legal analysis of the most important international legal acts that determine the meaning of one of the "core crimes" in international and international criminal law. At the Versailles Peace Conference, and then within the League of Nations and at regional conferences devoted to key political issues, attempts were made to legally regulate aggression and to prohibit the waging of an aggressive war. Although these attempts led to limited legal sanctioning of aggressive war, all these attempts "more or less" failed. The cause was the reactionary policy of the great powers that undermined the collective security system established by the League of Nations. All of this resulted in the complete collapse of the system of international relations and the outbreak of the Second World War. The execution of numerous acts of aggression during the Second World War postponed the issue of international legal regulation of aggression for

the post-war period. However, the Second World War was a demonstrative example of how international relations should not develop. The main assumption for that thesis was the protection of international peace and security, which could not go separately without establishing a prohibition on the use of force in international relations. Under the auspices of the United Nations, that prohibition was generally established in its Charter, which was the first step towards realizing the idea of the need for international legal regulation of acts of aggression. International legal acts and resolutions adopted by the United Nations on this matter in the previous period, therefore, have great value for international law. In this sense, the subject analysis indicates that aggression is beyond any doubt one of the "core crimes" that threatens the vital values of states, from sovereignty and territorial integrity to political independence. It causes serious and dangerous consequences for world peace and security, which is why it is contrary to general international law contained in the UN Charter. Unlike the international legal definition of aggression, which concerns determining the responsibility of states for violating *ius ad bellum*, the international criminal law definition of aggression adopted by the ICC refers to determining the legal responsibility of individuals who are in an effective position to control or direct the political and military actions of the aggressor state. In this sense, this paper has original value because it points to the insufficiently specified delimitation of the functional powers of the Security Council on the one hand and the jurisdiction of the ICC to judge in each individual case the individuals responsible for the crime of aggression on the other hand. At the same time, when there is a well-founded suspicion that aggression against the state has been committed, its objective and subjective (material and mental) elements, as a rule, are determined by the ICC, and the political background and legal qualification in terms of the provisions of the Charter are determined by the Security Council, adhering to its functional powers prescribed in Chapter VII of the United Nations Charter, which refers to the maintenance of international peace and security. But, for the sake of truth, it should also be mentioned that the Security Council, as the supreme executive and political body of the United Nations, in its long-term practice did not demonstrate its functional powers in a legally consistent manner, which left room for various voluntaristic interpretations (Gaja, 2002: 124, etc.). In such a situation, defining the conditions for criminal prosecution for the crime of aggression requires delicate work on more precisely harmonizing the competences and methods of action of the Security Council and the ICC (Trahan, 2019: 471–483). This is primarily because, in light of the complexity of modern warfare and the involvement of non-state actors in armed conflicts, the limited nature of responsibility for the crime of aggression requires finding an appropriate balance between the goals of advancing international criminal justice and protecting peace in the world. (Boas, 2013; Graziani & Mei, 2017: 57; Liakopoulos, 2020: 153).

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PUNISHEMENT IN THE PRE-ZONE OF ENDANGERING THE PROTECTED VALUE: *PRO ET CONTRA*?

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Introduction

Democratic state implies democratic criminal law. This was the main tendency in the time of the adoption of the Criminal Code of the Republic of Serbia (CC). Even though the codification in the field of substantive criminal law was something that was waited for a long period of time, in 2005 The Republic of Serbia gained modern and liberally oriented systematic legal document of criminal law provisions (Ristivojević, 2012:43-44). However, the dynamic of modern forms of criminality forces the legislator to make constant changes in order to cover all the new forms of dangerous social behaviour that need to be incriminated. But, the changes need to be done in certain manner and order, due to some of the accepted and proven dogmatic standards and values of contemporary criminal law. They have to be done cautiously, systematically and exceptionally. On the other hand, nobody can expect that criminal law should never be changed, especially because of the application the accepted principle that *ius criminale in status semper reformadus est.*

CC was changed and amended seven times during the 18 years of its existence. Some of those changes were necessary and in line with the needs of applying European standards and internationally accepted obligations from the relevant law documents. Some of them were the result of the need to make legal provisions more clear and applicable in practice. Some of the changes were made in order to exclude mistakes and incoherency between the norms themselves. But, most of the changes were not in accordance with the main principles of the basic text of the CC, from the time of its adoption, and were the changes which made the CC much more unclear, inapplicable and incoherent. Furthermore, most of them were made in a wrong direction, which moved the CC away from its original orientation and conception. Overcriminalization, continuous and almost unlimited tightening of the repression and making the criminal zone increasingly wider-conceived are the negative trends in criminal policy of the Serbian legislator, and in this paper only one of them will be the subject of the discussion and criticism (Bodrožić, 2020:395).

The main purpose of the paper is to point out and to explain the legal nature and the quality of the exceptions to the general rule that the criminal justice system is only initiated at certain stages of the commission of a criminal offence. As modern serious forms of crime require a more effective criminal law response, states often seek changes in the area of substantive criminal law in order to facilitate the processes of solving and proving the mentioned criminal offences. Establishing how justified are the aforementioned activities and what is the difference between the demands of criminal policy and the accepted dogmatic solutions is the main purpose and goal of this paper.

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The paper is organized in three chapters, besides the introductory remarks and the conclusion. The first chapter deals with general rules of the potential stages in criminal progression**.** The second chapter deals with the frequent interventions of legislators in the Republic of Serbia in the direction of punishment in the early stages of criminal progression, while the third chapter analyses arguments *pro et contra* the analysed tendencies.

This research is strictly theoretical one and that is why traditional methods in law research - dogmatic, normative and, in some part, comparative method – have been used.

Authors' approach is extremely critical in accordance with the main hypothesis of the paper which can be defined as importance of critical approach to over-widening the scopes and limits of the criminal law reaction in a pre-zone of endangering the protected value.

The Potential Stages in Criminal Progression-General Rules

The General and the Special part of the CC are the parts of the same law text. They are connected and intertwined. The General part provisions are meant to be applicable to all incriminations in the national criminal law system. That is how it should be. But, the exception confirms the rule. Sometimes, it is necessary to make some modifications within the Special part, in the field of specific incrimination. That policy is not a problem. But when those modifications are not rare and unique, than the question can be asked: are those deviations from the general rules acceptable from the point of view dogmatic principles of legality, but namely legitimacy?

Completed criminal offence is a general form of punishable behaviour. However, there are situations in which the criminal offence stays unfinished, and that is why criminal law theory recognizes several potential phases in the criminal progression (Stojanović, 2020:171).

Those are: making a decision to commit a criminal offence, preparation of a criminal offence, attempt and completed criminal offence. About the first potential phase, making a decision to commit a criminal offence, it is indisputable that it is completely out of the criminal zone. An old Latin phrase *cogitations poenam nemo patitur,* is applicable and necessary in a modern democratic state, and it is not a question of a debate. The first and the last phase in a criminal progression are not a problem. For the first one there is a consensus that it should never be punishable, and the last one is a general rule and standard in a punishing process.

In positive Serbian criminal legislation the first generally punishable phase is an attempt of a criminal offence, under certain circumstances. Under Art. 30 of the CC it is written that "whoever intentionally begins the execution of a criminal offence, but does not complete it, will be punished for the attempted criminal offence for which the law can impose a prison sentence of five years or a heavier penalty, and for the attempt of another criminal offence, only when the law expressly prescribes punishment for that attempted criminal offence" (*Criminal Code of the Republic of Serbia, Official Gazette, No. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016 and 35/2019).*

The theoretical position of the attempt is between the preparation and completed criminal offence. Therefore it is important to distinguish the moments and the limits of the punishable behaviour (Stojanović, 2020:177).

The issue of punishment for the preparation of a criminal offence is a complex one. Contemporary legislators, both the national one and the legislators in modern European democracies, take the stand

that the main criteria for punishing the preparation of a criminal offence should be value of a protected object and the intensity of its endangering.

So, there can be two modalities for punishing the preparation of a criminal offence: predicting preparation as a separate criminal offence, and predicting the punishment of a preparation as a stage in a commission of a criminal offence.

Criminal acts of preparation conceptually imply moving the border of the criminal zone backwards, to a phase that precedes the emergence of the consequence, to a phase of planning and preparation, which implies that a criminal offence was committed in the pre-zone of endangering the legal value, even though the behaviour is emphatically far from the threatened evil that should threaten it (*Core Concepts in Criminal Law and Criminal Justice,* 2020:54).

In the earlier Serbian legislation, before the adoption of the current CC, in the case of certain criminal acts, their preparation, as a separate phase in their realization, was also criminalized. Since the formulation "who prepares the criminal offence" was imprecise and inconsistent with the principle of legality, the legislator provided an orientational definition of preparatory actions for four groups of named preparatory actions: acquiring and equipping means for the commission of a criminal offence, removing obstacles for the commission of a criminal offence, agreeing, planning or organizing with others the commission of a criminal offence and other actions that create the conditions for immediate committing the criminal offence, which do not represent the act of committing the criminal offence.

Preparatory acts in the narrower sense, *delicta preparata*, which imply the general concept of preparatory acts common to all criminal acts, are no longer punishable, but this principle has not been consistently implemented. Therefore, the legislator decides on the second option, the introduction of punishment for preparatory actions, by raising the activity of preparation to the level of execution, within the framework of a special part of the CC, the so-called *delicta sui generis.* This type of preparatory actions can also be recognized as a phase in the committing of a criminal offence, but they enjoy an independent criminal-political justification, they have a corresponding criminal amount, and with regard to actions determined in this way, nothing is disputable, except for the fact that they essentially represent a disavowal of general principles, which should be applied to all criminal acts in the Special part (Bodrožić, 2022: 159).

Interventions of the Legislator in the Republic of Serbia in the Field of Punishment in the Early Stages of the Criminal Progression

General attitude about punishable phases in criminal progression is provided in the provisions of the General part. However, in certain situations, the legislator introduces the deviations from this general institute on the level of an abstract wrong, as a special form of a criminal offence, or a separate criminal offence. This can be considered as a way to modify certain needs of enhancing the potential performance of the legal norm itself, but only in the form of an exception.

In 2006, when the CC entered into force, even if the attitude toward excluding preparatory actions as a potential punishable phase in the criminal progression within the norms of the General part of the CC was accepted, legislator made one obviously deviating provision. It was the case with Art. 320 of the CC, under the title Preparation of acts against the constitutional order and security of the Republic of Serbia, which defines that preparation consists in procuring or equipping means for the commission of a criminal offence, in removing obstacles for the commission of a criminal offence, in agreeing,

planning or organizing with others the commission of a criminal offence or in other actions that create the conditions for the immediate commission of a criminal offence (Milošević, 2022:191-193). At this place it should be emphasized that the legislator in 2006 first omitted the provision on preparatory actions as a general criminal law institution and thus made it impossible to punish for the preparation of certain criminal acts, without specifying what this preparation consists of, but already in the same edition made a deviation of this principle in the Special part, by providing a collective provision on punishment for the preparation of criminal acts against the constitutional order and security of the Republic of Serbia, as a separate act.

This exception was the only one of this kind, so it was quite acceptable to continue to exist within the complete text of the CC. But the following changes introduced during the period of the legal existence of the CC were continuously characterised by implementing newer forms of separate offences, which is not in accordance with the attitude about the rare exceptions in this field.

Tendencies to prevent crime at all costs impose a new, unusual function, a security function, in the criminal law of the EU member states. It serves the implementation of the preventive paradigm, which arises as a result of the state's efforts to prevent serious forms of crime, such as terrorism, organized crime and corruption. Such tendencies shift the centre of gravity of the criminal law reaction to the zone of pre-endangerment of the protected value, introducing specific *ante delictum* measures, such as predicting preparatory actions as a separate act of execution or predicting danger as a reason for criminal law reaction (Bodrožić, 2022:160).

The idea of a purely preventive oriented criminal law, which protects citizens and society to a much greater extent within the framework of broader security law, may seem tempting at first glance. However, this is a dangerous idea. It is not certain that such "new" criminal law would perform better protective function than traditional criminal law, but it is very likely that it could lead to totalitarianism, some elements of which are already visible today in some democratic states. (Stojanović, 2013:486). According to Zedner & Ashwort, "security has always been a core function of the modern state. Yet the rise of the Preventive State captures an intensification of that role as threats to security and demands for public protection increase, prompting states to prioritize new practices of preventive criminalization, policing, and punishment. The rise of the Preventive State may promise greater security, but the costs of ever more coercive preventive laws and measures are burdensome and pose a threat to civil liberties" (Zedner & Ashworth, 2019:429).

Next changes, made in order to provide punishing for certain criminal offence, was made in 2016. The legislator's activities in the area of preventing criminal acts of terrorism are marked by moving the criminal zone to the pre-zone of endangering protected value and justified by the fact that the legislator moved terrorism from the group of criminal acts against the constitutional order and security of the Republic of Serbia to the group of criminal acts against humanity and international law. As a special form, it foresees the preparation of the criminal offence of terrorism, using previously used nomotechnics from Art. 320 of the CC. In the case of the criminal offence of terrorism from Art. 391 of the Criminal Code, the legislator envisaged preparation as a special form of this criminal offence, which he defined by using the wording inherent to the general concept of preparatory actions for some criminal offences against the constitutional order: "Who acquires or equips the means for the execution of the criminal offence from paragraph 1 of this Article either removes obstacles for its execution or agrees with others, plans or organizes its committing or undertakes another action that creates the conditions for its immediate committing".

In addition to these expansions of the criminal zone, the previous amendments to the CC included a comprehensive enumeration of the most diverse forms of the act of committing the crime of terror-

ism. Both amendments and additions were not fully in accordance with the principle of legality and the principle of legitimacy. Too abstract and enumerative approach in defining the criminal act of terrorism is also present when determining the circle of preparatory actions that are also considered a criminal act of terrorism. A more abstract and general way of formulating the norm can sometimes appear as more acceptable for the application of the norm in practice.

In 2019, the trend of punishment for the preparation of a criminal offence is confirmed by prescribing punishment for the preparation of serious murder. The structure of the criminal offence is complicated by the addition of a new paragraph (para. 2), which provides the punishment of preparation of aggravated murder. In this new paragraph, it is said that whoever acquires or prepares the means for the commission of the criminal offence referred to in para. 1, Art. 114, or removes obstacles for its execution or whoever arranges, plans or organizes its commission with others or who undertakes another action that creates the conditions for its immediate commission shall be punished by imprisonment from one to five years.

The focus in the legal formulation of aggravated murder should be on the content of the qualifying circumstances, and not only on their number. They are characterized by an emphasized casuistry, and the terms and expressions are not unambiguous and clear enough to ensure a uniform interpretation and subsequent application of norms of this type. The balance between the enumerative and abstract way of determining the action and the well-formulated general clause in the nomotechnical sense should adorn the norm that foresees one of the most serious criminal offences in the CC (Delić, 2021:112).

It is quite obvious that the norming process is very similar in the case of the criminal offence of aggravated murder and the criminal offence of terrorism. The used legislative technique should be simpler, more general, and on the other hand, more concentrated only on the most serious violations and threats to the protected object. Particular criminal law protection is appropriate for those situations when it appears as a special quality in relation to the general, for example in the case of the criminal law protection of secrets in the CC (Bodrožić & Milošević, 2022). In other cases it is much better to form a general rule, or to define the norm as generally as possible.

Arguments Pro and Contra for Punishing for Endangering the Protected Value

Before dividing the argumentation into *pro* and *contra* parts, it should be emphasized that one of the main principles of criminal law is the principle of legitimacy. It means that criminal law should always be the "last resort" for the state reaction to criminality. This *ultima ratio societatis* tool must be in accordance with its necessity and justification. Whenever other parts of the law system can be used in order to regulate some relations, criminal law should not be applied. This is the direct consequence of literally implemented ideas about the subsidiary, accessory and fragmentary character of criminal law.

Deviations from the general opinion that acts of endangerment should be punished only exceptionally are analysed in the previous section. How they should be understood, will be exposed through *pro et con* argumentation.

The main argument *pro* is the need for more effective proving and solving of criminal offences. In the pre-zone of threats to the protected value, law enforcement agencies could react and prevent their commission. This is a criminal policy argumentation. It is contrary to the accepted general dogmatic rules, which say that criminal law reaction should be used only when the protected object is of exceptional value, as well as when the degree of its endangerment or injury is high.

The next argument *pro* is the value of the protected value and the need to provide it with a higher level of protection. In all three analysed cases, the value of the protected object is high. On the other hand, actions that represent a threat to the protected value are not indisputable from the perspective of the principle of legitimacy. It is about an overly preventively-oriented approach of the legislator. These tendencies move criminal law away from its basic function, which is to protect society from crime. Traditional and rational criminal law becomes security criminal law. This is a negative criminal law tendency and it should be avoided.

The main argument *contra* is preserving the coherence of the CC. If the general rule is not followed, then the question arises - what will ultimately be the limits to further violations of the consistency of the analysed regulation? The norms of the general and special part of the CC must be harmonized, so that the general norms apply to all criminal offences without exception. In all three analysed cases of punishment for preparing a criminal offence, the integrity of the CC was violated.

The second argument *contra* is that a wider-conceived criminal zone reduces the possibilities of criminal law, because it is wider and hypertrophied. The abovementioned is not in accordance with the principle of legitimacy and the principle of *ultima ratio societatis*. According to the opinion of Macluan & Gil Gil, "this change of orientation with regard to the use and meaning of criminal law is often invoked, without a prior analysis of its real capacity, to fulfil the aims assigned to it by these doctrines. That is to say, even before verifying whether the drawbacks of this doctrine are compensated by the benefits it may bring, we must analyse whether criminal law is indeed able to fulfil the purposes attributed to it when punishment is conceived of as a state's obligation and a victim's right" (Macluan & Gil Gil,2020:132-133). Melander also states that the main purpose of the preventive turn in criminal law is primarily intended "to prevent actual harm from occurring by criminalising preparatory acts, possession and other action that might – or might not – in future increase the risk of the harm-affecting completed offence" (Melander, 2023: 12).

Similar argumentation is given in the book *Prevention and the Limits of the Criminal Law* edited by Ashworth, Zedner & Tomlin, in which the group of authors points out that "preventive measures include controversial crime control approaches such as pre-inchoate offences, pre-trial detention, restraining orders, and prevention detention of the dangerous. There are good reasons to justify state use of coercion to protect the public from harm, but while the rationales and justifications for state punishment have been extensively explored, the scope, limits, and principles of preventive justice have not received the same attention (Ashworth, Zedner & Tomlin, 2013).

Arguments *contra* punishing of preparation are related to the absence of a clearly determined criminal will of the perpetrator, to the lower degree of social danger they contain, to the temporal and spatial distance from the potential planned wrongdoing, as well as to the fact that criminal law repression is based on the idea on punishment *post delicti*, not *ante delicti* (Vuković, 2021:292).

According to Zedner, "although the objective of preventing harm underpins state authority to criminalize, police, and punish, it has always been tempered by the risk that the state will exercise that authority excessively or arbitrarily" (Zedner, 2017:89-91).

Cocnluding Remarks

Originality and value of the paper can be seen in pointing out the negative tendencies in the processes of constant changes to the CC. Some of them, such as the analysed deviations of the principles of punishable phases in a criminal progression, are only one of the negative tendencies in a wider con-

temporary criminal policy. Importance of researching those deviations can be seen as a way to move forward to the better solutions in a norming processes that take part continuously.

Changes in the area of the special part of the CC, which are aimed at punishment in the early stages of criminal progression, in order to facilitate the proving of certain serious crimes, are not in accordance with the rules of the general part of the CC and fundamentally violate the general concept on which the CC rests. Deviations from proven dogmatic principles are not the best way to solve the issue of proving criminal offences, and should be reduced to the necessary minimum.

The analysed processes, in which the expansion of the criminal zone to the preparation phase, the complexity of the normative structure of a large number of criminal acts, as well as the introduction of completely new ones, led to counter-effects. The level of efficiency is reduced and the norms only exist as an abstract expression of the legislator's wishes for as much repression as possible, and the level of the desired prevention of criminal behaviour is decreasing.

The exception turns into the rule, the system becomes bulky and hypertrophied. When one adds to that the constant increase in the number of criminal offences and the tightening of punishment ranges, the following conclusions can be reached about the possibilities of such a conceived criminal law.

Criminal law, which in its redactions has moved away from the postulates on which the CC was based, on accessory, subsidiary and fragmentary criminal law, is no longer consistent and aligned with the basic principles that represent its basis and landmark.

Protecting society from crime turns into paranoia about possible danger to society and the individual, and due to the fact that "eyes are wide open in fear", the creation and shaping of norms are linked to previous levels of endangerment, especially to abstract danger to the protected good, as a basis for interventions.

Therefore, this paper has its own *value* importance in the area of pointing out the harmful changes within the CC and is theoretically an attempt to maintain the system before its complete change and adoption of a new one are needed.

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UNCULTIVATED AGRICULTURAL LAND BETWEEN CRIMINAL AND TAX LAW

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Introduction

The agricultural sector contributes significantly to the creation of Serbia's GDP. According to the official statistical data, agriculture accounts for between 9 and 11% of the total Serbian GDP (Strategy of Agriculture and Rural Development of the Republic of Serbia for the period 2014-2024 - Strategy of Agriculture 2014-2024, Official Gazette RS), which is significantly more than the European average (Prokopijević, 2009: 199).

Serbia has 5,346,597 ha of land, which includes agricultural land, forests and land that official statistics categorize as "other" (Ševarlić, 2015: 37). Of that area, 72.2%, or precisely 3,861,477 ha, is agricultural land. However, only 3,437,423 ha or 89% of agricultural land is used for agricultural production. The literature emphasizes the importance of the problem of uncultivated land, which makes up about 11% of the total agricultural land in Serbia, i.e., 424,054 ha (Ševarlić, 2015).[2] It is assumed that putting these land areas into operation would contribute to the increase of the Serbian GDP, which is why it is suggested to the Serbian authorities to take measures aimed at increasing the utilization of the existing natural resources. Also, it is pointed out that the social costs of implementing those measures are often neglected (Samardžić, Baturan & Mitrović, 2022).

Purpose

In order to encourage the use of currently uncultivated areas of agricultural land, Serbian agro-economists often recommend the use of taxes, ignoring the fact that in the legal system of Serbia there is already an institute whose goal is to increase the use of agricultural land, which is a misdemeanour, i.e., a misdemeanour sanction. The goal is to review the potential of misdemeanour sanctions and taxes to encourage the use of agricultural land, but within the limits of its optimal use.[3]

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2 The largest part of the land used in agricultural production consists of arable land and gardens (74.1%), while the rest is made up of meadows (10.1%), pastures (9.3%), orchards (5.3%) and vineyards (0.6%) (Gavrilović, 2019: 195).

3 This paper represents the continuation of the authors' research in the direction of defining the optimal legal framework for the use of agricultural land in Serbia. See more: Baturan, 2013; Baturan, 2017a; Baturan, 2017b; Baturan, 2018; Cvjetković Ivetić, Milošević & Baturan, 2019; Milošević & Baturan, 2021; Samardžić, Baturan & Mitrović, 2022.

Design/Methods/Approach

The initial assumption in the paper is that the primary motive for the owner/the land user is to put their resources to work and thereby acquire profit (Samardžić et al., 2022). Given that land represents a common good, misdemeanour sanctions serve as an additional incentive for putting land into production. Misdemeanour sanctions as an instrument to encourage the use of agricultural land will be presented in a separate chapter.

In Serbia, property tax is currently paid on agricultural land. Certain theoreticians propose changes in the regime of taxation of agricultural land, in order to put unused land into production. On the one hand, tax relief is proposed for agricultural land that is cultivated, while on the other hand, stricter taxation is proposed for the land that is not used. After the current tax solution is presented, the subject of the analysis in this paper will be the effects of these two fundamentally opposite proposals, as well as the experience of the Republic of Croatia, where their Constitutional Court ruled on a similar legal solution.

In order to reach the appropriate results, the synthetic method was used in the paper based on economic and legal methodology.

Findings

The hypothesis is that special taxation of uncultivated land is not acceptable from either the economic or the legal point of view. In the first place, that would lead to duplication of the instruments that are intended to encourage the use of unused agricultural land, given that there is already a system of misdemeanour sanctions. Instead of conducting one - misdemeanour procedure, the proposed modifications of the property tax would mean that it is necessary to determine in the tax procedure whether the land has been cultivated or not. Also, the tax is inferior to the misdemeanour due to its inflexibility in determining the amount that the owner of the uncultivated land should pay. It is also questionable whether the differentiated taxation of cultivated and uncultivated agricultural land is in accordance with the Constitution of the Republic of Serbia.

Originality/Value

The paper represents the result of research conducted within the project commissioned by the Agricultural Land Administration of the Republic of Serbia, in the process of preparing a legal proposal that would encourage the use of agricultural land. Based on it, the proposed changes to the tax regulations were abandoned.

Misdemeanor Sanctions as an Instrument for Encouraging the Use of Agricultural Land

The Law on Agricultural Land stipulates the obligation of the owner or user of agricultural land to regularly cultivate arable agricultural land in an appropriate manner (Law on Agricultural Land, Article 59, Official Gazette RS).[4] The law prescribes the authority and duty of the agricultural inspector

4 Arable agricultural land includes fields, gardens, orchards, vineyards and meadows (LAL, art. 2(1)(2); Dabović, 2016: 207-210). In the following text, the term agricultural land will refer only to arable agricultural land, while the term owner

to control whether the owner of the agricultural land regularly cultivates the agricultural land, applies the measures prescribed by the law and other regulations, and whether he/she acts with due diligence and according to the rules of the code of good agricultural practice, and whether he/she cultivates land regularly, i.e., applies measures in accordance with the law and by-laws (LAL, art. 83(1)(2 and 18)). Also, the inspector is authorized to order the owner of arable agricultural land to cultivate it regularly and apply measures in accordance with the law and by-laws (LAL, art. 84(1)(10)). If the inspector determines illegal behaviour, the inspector shall submit a request to initiate misdemeanour proceedings, or issue a misdemeanour order (Law on Inspection Supervision, Art. 42, Official Gazette RS).

Given the importance of agricultural land as a common good, the penal provisions of the Law on Agricultural Land also prescribe misdemeanor sanctions for its non-use. If a business company, or other legal entity does not cultivate arable agricultural land regularly, it will be fined from RSD 20,000 to 200,000. If the owner is a natural person, the prescribed sanction ranges from RSD 2,000 to 20,000, while the prescribed sanction for an entrepreneur is from RSD 5,000 to 50,000 (LAL, Art. 86).

The function of misdemeanour sanctions is, primarily, the achievement of general and special prevention, bearing in mind that the protection of assets through criminal law is accessory, subsidiary and fragmentary (Brkić, Drakić, Samardžić, 2017). By punishing the owner of uncultivated agricultural land, the owner is influenced to harmonize his/her behaviour with the legal disposition, and by doing so, the special prevention is achieved. Other subjects, fearing sanctions, also harmonize their behaviour with the prescribed disposition, which achieves general prevention. The expected result is the behaviour of economic subjects aligned with the legal disposition, whereby land as a limited resource should (in theory) be maximally used.

However, the number of submitted requests for initiation of misdemeanour proceedings so far is minimal, probably due to the small number of agricultural inspectors in the Ministry of Agriculture. For this reason, this legal instrument did not achieve the desired result. Most often, misdemeanour proceedings are conducted only if, due to non-use of a certain plot of agricultural land, damage occurs to the neighbouring plot.[5]

Consistent application of the misdemeanour provisions of the LAL can create major problems in practice. Namely, economic logic dictates the optimal use of resources, up to the limits of matching marginal costs and utility. It is the case of land of lower quality, or land in regions with a shortage of labour. If the land is state-owned, it remains unleased year after year, because there are no interested tenants. However, the problem is privately owned land. Consistent application of the misdemeanour provisions of the Law mandates the imposition of a misdemeanour sanction on the owners of such land. On the other hand, this kind of practice is economically unacceptable, because it would force the owners to use land whose cultivation generates more costs than benefits. The question arises as to how one should proceed in such a situation, since the consistent application of the principle of the rule of law is opposed to economic laws.

In the first place, it is necessary to answer the question of whether and to what extent the misdemeanour punishment of agricultural land owners who do not use their resources makes economic sense at all. The assumption is that they behave rationally (the concept of *hommo oeconomicus*), because they use their resources in such a way as to maximize their own well-being. Not putting resources to work that can bring them an increase in utility, in itself leads to an opportunity cost represented by foregone rent. However, it seems that misdemeanour punishment is necessary due to the appearance

will be used to indicate both the owner and the user.

5 See: Judgment of the Misdemeanour Appellate Court Prž. 13751/15 dated October 5, 2015.

of negative externalities[6] on neighbouring plots. In that case, the current practice of state authorities on selective misdemeanour punishment of only persons reported by the owners of neighbouring plots that suffer damage proves to be economically optimal, although legally unacceptable.

It is therefore necessary to adjust the legal framework, which will enable land owners to be acquitted from misdemeanour liability if they offer their arable land for lease to third parties, according to the market conditions. Finally, changing the use of the land remains as the last option.

Taxation of Agricultural Land by Property Tax

The basic **function of taxes** is fiscal, i.e., the task of the tax system is to ensure the collection of budget funds for financing public expenditures. However, taxes can also serve as instruments for achieving non-fiscal goals. Taxation of agricultural land has been proposed from time to time as one of the solutions to the problem of unused agricultural land.[7]

In Serbia, owners of agricultural land with an area of more than 10 ares pay **property tax** (Law on Property Taxes, Art. 2(1)(1) Official Gazette RS). The basis of the tax is the value of the agricultural land, determined in the manner provided by the Law on Property Taxes (Art. 5(1)). For a taxpayer who keeps business books and whose value in business books is reported using the fair value method in accordance with International Financial Standards (IFS), i.e., International Financial Reporting Standards (IFRS) and adopted accounting policies, the tax base is the fair value stated on the last day of the business year of the taxpayer, in the current year (LPT, Art. 7).

The problem could arise if the real value of each plot was determined individually for taxpayers who do not keep business books. That is why the legislator, acting in accordance with the principle of minimizing the costs of determining taxes, determined that in those cases the value of (agricultural) land is determined by the local self-government body, by multiplying the usable area of the land and the average price per square meter in the area where the land is located (LPT, Art. 6). The amount of the tax is determined by multiplying the base (value of the land) and the proportional tax rate of 0.3% or 0.4% (LPT, Art. 11(1)(1 and 2)).

The law also provided for several different tax benefits, of which two are particularly interesting for the purposes of this paper. The first refers to the exemption from paying property tax **on agricultural land that is re-purposed** for a period of five years, counting from the beginning of the use (LPT, Art. 12(1)(6)). The goal of this provision is to encourage taxpayers to start cultivating land that was not used for production in the previous period (Cvjetković, 2016: 199-200). The relief makes a lot of sense, given that the repurpose of previously unused land requires extraordinary costs for the user.

Another relevant tax relief refers to the situation when the **total value of the immovable property**[8] of the taxpayer in the territory of one local self-government unit does not exceed RSD 400,000 (LPT, art. 12(2); Cvjetković 2016: 210-2011). The idea is to exempt owners of low-value real estate from tax.

6 According to economic theory, negative externalities are the costs that one economic entity directly, i.e., without the market, transfers to other entities that did not give their consent.

7 Increased taxation of unused agricultural land is no stranger to the science of taxation. In principle, the economic doctrine accepts taxation of property if it is not used for productive purposes. In that case, it can be expected that the tax will influence the taxpayer to put that property into production, e.g. by starting to cultivate the land or by leasing it (Popović, 1997: 286).

8 The base does not include the properties of a taxpayer who does not keep business books, that is, a taxpayer who keeps business books whose agriculture is the predominant registered activity, which are intended and used exclusively for primary agricultural production (Act on Property Taxes, Art. 12(1)(10)).

When the land is of low quality, or is located in areas that are affected by the depopulation process due to which there is a labour shortage, it in itself has a low market value, so there is a possibility that the taxpayer meets the conditions for this tax relief.[9]

Thus, the taxation of agricultural land is harmonized with the requirement of the theory of public finance for the **evenness (fairness) of the tax burden** (Popović, 1997: 291-297; Stiglic, 2013: 477-484; Jelčić, 1983: 163-168). This tax principle is realized through requirements for horizontal and vertical equity, because the tax liability is aligned with the value of the agricultural land owned by each taxpayer. Namely, an individual acquires land in order to include it in the process of agricultural production, expecting that based on the property in the future, he/she will achieve economic benefits in the form of rent. The higher the productivity of the land, the higher is its land rent, and the higher is the value of the land, which is taken as the value of the tax base. Conversely, the lower the productivity, the lower the rent leads to the lower value of the land and therefore the tax base is low. Thus, the land that is not used, as a rule, represents the land that has the lowest productivity, which is why it has the lowest market value, and therefore the lowest tax burden.

Proposal for Differentiated Taxation of Cultivated and Uncultivated Agricultural Land

In the general and professional public of Serbia, from time to time, one can hear proposals for the modification of the property tax, in order to use this instrument to encourage the increased use of agricultural land. Basically, there are two proposals. The first proposal envisages that the *increased tax burden* on uncultivated agricultural land compared to the regular situation would encourage owners to put it into operation, in order to avoid a higher tax over time. According to the second proposal, it is necessary to *exempt from the property tax obligations* "(not only to land that is used for up to five years, but also) all areas of used agricultural land of classes 5-8, as well as the area of used agricultural land of all classes located (for example) above 400 m above sea level" (Ševarlić, 2015: 95-96).[10] Therefore, some propose tightening the tax regime for taxpayers who do not cultivate land, while others propose easing the regime for taxpayers who cultivate, i.e. use the land.

In the property tax system, the differentiated treatment of cultivated and uncultivated agricultural land is not new. In the Czech Republic, as well as in Serbia, the taxpayer is exempt from paying tax on agricultural land that is earmarked, for a period of 5 years (Radvan, 2014: 7; Cvjetković, 2016: 210-2011). In Republika Srpska, tax is not paid on agricultural land that is cultivated (Law on Real Estate Tax of Republika Srpska, Art. 9(1)(12), Official Gazette). In the previous Law on Real Estate Tax, Montenegro had a solution according to which the local self-government unit could determine a higher or lower tax rate for agricultural land that is not cultivated (Law on Real Estate Tax of Montenegro, Art. 9a(1)(1), Official Gazette of the Republic of Montenegro). That law also provided that the local self-government unit, for agricultural land that is not cultivated, whose area exceeds 150,000 m^2, determines a tax rate of 3-5%, while the regular tax rate is proportional, of 0.25-1% (Law on real estate tax of Montenegro, Art. 9b(1)). There is no similar solution in the new Montenegrin Law on Real Estate Tax. Until 2007, Croatia also had a tax on uncultivated agricultural land, but the Croatian Constitutional Court abrogated such decision.[11]

9 The practical problem is that this amount is prescribed by the Law on Amendments to the Law on Property Taxes, dated December 21, 2004. According to the average exchange rate of the NBS from that day, the limit was EUR 5,087.88, while at the time of writing this paper (August 1, 2023), the limit is only EUR 3,412.54.

10 Translation and italics were added by the author. Since the explanation of the proposal is missing, at this point it will not be considered whether the relief is better conceived as exclusion or an exemption.

11 Decision of the Constitutional Court of Croatia will be later elaborated.

Those proposals, given with almost no explanation, create a number of dilemmas, and it seems that they are not justified either from the economic or the legal side. Given that the proposals come both from foreign experts who work closely with the Agricultural Land Administration, and from highly respected domestic experts in the field of agro-economics, they deserve to be taken into consideration, despite the fact that they lack a more detailed explanation of the mechanism by which they wish to achieve the desired goal.

The main problem with the special tax treatment of uncultivated agricultural land concerns the **duplication of instruments** that should achieve the same effect. According to the existing legal framework, an individual who does not use land with appropriate characteristics is liable for a misdemeanour. The effect of a misdemeanour sanction is deteriorating the financial position of a person who does not act in accordance with the law. An additional tax burden on uncultivated agricultural land would have exactly the same effect, which is also a deterioration of the taxpayer's financial position.

Although the effects are the same, the objectives of taxes and misdemeanour sanctions are not. The aim of the misdemeanour sanction is to force the owner of the land to socially desirable behaviour through the threat to its economic power, and through general prevention to completely stop the behaviour contrary to the legal disposition. The basic (fiscal) goal of taxes is to provide funds for financing public expenditures. By counting on the effect produced by distortionary taxes, it is possible to achieve some non-fiscal goals. However, the aim and purpose of the tax is not and cannot be to punish the taxpayer, i.e., to completely stop undesirable practices such as not using arable land. On the contrary, taxes should strive for neutrality, i.e., for the realization of the principle of efficiency, which implies minimal influence on the economic decisions of economic entities (Popović, 1997: 276-281).[12]

The proposal that owners of agricultural **land of a certain class get tax relief** may make sense, but the question is how much such a solution would contribute to the goal for which it was established. Since the land is of low-productivity, its value is small, so the tax base is also small, and consequently the amount of tax debt is small as well. Exempting taxpayers from even that small tax obligation may have a certain (but limited) socio-political significance, but it is not known how it would influence the owner to put the land into use.

Jelčić shares a similar opinion. *"It is difficult, namely, to assume that the owners of uncultivated arable agricultural land are a kind of "collectors" and eccentrics who enjoy owning and buying arable agricultural land so that they could lay eyes on weed-covered arable land with undisturbed joy. Much closer to reality is that the land (a) cannot be cultivated by itself; (b) they cannot lease it because there are no interested parties; (c) they have no one to give it to; (d) nor sell; (e) do not make economic sense to process it; (f) i.e., not only can't they cultivate the land, but because it is contaminated with mines, they can't even get close to it, etc. It is completely clear that no tax can affect any of the listed reasons why arable agricultural land is not cultivated - it does not remove them, but only complicates the problem for the taxpayer and makes it difficult to solve it. We are not aware of those factors in the economy that favour the non-cultivation of arable agricultural land, even in the range that really calls for a solution as soon as possible - and it is about 50% of all agricultural land that remains uncultivated. And that is why, of course, we cannot suggest what should be done to solve the problem, but when it comes to taxes, the possibilities and limitations of their application, and the aim that can (and should) be set for some of them, we can state, quite certainly, that the fact that no tax is paid on arable agricultural land - whether it is cultivated or not - is by no means the cause of this. Therefore, introducing a tax on uncultivated arable agricultural land would be a big failure from both a socioeconomic and a legal point of view. It would be*

12 This would not be the first time that taxes are used as a way to punish individuals. A typical example is the "special tax" from the Law on Determining the Origin of Property and Special Tax (see: Baturan, 2021; Baturan, & Milošević, 2020).

wrong to start from the premise that someone cultivates his agricultural land only and precisely to avoid paying taxes" (Jelčić, 2012).

Even more objections can be made to the proposed **tax relief for land at a certain altitude**. First of all, the quality of land depends on its altitude.[13] Therefore, the altitude is already included in the determination of the land class, so the V class cannot be below 250 m above sea level, VI class below 650 m above sea level, and VII and VIII class below 1,000 m above sea level. Here, too, the question arises as to how this tax relief would affect the owner's decision to use the land for agricultural production.

However, the value of land can be conditioned by certain tourist, industrial or construction potentials, and not only by agricultural production. For this reason, the indicative method of determining the value of a tax object using some external indicators such as altitude or class is an inferior method compared to the existing property tax solution.

The existence of two legal instruments implies the conduct of **two (or even three) different and separate legal procedures**. The misdemeanour liability of the owner is determined by the misdemeanour court in the misdemeanour procedure, which is initiated by the agricultural inspector when, as part of the inspection control, he/she determines that certain land is not being used in accordance with the law. Additional taxation of uncultivated land would mean that parallel to the misdemeanour court proceedings a tax proceeding would also be conducted, the end result of which (tax payment) would be the same as in the case of a misdemeanour sanction: deterioration of the financial position of the landowner who does not fulfill the obligation.

There is also the question of **how to determine the tax liability** in case of differentiation of agricultural land according to the criterion of utilization, and every answer to this question gives rise to a new dilemma. In the first place, the case where uncultivated land would be more severely taxed than it is now will be considered. The logic of tax law dictates that a taxpayer who does not intend to use his/her land would be obliged to submit an amended tax return for property tax, in which he/she will inform the competent tax authority about that fact, which is important for determining the tax liability. If the taxpayer fails to do so, he/she commits a misdemeanour prescribed by the Law on Tax Procedure and Tax Administration, on the basis of which the tax inspector must initiate the procedure for determining misdemeanour liability (Art. 11 and Art. 177, Official Gazette of RS). However, when the tax inspector learns from the tax return about the fact that the owner (taxpayer) does not cultivate his/her land, the tax inspector is obliged to make a record on this and forward it without delay to the agricultural inspector (LIS, Art. 30(1)), who is then obliged to file a misdemeanour report (LIS, Art. 42) for violating the provisions of the LIS (Art. 82 and 83(1)(2)). Therefore, the taxpayer would be obliged to report him/herself indirectly for a misdemeanour, which brings into question the constitutionality of the proposed legal solution in view of the Constitution of Serbia (Constitution of the Republic of Serbia, Art. 33(7), Official Gazette RS).[14]

Conversely, if the agricultural inspector were the first to find out about the existence of uncultivated land, the inspector would be obliged to inform the tax inspectorate about it (LIS, Art. 30(1)). In that case, both inspectors would have to file a misdemeanour report against the owner: the agricultural inspector for not cultivating the land, and the tax inspector for not submitting a property tax return. The tax inspector would also be obliged to issue a decision on the determination of property tax, which

13 The altitude of the land determines its belonging to a certain climate-production region, that is, to the credit rating class and subclass. The vertical zoning of the climate-production regions shows the regularity of the worsening of the climate conditions that affect the credit rating class, i.e. sub-class, starting from the plain, through the hilly and hilly-mountainous areas, to the mountainous area (Regulation on land cadastral classification and credit rating, Art. 48 Par. 1 and 2, Official Gazette RS).

14 Unconstitutionality could be avoided by decriminalizing misdemeanour liability for not cultivating the land.

is adopted in the tax control procedure, and to order the taxpayer to submit a tax return in which the taxpayer should eliminate the identified irregularities (LTPTA, Art. 54(2)(1) and Art. 129). Therefore, the owner would be obliged to pay two misdemeanour fines, as well as the amount of (increased) tax.

If, on the other hand, only a special tax relief is prescribed for the use of agricultural land (as suggested by Ševarlić), then there is no obligation for the taxpayer to report his/her illegal behaviour. However, several questions arise in this case. The first one is how the taxpayer proves his/her right to tax relief, that is, how the taxpayer proves the fact that he/she cultivates the land for which he/she is requesting relief. It would not be natural to start from the assumption that all owners from the start enjoy a tax relief as if they are using the land, and that the non-use is proven in each individual case. Namely, a tax relief is "a concession made by the state in terms of the taxpayer, the tax base, tax rates or the amount of tax revenue, *all of which is compared to the general regime of these four elements* that would be regulated by the law in the absence of the relief" (Popović, 2018: 239[15]). Therefore, tax relief cannot be a rule, but can only be a deviation from that rule ("general regime").

The second question is related to the tax control procedure, and it refers to the competence of the tax inspector to conduct investigation (LIS, Art. 21(1)(5)) to directly determine whether the land has been cultivated or not, or if it is necessary to request an expert opinion. An expert opinion is performed when the determination or evaluation of a fact requires expert knowledge that the authorized official does not have (Law on General Administrative Procedure, Art. 128(1), *Official Gazette RS*). The issue becomes more important considering that the LAL expressly stipulates that the control of whether the owner of arable land is regularly cultivating the land is carried out by the Republic's agricultural inspector (Art. 83(1)(18)), and these tasks can be performed by a graduate engineer of the agricultural, land reclamation, farming, general, fruit growing and viticultural or agronomic course, with a passed professional exam and at least three years of work experience (LAL, Art. 82).

The inadequacy of the tax to encourage the use of agricultural land can also be seen from the fact that the Ministry of Finance has the jurisdiction **to decide the matter in the second instance**. The question is whether the Ministry of Finance, as a second instance body, is indeed the right body to make a final decision determining whether an individual cultivated the land or not, since the legal nature of this problem is distant from the tax law. If the taxpayer would be unsatisfied with the second instance decision, the taxpayer could request the protection of his rights from the Administrative Court.

Finally, the tax is inferior to the misdemeanour because of its **inflexibility in determining the amount** that the owner of uncultivated land should pay. Namely, misdemeanour sanctions are specified in the law in absolute amounts, depending on whether it is a business company, an entrepreneur or another natural person. As a rule, the maximum prescribed amount of the misdemeanour fine is 10 times higher than the minimum amount. When determining the monetary amount of the fine, the Misdemeanour court decides on the basis of mitigating and aggravating circumstances concerning the offense and its perpetrator (Đorđević, 2003; Risimović & Kolarić 2016; Jovašević, 2006; Janković, 2010; Jovašević, 2003; Vrekić, 1999). On the other hand, the tax authority is absolutely inflexible. Due to the principle of tax legality (Popović, 1997: 298-299), the amount of tax liabilities is obtained by applying the tax rate to the tax base (land value). The tax authority does not have any possibility of adjusting the tax base or rate, and therefore the amount of the tax debt either, based on any subjective or objective circumstances that may arise in practice.

15 Italics added by author.

The Unconstitutionality of the Croatian Tax on Uncultivated Agricultural Land

In the earlier version of the Croatian Law on Financing of Local Self-Government and Administration Units (Act on Amendments to the Law on Financing of Local Self-Government and Administration Units of the Republic of Croatia, Article 31. *Official Gazette*), it was stipulated that the **tax on uncultivated arable agricultural land** is paid by owners or tenants of that land, if they do not cultivate the land for a year. Uncultivated arable agricultural land is considered to be land that, due to its size, class and culture, can be cultivated and brought to agricultural production, but the owners or tenants do not cultivate it (Act on Financing of Local Self-Government and Administration Units of the Republic of Croatia, Article 38a).[16]

In 2007, the Constitutional Court of Croatia abrogated this legal solution, due to inconsistency with the Croatian Constitution (Decision of the Constitutional Court of the Republic of Croatia No. U-I-1559/2001 and U-I-2355/2002). Namely, the court ruled that the tax on uncultivated agricultural land has the characteristics of "punitive taxes", because it punishes the owner - the taxpayer for failing to use his immovable property (Kesner-Škreb, 2012; Marković, Radin & Trgovac, 2011, 614).[17]

According to the position of the Croatian Constitutional Court, by introducing taxes that tax uncultivated agricultural land, the legislator acted contrary to the constitutional principle according to which **everyone is obliged to participate in the payment of public expenses in accordance with their economic capabilities**.[18] A similar provision exists in the Constitution of the Republic of Serbia: there is the obligation to pay taxes and other expenses is general and it is based on the economic power of the obligee (Constitution of the Republic of Serbia, Art. 91(2)). According to the opinion of the Croatian Court, the aforementioned taxes, neither when it comes to determining their Addressees, nor when it comes to the amount or rates of taxes in general, take into account the economic capabilities of those for whom they are determined (Decision of the Constitutional Court of the Republic of Croatia No. U-I-1559 /2001 and U-I-2355/2002).

The Croatian Constitutional Court also determined that the tax on uncultivated agricultural land **violates the constitutional principles of fairness and equality**, because not all land owners pay them, but only those who do not use them.[19] Regarding the nature of property rights and the possibility of its limitations, the Court concluded that for each type of property tax, the decisive fact must be that the property exists and that the taxpayer owns it, and not the way in which the property is used. Equality, as one of the constitutional foundations of the tax system, does not exist if the tax is prescribed as a form of punishment with the purpose of forcing the owner to use his/her property against his/her interests or capabilities. Therefore, the mentioned taxes are not in accordance with the principle of the fairness of the tax system, which requires that the tax burden must be evenly distributed among all

16 The tax base was determined as the area of the land expressed in hectares, while the tax rate was expressed in a monetary amount, depending on the type of land (Act on Financing of Local Self-Government and Administration Units of the Republic of Croatia, Art. 38b and 38c).

17 According to the understanding of the Croatian Constitutional Court, the obligation to use the land is not in accordance with the constitutionally permitted property restrictions (Decision of the Constitutional Court of the Republic of Croatia No. U-I-1559/2001 and U-I-2355/2002).

18 The Constitution of the Republic of Croatia stipulates that everyone is obliged to participate in the payment of public expenses in accordance with their economic capabilities, and that the tax system is based on the principles of equality and fairness (Constitution of the Republic of Croatia, Article 51, *Official Gazette*).

19 The fairness and equality of taxation, as one of the basic principles of tax law, has been elevated to the rank of a constitutional principle in Croatia. Constitution of the Republic of Croatia, Art. 51(2). The Serbian Constitution foresees the universality of tax liability (Constitution of the Republic of Serbia, Art. 91(2)), and guarantees the equality of every individual in a fair, open and democratic society, based on the principle of the rule of law (Constitution of the Republic of Serbia, Art. 19).

addressees to whom a certain tax applies, based primarily on their economic capabilities (Decision of the Constitutional Court of the Republic of Croatia No. U-I-1559/ 2001 and U-I-2355/2002).

Finally, abrogating the provisions of the Law on Financing of Local Self-Government and Administration Units, the Constitutional Court of Croatia concludes that the legislator is authorized to prescribe various legal measures to encourage the cultivation of agricultural land, but not in a way that is contrary to the basic constitutional values and protected goods, which the legislator in the specific case failed to do so by prescribing taxes due to non-use of real estate, which is against the purpose of taxes and the tax system. Thus, the court fully accepted the position and explanation of Professor Božidar Jelčić, who proposed the constitutionality assessment of such provisions (Decision of the Constitutional Court of the Republic of Croatia No. U-I-1559/2001 and U-I-2355/2002).

It is obvious that the provisions of the Croatian Constitution, on the basis of which the Croatian tax on uncultivated land was abrogated, fully correspond to similar provisions of the Serbian Constitution. Although the decisions of the Serbian judicial authorities are unpredictable, it is quite reasonable to expect, based on everything elaborated above, that even the Constitutional Court of Serbia would not treat the same tax form differently than the Croatian Constitutional Court if it were to be implemented in the Serbian tax system.

Conclusion

Agricultural land is a natural resource of crucial importance for food production. The LAL stipulates the obligation of the owner or user of agricultural land to regularly cultivate the arable agricultural land in an appropriate manner. Nevertheless, in spite of the aforementioned legal disposition, a part of the agricultural land remains outside the production process.

The basic mechanism for encouraging the owners of agricultural land to put their resources to work is the system of misdemeanour sanctions. Agricultural inspectors are authorized to check whether owners or users of agricultural land comply with the obligation to cultivate the land in an appropriate manner. If inspector determines illegal behaviour, the inspector shall submit a request to initiate misdemeanour proceedings, i.e., issue a misdemeanour order. The misdemeanour court, after conducting the misdemeanour procedure, imposes a fine if it determines that the defendant violated the law.

Agricultural land in Serbia is subject to static property tax. The basis of the tax is the value of the land, with the proportional tax rate, which enables the realization of the principle of fairness in taxation. Although the basic functions of taxes are fiscal, they can in principle be used to achieve some non-fiscal goals.

According to the existing solution of the Law on Property Taxes of the RS, the owner of agricultural land that is re-purposed is exempt from paying property tax for a period of five years, counting from the beginning of the use. The goal of this provision is to encourage taxpayers to start cultivating land that was not used for production in the previous period.

In recent years, there have been proposals from several addresses to encourage greater utilization of agricultural land, through the application of the tax law institute. On the one hand, tax relief is proposed for agricultural land that is cultivated, while on the other hand, stricter taxation is proposed for the land that is not cultivated (used).

The analysis confirmed the hypothesis that special taxation of uncultivated land is not acceptable from either the economic or the legal point of view. First of all, this would duplicate the instruments that are intended to encourage the use of unused agricultural land, given that there is already a system of misdemeanour sanctions. Instead of conducting a misdemeanour proceeding, the proposed property tax modifications would lead to tax proceedings as well.

By considering the question of how that tax procedure should be constructed, it was concluded that the owner of the land, as a taxpayer, should inform the tax authority in the tax return about the existence of uncultivated land as an important fact for determining the tax object, i.e., for determining the tax liability. However, non-cultivation of the land is also a direct violation of the obligation from the LAL, which entails the misdemeanour liability of the taxpayer under that law. On the other hand, if the taxpayer did not report this fact in the tax procedure, he/she would violate the obligation from the LTPTA, which entails misdemeanour liability under that law. Therefore, the owner of agricultural land would be obliged to report him/herself for a misdemeanour, which calls into question the constitutionality of this Law in view of Art. 33 of the Constitution of Serbia.

In case the agricultural inspector finds out about the existence of uncultivated land, the inspector would be obliged to inform the tax inspectorate about it. In that case, both inspectors would have to file a misdemeanour report against the owner: the agricultural inspector for not cultivating the land, and the tax inspector for not submitting the property tax return. The tax inspector would also be obliged to make a decision on the determination of property tax, which is made in the tax control procedure. Therefore, the owner would be obliged to pay two misdemeanour fines, as well as the tax.

The inadequacy of the tax to encourage the use of agricultural land can be seen from the fact that the Ministry of Finance would be responsible for the final decision in the second instance, while judicial protection would be achieved in an administrative dispute before the Administrative Court.

The tax is inferior to the offense also because of its inflexibility in determining the amount that the owner of uncultivated land should pay.

Differentiated taxation of cultivated and uncultivated agricultural land would also call into question the constitutionality of such a solution. Such tax treatment is not in accordance with the constitutional principles of the universality of tax liability and its basis on the economic power of the taxpayer, and it calls into question the constitutional guarantee of equality of all individuals in a fair, open and democratic society, based on the principle of the rule of law. For these reasons, the Constitutional Court of Croatia has already abrogated a similar tax form that existed in the tax system in Croatia, and the explanation of the decision does not leave much room for a dilemma as to whether the Serbian Constitutional Court could decide differently, provided that the proposed solutions are incorporated into the Serbian tax system.

After all the aforementioned, it follows that it is absolutely unnecessary to establish additional tax incentives, in a situation where the existing legal framework enables the achievement of optimal allocation. That is why the solution to the problem of uncultivated agricultural land should be sought not in the amendment of legal regulations, but in the consistent application of the existing legal instruments.

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THE PROTECTION OF CULTURAL HERITAGE IN INTERNATIONAL CRIMINAL LAW

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"What is at stake here is not just walls and stones."
Fatou Bensouda

Introduction

The cultural heritage of a nation is an integral part of its identity. Throughout history, one can trace the cases of the destruction of the cultural assets of one nation during armed conflicts, precisely in order to weaken its moral strength, and then its defence. In this way, numerous civilization assets were destroyed, the churches and mosques were burned and destroyed, as well as palaces, monuments and temples; the bridges were bombed, the movable cultural property was looted. In addition to the fact that once upon a time cultural goods, even entire cities, were collateral damage of armed conflicts, modern armed conflicts are characterized by attacks that are deliberately and precisely directed towards objects of the cultural heritage of a nation. Modern armed conflicts pose a greater threat to protected goods due to the use of modern weapons of great destructive power. In that way the cultural heritage of the whole of humanity is endangered.

Recognizing that the protection of cultural property provided within the framework of international humanitarian law and law of armed conflict is not sufficient, a step further has been made - by providing protection within the framework of international criminal law by stipulating that attacks against protected objects, including objects of cultural importance constitute a war crime. It is justified to ask what are the scopes of international criminal law protection of cultural property during armed conflicts and whether the application of international criminal law in this sphere can have a deterrent effect. This is due to the fact that in recent years there has been a tendency to expand international criminal law protection, for example to natural assets (Author, 2022: 372) (Author, 2021), and therefore the question arises as to whether international criminal law can achieve one of its goals (Author, Soković, & Banović, 2023) - to act generally preventively - through this dilution of international criminal law protection.

As cultural property is the object of attack even in modern armed conflicts, the need to provide protection to cultural heritage is recognized within the international criminal justice system through first trials held against perpetrators of this crime. It is important to emphasize the first verdict rendered before the International Criminal Court for a war crime against cultural heritage in the *Al Mahdi case*. This indicates the need for a detailed analysis of the positions taken in the *Al Mahdi case*, which will serve as a precedent in international criminal law. Bearing in mind the destruction and endangerment of the Serbian cultural heritage during the past conflicts, but also the fact that some items of this heritage are still endangered, in domestic doctrine, as well as judicial practice, the positions taken in the *Al Mahdi case* may have great significance.

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Bearing in mind all of the above stated, the purpose of the paper is to point out the international rules of criminal law protection of cultural property during armed conflict, as well as the practice of international criminal courts in terms of trials for the war crime against cultural heritage. In that sense the legal dogmatic method of legal norms analysis and content analysis method will be used.

The main findings of the work will be related to the etiological-phenomenological dimension of the attack on cultural property during the armed conflicts, which could help us understand insufficiency and impossibility of a wide range of international rules (outside of international criminal law) to protect cultural heritage during armed conflicts. Bearing in mind reasons why cultural heritage is the object of destruction during almost all conflicts, it is crucial to find out if it is justified to set international criminal law protection of cultural heritage, and to question the possibilities and boundaries of this kind of protection.

In the light of the judgement in the *Al Mahdi case* before the International Criminal Court and with the understanding of etiological-phenomenological dimension of the crime of attacking protected objects, the originality of the paper will be reflected in discussion on some new findings related to international criminal law protection of cultural heritage during armed conflicts, which could be useful for the protection of Serbian cultural heritage endangered, damaged and destroyed during former conflicts.

The Protection of Cultural Property During Armed Conflicts in International Instruments

History has shown many cases of destruction of cultural assets during armed conflicts, such as the destruction of Carthage by the Romans, the destruction of the Hindu civilization by the Muslims in South Asia, the extensive destruction of entire cities during the First and Second World Wars (Jončić & Petrović, 2012: 151). The destruction of the nation's immovable cultural assets and the theft of movable cultural assets was almost common practice during armed conflicts (Tesla, 2016: 218-220).

Destruction of cultural heritage is also present in modern wars. During the war in the former Yugoslavia, many cultural and historic monuments were destroyed, such as Dubrovnik old city centre, Old bridge in Mostar, Orthodox Church of St. Nicholas in Karlovac, etc. During the NATO bombing of Serbia in 1999, 176 cultural monuments were destroyed according to official statistical data (Đorđević, 2013: 300). The Afghanistan war was also well-known for destruction of cultural heritage. In Afghanistan, the Taliban announced that they would carry out the politics of destruction of cultural heritage representing religious and spiritual traditions different to Islam, which culminated in the destruction of two ancient Buddhas of Bamiyan in 2001 (Francioni & Lenzerini, 2003: 625). The destruction of the two Buddhas was the part of a well-organized plan with the intention to completely eradicate ancient Afghan cultural heritage (Francioni & Lenzerini, 2003: 627). The US invasion of Iraq in 2003 resulted in vandalism towards archeological heritage of Iraq (Obšust). A large number of archeological sites and other objects of cultural heritage were completely destroyed in Syria during 2015 by the so-called Islamic State. The destruction of the heritage of mankind in Syria was aimed to attract world media attention during 2015, in order to promote Islamic State and its goals (Obšust). In the digital age, the destruction of cultural sites is being recorded and released in media, so it is not directed only to the combatants in conflict, but it also has the aim to gain media attention worldwide and to shock the international community (Vrdoljak, 2017: 59). Also, the vandalism toward cultural heritage had the purpose of finding valuable artifacts and selling them in order to provide source for Islamic State war operations (Obšust).

The protection of cultural property during armed conflicts in international instruments is provided on two levels: through the *general protection* of civil objects, and through *special protection* of those properties which represent cultural heritage of people. The very fact that over time the general protection of cultural assets within the framework of all civil objects has changed to their special protection exclusively as objects of cultural heritage, indicates a change in the real world where there is a practice of deliberately directing attacks towards certain objects precisely because they are a sign of people's cultural identity, which now requires the prescription of more intensive protection of cultural assets during armed conflicts.

Throughout history, protection of property, including cultural assets, during armed conflicts can be traced in numerous national and international acts, but initially it was incomplete and sporadic. Although there are many international acts that prohibit the destruction of cultural heritage during an armed conflict, in this paper we will point out only those acts that are the most important from the point of view of international criminal law protection of cultural heritage. The first direct protection of cultural property during the armed conflict was prescribed in Art. 27 of the Hague Convention (IV) respecting the laws and customs of war on land from 1907 and its annex - Regulations concerning the laws and customs of war on land[2], in the following way: " In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided they are not being used at the time for military purposes. It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand."

The First World War, and especially the Second World War, are known for the destruction of entire cities, the destruction of immovable cultural assets and the theft of movable cultural assets, which resulted in the adoption of the Convention for the protection of cultural property in the event of armed conflict[3] with regulations for the execution of the Convention in the Hague on 14th May 1954. This Convention provides the first direct and comprehensive protection to cultural property during armed conflict, and was the first conflict-related instrument to use the term "cultural property" (Abtahi, 2001: 7). It stipulates that for the purposes of the Convention, the term `cultural property' shall cover, irrespective of origin or ownership: (a) movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites; groups of buildings which, as a whole, are of historical or artistic interest; works of art; manuscripts, books and other objects of artistic, historical or archaeological interest; as well as scientific collections and important collections of books or archives or of reproductions of the property defined above; (b) buildings whose main and effective purpose is to preserve or exhibit the movable cultural property defined in sub-paragraph (a) such as museums, large libraries and depositories of archives, and refuges intended to shelter, in the event of armed conflict, the movable cultural property defined in sub-paragraph (a); (c) centres containing a large amount of cultural property as defined in sub-paragraphs (a) and (b), to be known as 'centres containing monuments'. It can be seen that the concept of cultural property in the Convention is set very broadly, with the intention of using this term to cover all objects of importance for the cultural identity of the people, especially taking into account which kinds of cultural property were destroyed during previous armed conflicts. In Art. 28 of the Convention it is prescribed that "The High Contracting Parties undertake to take, within the framework of their ordinary criminal jurisdiction, all necessary steps to prosecute and impose penal or disciplinary sanctions upon those persons, of whatever nationality, who commit or order to be

2 Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land. The Hague, 18 October 1907.

3 Convention for the protection of cultural property in the event of armed conflict, the Hague, 14th May 1954.

committed a breach of the present Convention". Beside the obligation imposed to countries to protect cultural property during armed conflicts, the countries have additional obligation to prosecute those responsible for destruction of cultural property.

Among the international instruments, it is important to mention the I Protocol to the Geneva conventions from 1977[4], whose Article 53 prescribes that it is prohibited: a) to commit any acts of hostility directed against the historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples; (b) to use such objects in support of the military effort; (c) to make such objects the object of reprisals.

There are many other international documents which provide protection to cultural heritage during armed conflict, which implies that there is an increased effort of international community to fight against those responsible for the destruction of cultural heritage during wars (Wierczynska & Jakubowski, 2017: 701). Although the mentioned documents do not list the same objects that they seek to protect, they all have the same goals: to provide protection to objects that represent the cultural identity of a group of people, and therefore part of the cultural heritage of all humanity; to provide that such objects are not being used for military purposes; and to encourage national states to prosecute persons responsible for the destruction or attacks on cultural objects during armed conflict. At the same time, the most complete protection is provided by the Convention for the protection of cultural property in the event of armed conflict, bearing in mind that the subject of its regulation is exclusively the protection of cultural heritage during armed conflicts, while other international instruments deal with this protection in addition to the abundance of other issues they regulate.

The Protection of Cultural Heritage in International Criminal Law

The development of the rules related to the protection of cultural heritage is also visible within the international criminal law. While the first trials for the destruction of cultural assets were held before the International Military Tribunal in Nuremberg (IMT), the International Criminal Tribunal for the former Yugoslavia (ICTY) and the International Criminal Court (ICC) have made a step forward in the development of the rules on individual criminal responsibility for the crimes committed against cultural heritage.

International Military Tribunal in Nuremberg

The first international criminal trials for crimes against cultural property were held after World War II in Nuremberg, and those crimes were committed by a Nazi military unit – Eisatzstab Rosenberg, specially formed for plundering works of art. Alfred Rosenberg, as the main defendant, and some less known defendants, were found guilty of war crime involving destruction and pillage of cultural property (Mrljić, 2009: 809). The International Military Tribunal in Nuremberg stated that persecution of Jews, as a crime against humanity, was particularly apparent in the "pogroms which were organized, which included the burning and demolishing of synagogues" (Nuremberg judgment, 1946: 76). So, in the case law of IMT, there was a double protection of cultural heritage, direct - through the war crime of destruction and pillage of cultural property, and indirect - through the act of persecution as crime against humanity.

4 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts, 8 June 1977.

International Criminal Tribunal for the former Yugoslavia

Unfortunately, during the war in the former Yugoslavia, we witnessed the massive destruction of cultural monuments, regardless the fact that Yugoslavia had ratified the Convention for the protection of cultural property in the event of armed conflict in 1955[5]. According to some reports based on the ICTY investigations during the war in the former Yugoslavia, approximately 2000 cultural and religious objects were destroyed. Some authors find that the reason for targeting cultural property in Yugoslavia war lies in ethnic and religious causes of war (Abtahi, 2001: 2).

As in the trials before the ICTY the emphasis was placed on crimes against persons, the gravity of crimes against cultural objects was explained in some ICTY judgments, in order to justify the trials for these crimes as well. Considering the seriousness of the offence of damage to cultural property, the Trial Chamber in *the Strugar case* finds that "such property is, by definition, of great importance to the cultural heritage of every people". Further, the Chamber states that "even though the victim of the offence at issue is to be understood broadly as a "people", rather than any particular individual, the offence can be said to involve grave consequences for the victim" (The Prosecutor v. Pavle Strugar, 2005: 106-107). The Trial Chamber in the *Jokić case* stated that the destruction and damage inflicted to the Old Town of Dubrovnik were very serious crimes, and that "since it is a serious violation of international humanitarian law to attack civilian buildings, it is a crime of even greater seriousness to direct an attack on an especially protected site, such as the Old Town of Dubrovnik" (The Prosecutor v. Miodrag Jokić, 2004: 14).

In the ICTY Statute[6] crimes against cultural property are prescribed in Art. 3(d) as violation of the laws or customs of war in the following way: "seizure of, destruction or wilful damage done to institutions dedicated to religion, charity and education, the arts and sciences, historic monuments and works of art and science". The terms "cultural heritage" and "cultural property" are not used in the ICTY Statute, but the object of the protection is clearly determined, and it refers to all objects which reflect cultural identity of people. Although according to ICTY case law (The Prosecutor v. Tihomir Blaškić, 2000: 56-57), violations enumerated in Art. 3 of the Statute do not present *numerus clausus* and there are some other violations that could be classified in this list according to other international instruments, the list provided in Art. 3(d) could be considered as a "closed list" referring to "all institutions which may clearly be identified as dedicated to religion or education and which were not being used for military purposes at the time of the acts" (The Prosecutor v. Tihomir Blaškić, 2000: 61).

In the ICTY practice, the question of relation between cultural heritage objects and legitimate military objectives arose. Analysing the international instruments on the protection of cultural heritage, the Trial Chamber made the following conclusion: "the crime of destruction or wilful damage done to institutions dedicated to religion or education comprises the following elements: (1) an intentional act or omission; (2) causing destruction or damage to a cultural or religious object of property; (3) the property did not constitute a military objective within the meaning of Article 52 of Additional Protocol I and (4) the act or omission is perpetrated with intent to destroy the cultural or religious property". According to ICTY position, the protection to cultural heritage could be provided as long as cultural heritage objects are not used for military needs or purposes (Wierczynska & Jakubowski, 2017: 707).

Beside this direct protection of cultural property in Art. 3(d), it is worth mentioning that the ICTY Statute and case law provide indirect protection to cultural property as well, through grave breaches

5 Law on ratification of the Convention for the protection of cultural property in the event of armed conflict, "Sl. list FNRJ - Međunarodni ugovori i drugi sporazumi" (FNRY Official Gazette), No. 4/56.

6 Statute of the International Criminal Tribunal for the former Yugoslavia, United Nations, Security Council, Resolution no. 827, adopted on 25 May 1993.

of the Geneva Conventions of 1949 (for example in Art. 2(d)), some other violations of the laws and customs of war (for example, Art. 3(b), (c) and (e)), and through crimes against humanity (for example Art. 5(h)) (Abtahi, 2001: 13-28). Without going into a detailed analysis of the indirect protection of cultural property according to the Statute and practice of the ICTY, it is important to emphasize that in the practice of this Court, as well as in the practice of the International Military Tribunal in Nuremberg, the position was taken that the destruction of cultural property can constitute persecution as a crime against humanity. Namely, in Kordić and Čerkez Trial Judgment, the Trial Chamber found that the attack to cultural property, "when perpetrated with the requisite discriminatory intent, amounts to an attack on the very religious identity of a people" (The Prosecutor v. Dario Kordić & Mario Čerkez, 2001: 58). In Blaškić Trial Judgment the Chamber stated that "persecution may thus take the form of confiscation or destruction of private dwellings or businesses, *symbolic buildings* or means of subsistence..." (The Prosecutor v. Tihomir Blaškić, 2000: 76). Later, the Trial Chamber explained that cultural property that was destroyed was placed in the village of Ahmići, which was of particular significance for the Muslim community in Bosnia, because many imams and mullahs came from there, and in that way this village symbolized Muslim culture in Bosnia (The Prosecutor v. Tihomir Blaškić, 2000: 137).

International Criminal Court

Provisions within the Rome Statute[7] related to attacking protected objects during an armed conflict relate to and basically restate the content of the above mentioned Art. 27 of the Convention (IV) respecting the laws and customs of war on land. But, unlike Art. 27, the Rome Statute does not prescribe the obligation for the besieged to identify protected objects and notify the enemy of them (Fenrick, 1999: 214), which represents the step forward in the development of these rules.

The war crime of "intentionally directing attacks against buildings dedicated to religion, education, art, science or charitable purposes, historic monuments, hospitals and places where the sick and wounded are collected, provided they are not military objectives" falls within the *ratione materiae* jurisdiction of the Court pursuant to Arts. 5, 8(2)(b)(ix) and 8(2)(e)(iv) of the Rome Statute. Art. 8(2)(b)(ix) provides protection to protected objects during the armed conflict of an international character, while Art. 8(2)(e)(iv) provides the protection to protected objects during the armed conflict that is not of an international character. According to the Elements of crimes[8], five elements need to be established in order to prove that the war crime of attacking protected objects was committed: 1. The perpetrator directed an attack. 2. The object of the attack was one or more buildings dedicated to religion, education, art, science or charitable purposes, historic monuments, hospitals or places where the sick and wounded are collected, which were not military objectives. 3. The perpetrator intended such building or buildings dedicated to religion, education, art, science or charitable purposes, historic monuments, hospitals or places where the sick and wounded are collected, which were not military objectives, to be the object of the attack. 4. The conduct took place in the context of and was associated with an international armed conflict (in the case of Art. 8(2)(b)(ix))/ armed conflict not of an international character (in the case of Art. 8(2)(e)(iv)). 5. The perpetrator was aware of the factual circumstances that established the existence of an armed conflict.

The Al Mahdi case was the first case before the ICC in which the Court was applying Article 8(2)(e)(iv) of the Rome Statute, and this case was of particular importance because prosecuting crime against cultural heritage for the first time sends the message that the destruction of cultural heritage is a war

7 The Rome Statute of the International Criminal Court, adopted at a diplomatic conference in Rome, Italy, on 17 July 1998 and entered into force on 1 July 2002.

8 Elements of Crimes, adopted at the 2010 Review Conference are replicated from the Official Records of the Review Conference of the Rome Statute of the International Criminal Court, Kampala, 31 May -11 June 2010.

crime of great concern to the international community and that accountability for cultural crimes is possible (Sterio, 2017: 68-69). So the Court found itself addressed to interpret this crime and its elements. When it comes to *the first element* of directing an attack, the Chamber considers that this element encompasses any acts of violence against protected objects, no matter whether they are carried out in the conduct of hostilities or after the object have fallen under the control of an armed group (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 9). Contrary to the ICTY Statute, the *actus reus* of war crime in Rome Statute is not the destruction of the cultural heritage, but the directing the attack, meaning that such war crime does not have to lead to the destruction of attacked properties, but some lesser attacks or acts of vandalism can reach the degree of war crime (Wierczynska & Jakubowski, 2017: 702-703). In this sense, the Rome Statute provides broader protection to cultural heritage than other international instruments.

The second element refers to the objects of the attack, and these are special kinds of civilian objects which are of particular importance for cultural heritage of people. In *the Al Mahdi case*, the objects of the attack were mausoleums and mosques qualified as both religious buildings and historic monuments, which were an integral part of the religious life of local inhabitants and had an important role in their cultural life. These objects also presented a common heritage for the community, and were frequently visited by their residents for prayer and sometimes as a place for pilgrimage. Further, nine of these building had the status of UNESCO World Heritage sites (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 18, 26). There is a justifiably asked question in the literature whether the objects of an attack have to bear the status of UNESCO World Heritage sites in order to be considered as objects of war crime against cultural heritage (Marković, 2017: 141). Because crimes against property are generally considered as crimes of lesser gravity than crimes against persons, the facts that the property which is the object of an attack is under UNESCO protection should indicate that the gravity threshold is passed and that the case is admissible before the ICC according to Art. 17 of the Rome Statute, but the question still remains if this is a necessary element of the war crime.

Bearing in mind the fact that crimes against property are considered of lesser gravity than crimes against persons in case law of the International Criminal Court (The Prosecutor v. Germain Katanga, 2014: 19), the importance of protected objects was explained at the opening of the confirmation of charges hearing in the case against Al Mahdi, in the statement of the Prosecutor. She emphasized that "at stake here is not just walls and stones", because destroyed objects were important from religious, historical and identity point of view. These crimes present an assault to dignity and identity of the entire population, destroy the roots of the whole population, disturb the daily life of local people, and deter tourists' visits. There are people behind those walls and stones. When crimes against cultural property are committed, the perpetrators' main goal is to harm the population whom the cultural property represents. When destroying cultural heritage during armed conflicts, the main goal is to harm the population to whom cultural heritage belongs (Bensouda, 2016). This anthropocentric approach requires the establishment of a link between cultural property and the group of individuals that it represents, and that is why there is often a tendency to place crimes against cultural property below crimes against persons in respect of their gravity. It is a fact that there is a huge difference between murder, rape, torture on the one side, and destroying cultural heritage on the other side, but specific long-term effects of the latter must be recognized (Abtahi, 2001: 3).

In order to determine the appropriate sentence, the Chamber in the *Al Mahdi case* once again had to analyse the gravity of the committed war crime. The Chamber emphasized again that the defendant had not committed crime against persons, but crimes against property which, even if inherently grave, are generally considered as crimes of lesser gravity (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 36-37). Still, the gravity of the case was established based on the facts that some of the protected ob-

jects were completely destroyed, the impact of the attack on the population was heightened by the fact that it was announced in media, the fact that the attacked objects were placed in a city which played a crucial role in the expansion of Islam in the region and which was the heart of Mali's cultural heritage, while the attacked objects themselves were used for prayer and as pilgrimage locations. As protected objects were of symbolic and emotional significance for the local community and some of them were recognized as UNESCO World Heritage sites, their destruction affected not only local people, but also the entire population of Mali, as well as the international community (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 37-38). By stating this, the Chamber recognized and emphasized both - the civilian use and culture-value characteristics of attacked property (Badar & Higgins, 2017: 513).

The third element refers to the perpetrator's intent to attack protected objects, and in the *Al Mahdi case* this intention was established based on the circumstances of the attack, as well as the perpetrator's statements that the purpose of the operation was to destroy these buildings (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 27).

Concerning *the fourth element* which refers to the existence of an armed conflict not of an international character, the Chamber stated that there was no evidence of any foreign intervention in opposition to the Malian forces in the relevant time period, nor had the parties claimed that there was any involvement by the other State, meaning that there was no evidence that the armed conflict became internationalised (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 28).

The fact that Al Mahdi and the attackers were based and present in the city where the protected objects were attacked, led the Chamber to conclude that the perpetrators were aware of the factual circumstances which established the existence of the armed conflict, the *fifth element* of the crime thereby having been established (The Prosecutor v. Ahmad Al Faqi Al Mahdi, 2016: 28).

Findings

The fact is that cultural heritage can be endangered, damaged or destroyed during a period of peace and during armed conflicts, but the most extensive and the most devastating destructions of cultural heritage occur during armed conflicts. According to some authors, there is a *specific psychology* behind the destruction of cultural heritage during armed conflicts. The destruction of cultural heritage of one nation or other group has as its goal not only to weaken present generations or destroy the identity of specific nation or other group, but also to make influence to future generations and destroy their understanding of who they are and where they come from (Abtahi, 2001: 2).

The etiology of the crimes against cultural heritage is very specific. The main reason for targeting the objects of cultural heritage is not in their simple physical destruction, but in what such destruction will cause to the group to which the cultural heritage belongs, which is to make harm to the group, to destroy its historical, religious and cultural identity, to destroy its roots. There is a strong connection between the material and immaterial dimensions of cultural heritage (Lostal, 2017: 51). This further affects the entire international community, because the destruction of civilizational assets represents the destruction of the cultural heritage of all humanity. This etiology of committing crimes against cultural heritage during armed conflicts is confirmed in modern armed conflicts, which are characterized by the recording and publication in the media of the destruction of cultural heritage objects, in order to have an impact on the entire international community. Parties in some armed conflicts, such as conflicts in Libya, Egypt and Yemen, have even adopted the destruction of cultural heritage as their *modus operandi* (Lostal, 2017: 47), which indicates that they are aware of the broad and multilevel effects of the destruction.

It is interesting that history has shown different treatment of cultural heritage during armed conflicts depending on whether the warring parties have the same civilizational and cultural values or not. In the case where they share the same civilizational assets, more care is taken to protect the cultural heritage, while in the case when the warring parties do not share the same civilizational assets, the cultural heritage can often be the target of attacks (Jončić & Petrović, 2012: 150).

The specific etiological-phenomenological dimension of crimes against cultural heritage was recognized in ICC practice, when the Prosecutor in the *Al Mahdi case* showed his intention to prosecute these crimes which had previously been under-prosecuted, demonstrating in that way that the protection of cultural heritage had become a valuable goal of international criminal justice (Wierczynska & Jakubowski, 2017: 712).

Although in the public the guilty verdict in the *Al Mahdi case* is praised as a great success of the ICC because it is the first case in which the defendant was charged exclusively with war crime of attacking cultural property and was convicted at the same time, and because this case should serve as a precedent for future cases related to attacking cultural heritage. Still, the fact is that *the Al Mahdi case* provides minimal guidelines for future cases. The reason lies in the fact that the Trial Chamber in *the Al Mahdi case* did not determine the framework and limits of the protection provided to cultural heritage in the Rome Statute. Given that the defendant Al Mahdi admitted his guilt, the ICC used this to omit a more detailed analysis and explanation of the war crime against cultural heritage (Gerstenblith, 2016: 1982). The big shortcoming of the judgment in *the Al Mahdi case* is the failure to make the demarcation between objects of cultural, historical and religious importance, and thus make it clear whether the protection provided by the Rome Statute to cultural heritage applies to all the mentioned objects. Also, Al Mahdi was found guilty of demolishing ten buildings, nine of which are under UNESCO protection and one is not. The Trial Chamber failed to explain the demarcation of objects under and without UNESCO protection, so in future cases there may be different positions among different Chambers on whether cultural heritage objects not protected by UNESCO enjoy protection under the Rome Statute or not (Gerstenblith, 2016: 1983-1984). Bearing in mind the abovementioned strong connection between material and immaterial dimensions of cultural heritage, it is clear that UNESCO protection of some cultural assets could only be one of the guidelines for the ICC in the future to decide whether the gravity threshold is passed or not, but it should not be seen as an element that determines whether the war crime against cultural heritage is committed or not. It is rational to assume that in some cases where destructed objects of cultural heritage are not under UNESCO protection, the war crime will still be committed due to the importance and value of these objects for cultural identity of one group. This approach could be very useful for the criminal law protection of Serbian cultural heritage in Kosovo.

Even after the end of the armed conflict, the destruction or endangering of the objects of cultural heritage of a population can be done with the aim of pressuring the population to move out of a certain territory and for the purpose of erasing their cultural identity, which is the case with Albanian separatist pressure on the Serbs in Kosovo (Đorđević, 2013: 293). Such a practice makes the re-establishment of peace impossible, and can actually lead to re-escalation of the conflict.

Conclusion

Regarding cultural heritage, there are many different issues that have to be discussed and analysed, and many different branches of law that could be involved in terms of proposing the definition of cultural heritage, determining its types and providing protection (Manacorda, 2011: 18). This paper focuses

on immovable cultural heritage objects, their definition in international instruments, their endangerment or destruction during armed conflicts and their protection within international criminal law.

There are two ways of thinking about cultural property: as a component of common human culture, and as part of a national cultural heritage (Merryman, 1986: 831-832). But, in the Preamble to the Convention for the protection of cultural property in the event of armed conflict it is correctly stated that "damage to cultural property belonging to any people whatsoever means damage to the cultural heritage of all mankind, since each people makes its contribution to the culture of the world".

Bearing this in mind huge efforts are made within the international community to protect cultural heritage during armed conflict. Many international instruments, mainly within international humanitarian law, prescribe protective measures for cultural heritage. It is very important to implement protective measures during the period of peace, because the preservation of cultural heritage during the armed conflict helps to rebuild ruined communities and re-establish their cultural identity after the cessation of hostilities (Bokova, 2017: 8)

Although all international instruments contribute to the overall protection of cultural heritage during armed conflicts, history has shown that the provisions contained in international instruments that are not exclusively of a criminal law nature do not represent a sufficient measure of protection, i.e. do not show a sufficient deterrent effect towards potential perpetrators of crimes against cultural heritage. In this sense, criminal legal protection should be improved through its strengthening in international instruments of an exclusively criminal legal character, such as the Statute of the permanent International Criminal Court, and through the application of the provisions of these instruments in the practice of national and international criminal courts. When it is visible that crimes against cultural heritage committed during armed conflicts are tried at the national and international level, a deterrent effect can be achieved. In addition, it is necessary to make such trials visible and covered by the media. *The Al Mahdi case* before ICC presents the step forward in this sense, because it shows that international criminal justice system is willing to support the protection of cultural heritage and thus affect the way the international community responds to attack on cultural heritage (Wierczynska & Jakubowski, 2017: 712). However, based on the guilty plea, the judgment in Al Mahdi case does not provide clear guidelines for future cases before the ICC or before national criminal courts. Still, this judgment must serve as an incentive, especially for the national judiciary, to prosecute the perpetrators of crimes against cultural heritage, and will serve to raise awareness of international community about gravity of crimes against cultural heritage and about importance of its protection.

It must be kept in mind that the role of the ICC in the protection of cultural heritage is limited, based on the principle of complementarity. More important and more effective is the role of national courts. It is crucial for national authorities to ratify international instruments related to the protection of cultural property, to create the conditions for the application of preventive measures in practice, but also to create a legal and factual framework for the prosecution of perpetrators of crimes against cultural heritage. Because, as stated at the beginning, "what is at stake here is not just walls and stones". Bearing in mind the long-term effect of the destruction of cultural heritage to the group whom the cultural heritage belongs to, efforts have to be made to prosecute perpetrators of crimes against cultural heritage before national courts as well.

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CRIMINAL LAW ASPECTS OF DIGITAL ASSETS – CONTEMPORARY CHALLENGES

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Introduction

By adopting Law on Digital Assets (LoDA, Official Gazette RS, 153/2020) in 2020., Serbia became one of the first countries in the world that regulates realm of digital assets. Among others, the enactment of the aforementioned law aimed to prevent the abuse of digital assets and their criminal misuse. A few years prior, Law on the Prevention of Money Laundering and the Financing of Terrorism (LoPMLFT, Official Gazette RS, 113/2017, 91/2019, and 153/2020) also stipulated virtual currencies in accordance with the aforementioned law. Additionally, it is essential to emphasize significance of the newest European Union Regulation 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (MiCA). This regulation raises critical questions about digital assets and associated risks and is expected to pave the way for future legislation governing the digital landscape within the European Union.

Theoretically speaking, we are currently facing an atypical situation in Serbia. According to fundamental principles, Criminal law should possess an *ultima ratio* character, encompassing subsidiary application and the protection of fragmentary types of goods. The notion of fragmentarity is pertinent to the subject of this article, as it implies that Criminal law does not create the values it protects, but rather identifies them in other fields of law. In a broader sense, we are currently witnessing a sort of *vice versa* scenario – digital and virtual assets are initially encountered within the context of Criminal law, concerning abuse or money laundering, before being subsequently integrated into the conceptual framework that defines the terms associated with these concepts. This article's focal point will be on offences linked to Digital assets, as defined by the Law on Digital Assets (LoDA), and the potential application of existing provisions within the Criminal Code of Serbia to address the aforementioned legal issues.

Design/Methods/Approach

The research paper comprises an introduction, three distinct chapters, and a conclusion. The first chapter provides a brief elucidation of the normative framework, encompassing pertinent provisions from the LoDA, LoPMLFT, Criminal Code of Serbia (CC, Official Gazette RS, 5/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016, and 35/2019) and MiCA regulation. The emphasis lies on the overarching provisions relevant to digital assets, particularly the legislative foundation underpinning the enactment of LoDA (Official Gazette RS, 153/2020) and its interplay with CC and LoPMLFT (Official Gazette RS, 113/2017, 91/2019, and 153/2020), accompanied by an overview of appropriate regulations set forth by MiCA. The second chapter delves into an analysis of two offences outlined in LoDA (Official Gazette RS, 153/2020). From a criminal law perspective, this exploration

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encompasses the penal aspects of insider trading and market manipulation. The third segment of the article addresses queries concerning existing provisions within the CC that could potentially pertain to digital assets, encompassing criminal offences against property, computer data security, economic interests, and related matters.

The scientific method employed here primarily incorporates a doctrinal approach, utilizing content analysis, the dogmatic method, and a conceptual approach. Given that this Article is founded on legal provisions, a normative analysis has been employed to assess the existing state of digital assets concerning crimes involving cryptocurrency usage, while also addressing the challenges posed within the context of contemporary challenges.

The Normative Framework and Certain Fundamental Principles

Before presenting the main provisions of the aforementioned laws, we will establish some fundamental terms. Firstly, the terms 'digital assets' and 'virtual assets' will be used interchangeably, as LoDA (Official Gazette RS, 153/2020) treats them as synonyms. In fact, the Law explicitly provides the definition as follows: "digital assets, or virtual assets, means…" (Art. 2, Par. 1, pt. 1). Undoubtedly, both digital and virtual assets encompass broader categories than virtual or cryptocurrencies (for example, see Art. 2, Par 1, pt. 2 of LoDA; The Report – The Role of Law Enforcement in Detecting, Investigating, and Prosecuting Criminal Activity Related to Digital Assets, 2022: 4). This examination will also delve into relevant questions about virtual currencies, as they represent the most common form of digital assets.

LoDA (Official Gazette RS, 153/2020) serves as the foundation for considering the main subject of this Article. This law came into force on June 29th, 2021. Article 2, par. 1, pt. 1 and 2 of the Law define "digital assets, or virtual assets' as 'a digital representation of value that can be digitally bought, sold, exchanged, or transferred and used as a means of exchange or for investment purposes. Digital assets do not include digital representations of fiat currencies and other financial assets governed by different laws, unless otherwise specified by this Law." Similarly, the Law specifies that "virtual currency means a type of digital asset that is not issued or guaranteed by a central bank or public authority, is not necessarily tied to legal tender, and lacks the legal status of money or currency. However, it is accepted by natural or legal persons as a medium of exchange and can be bought, sold, exchanged, transferred, and electronically stored." With these definitions in mind, several conclusions can be drawn. Digital assets represent specific property rights or property values in digital format, often symbolized by tokens. This parallels the logic of symbols representing property rights or values in physical form, such as banknotes or coins. Additionally, the concepts of 'digital,' 'virtual,' and 'crypto' can be discerned. What these terms share is their non-physical existence. These attributes capture the nature or essence of digital assets that include and crypto currencies: 'digital' highlights their basis in computer technology, 'virtual' denotes their operation in the online and virtual realm, and 'crypto' signifies a certain level of secrecy (Schueffel, Groeneweg & Baldegger, 2019: 11, 14; Fairfield, 2017: 172-174).

While LoDA (Official Gazette RS, 153/2020) provides the foundation for comprehending the realm of digital assets, it is essential to underscore the significance of LoPMLFT (Official Gazette RS, 113/2017, 91/2019, and 153/2020) within the Serbian justice system. This marked the initial legal enactment through which 'virtual currencies' were regulated. Although virtual currencies were first *mentioned* in the same-titled law (LoPMLFT, Official Gazette RS, 113/2017), their more comprehensively regulated definition was missing.[2] This was achieved more detailed through amendments to LoPMLFT as docu-

2 This was done in a provision (Art. 4, par. 1, pt. 16 LoPMLFT) that stated: "Entities engaging in the provision of services

mented in Official Gazette RS, 91/2019. Subsequent amendments of LoPMLFT in Official Gazette RS, 153/2020 'harmonized' these definitions in relation to LoDA (Official Gazette RS, 153/2020). Thus far, we can confirm that the Law on Digital Assets has adopted the virtual currency definition as stipulated in LoPMLFT, Official Gazette RS, 91/2019. This stands as the current state of our legislation. Now, let's take a step back.

The main reason for legislative intervention in the context of virtual currencies within LoPMLFT was to prevent offenders and criminal groups from abusing virtual currencies in their illegal activities. This intervention aligns with the obligations of harmonization with the European Union *Acquis*, a collection of Community (*Communautaire)* rules contained in legal acts and court decisions. This is an important obligation for both EU member states and candidate countries. Conceptually, the legal foundation for the initial regulation of virtual currencies in Serbia is based on aligning Serbian law with Directive (EU) 2018/843 of The European Parliament and of The Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (Directive 2018). *Inter alia,* the Directive's preamble explains that the anonymity of virtual currencies can lead to their potential misuse for criminal purposes. To counter these risks, national Financial Intelligence Units (FIUs) should be able to obtain information that links virtual currency addresses to the identities of their owners. Chronologically, this legislative situation is interesting from the perspective of the fundamental principles of Criminal law, particularly in terms of fragmentarity as part of the *ultima ratio* character of Criminal law. Virtual assets initially enter the realm of Criminal law due to issues of abuse, money laundering, and terrorist financing, before being formally defined within legislative frameworks. This unique situation underscores the contemporary challenges that the law must address, even if it requires exceptions from traditional rules. For instance, the decentralization and anonymity inherent in digital currencies contribute to this evolving legal landscape (Czarnecki, 2017: 287). Similar dilemmas can arise in defining movables according to Art. 112 Par. 16 of the Criminal Code. While 'digital assets' can find acceptance within criminal law, it cannot be entirely equated with the terms used in civil and property law (Damnjanović, 2022: 80).

It should be kept in mind that this type of process is complex and continually challenged. The recent Financial Action Task Force (FATF) Report serves as evidence of this. Reporting on the implementation of Recommendation 15, the report underscores that "some jurisdictions have introduced regulations standards on Virtual Assets (VAs) and Virtual Asset Service Providers (VASPs), but global implementation is relatively poor and compliance remains behind most other financial sectors. Based on 98 FATF mutual evaluation and follow-up reports since the standards on VAs and VASPs were adopted, three quarters of jurisdictions (75%; 73 of 98) are only partially or not compliant with the FATF's requirements" (FATF, 2023: 2). This data holds significance, especially when considering that Serbia, unlike many jurisdictions with low global compliance, has adopted a substantial number of standards pertaining to virtual assets.

Finally, MiCA establishes the most detailed regulations for digital assets at the European Union level. From the perspective of Criminal Law, a few points warrant emphasis. Firstly, it prohibits the behavior that can undermine user confidence in crypto-asset markets and their integrity. Specifically, under Title VI – Prevention and Prohibition of Market Abuse Involving Crypto-Assets, the following provisions can be found: Article 89 stipulates the Prohibition of insider dealing, Article 90 prohibits the Unlawful disclosure of inside information, and Article 91 prohibits market manipulation. Moreover,

for the purchase, sale, or transfer of virtual currencies, or the exchange of these currencies for money or other assets, through internet platforms, physical devices, or other means, or entities that mediate in the provision of these services." However, almost complete harmonization followed, as will be explained further below.

administrative penalties and other measures are proscribed for these infringements, without prejudice to potential criminal penalties and the supervisory and investigative powers of competent authorities (Art. 111, MiCA). Considering that the Serbian legislator sanctions these illicit activities through penal law provisions, it is intriguing to examine the second part of Art. 111, MiCA. It allows Member States to opt not to establish rules for administrative penalties if the infringements mentioned in the first subparagraph are already subject to criminal penalties in their national law by 30 June 2024. Given that LoDA (Official Gazette RS, 153/2020) criminalizes the aforementioned conducts, it can be inferred that Serbian law has taken a step further even before the EU officially did, prescribing more stringent forms of punishment than what MiCA requires (criminal, not solely administrative). However, there are differing viewpoints regarding the justification of criminal law protection concerning insider dealing, especially considering its *ultima ratio* nature (more about the new trends in EU Criminal law: Faure & Leger, 2015: 389, 426-427). Nevertheless, contemporary criminal law must align with and judiciously assess modern trends (Aryamov, Grachova, Chuchaev & Malikov, 2019: 2).

Criminal Law Protection of Digital Assets – Articles 140 and 141 of LoDA

LoDA (Official Gazette RS, No. 153/2020) introduces two relatively new criminal offences. We say "relatively" because Serbian law already has the same offences in nature. Articles 140 and 141 of LoDA prohibit illicit use of inside information and market manipulation referred to digital assets. However, Capital Market Law – CML (Official Gazette RS, 129/2021) contains two almost identical criminal offences: Prohibition of market manipulation (Art. 402) and Use, disclosure and recommendation of insider information (Art. 403) (see more: Jovanović, V. Radović & M. Radović, 2020: 607-615). Regarding the subject of the Article, a brief analysis of digital assets-related crimes will be given below.

Article 140 of LoDA – Insider Dealing

The offence consists of a basic form, two qualified forms and the most serious form of this offence. Additionally, there is a specific paragraph stipulating a punishment for attempting the basic form of the crime, as it would not be punishable under general rules. According to the Law, the offence is committed when the perpetrator uses inside information with the intention of acquiring financial benefits for themselves or for other persons, or causes damage to other persons. Illicit use of inside information that is done with intention of earning financial benefits or causing damage is prohibited when it is alternatively perpetrated as following: directly or indirectly during the acquisition, alienation or attempts to acquire or alienate for own account or the account of another holder the digital assets to which such information relates, or by disclosing and making available inside information to any other person, or by recommending or inducing another person, based on inside information, to acquire or alienate digital assets to which such inside information relates. For this form of the offence, the penalty is imprisonment for up to one year, including a fine.

The object of protection is inside information or more precisely – its misuse. Domestic law protects various types of secrets (see: Bodrožić & Milošević, 2022). Inside information, being privileged, is a component of that system. The LoDA (Official Gazette RS,153/2020) provides definition of inside information in Article 39. This refers to information about specific facts that are non-public and relate directly and indirectly to one or more issuers or one or more types of digital assets, which, if made public, would be likely to have a significant effect on the price of such digital assets. Subsequent paragraphs elaborate on what constitutes a 'significant effect,' the characteristics that information must possess to qualify as insider information, and the implications for individuals responsible for carrying

out orders related to digital assets. With regard to the aforementioned provision, several basic characteristics of this type of privileged information can be identified. Firstly, it must pertain to a specific fact concerning the issuer or digital asset. Secondly, it must not have been published. Lastly, the information should be of financial significance to a prudent investor. Intention is established as a subjective element of the offence, indicating that the relevant degree of guilt is direct intention.

The first qualified form occurs when the acquisition of financial benefits or the caused damages exceed the amount of RSD 1,500,000 (Art. 140, par. 2 of LoDA). The second qualified form arises when a person gains possession of inside information in the following ways: through membership in the management or supervisory bodies of the issuer, having a stake in the issuer's capital, accessing information obtained through normal employment, profession, or duties, or as a result of criminal offences committed. Both qualified forms require intent as a subjective element, and the perpetrator is subject to punishment by a fine or imprisonment of up to three years. In contrast to the basic form of the offence, which is committed by the secondary insider, the second qualified form should be committed by the primary insider. Due to their duty of loyalty and specific status as members or stakeholders, the penalty is more stringent (Radisavljević, 2023: 308; for further insight into specific duties and status-related crimes, refer to: Banović & Mihailović, 2021: 128-133). The most severe form of the offence is linked to this form of crime (Art. 140, par. 3 of LoDA) and arises when the acquisition of financial benefits or caused damages to other persons exceed the amount of RSD 1,500,000. The prescribed penalty is imprisonment for a duration of six months to five years, along with a fine.

Article 141 of LoDA – Market Manipulation

This offence exists in both a basic and a qualified form. The act of perpetration involves engaging in market manipulation to gain financial benefits, either for oneself or another person, or causing damage to others. Manipulation inherently carries a negative connotation, although not all forms of manipulation are illegal. Moreover, manipulation can be defined as "sophisticated, skillful handling or management of something, and also the creation of business tricks" (Vujaklija, 2009: 567). LoDA (Official Gazette RS, 153/2020) provides a comprehensive definition of market manipulation in Article 49. In summary, this definition covers: false or misleading signals or information regarding the supply, demand, or price of digital assets; maintaining the price of one or more digital assets at an abnormal or artificial level in connection with transactions or orders; engaging in fictitious actions or any other form of deception and contrivance; disseminating knowingly or potentially false or misleading information; transmitting such information, and more. If we consider the complete definition from the aforementioned Article 49 (along with the subsequent Article 50 that prohibits manipulation), we can comprehend unlawful manipulation as actions that contravene fair market competition rules, influencing the supply or demand of digital assets with the intent to gain financial benefits or cause damages. Such actions create a 'manipulative market' (in a negative sense) that operates outside the genuine laws of supply and demand. These actions erode the foundation of sound market competition (Watters, 2023: 5).

For the basic form of the offence, the offender shall be punished if they engage in the following actions, alternately: concluding transactions or issuing orders to trade that provide, or are likely to provide, false signals about the supply, demand, or price of digital assets, or where the price of one or more digital assets is artificially maintained at an abnormal level through collaboration (the first scenario); concluding transactions or issuing orders to trade that involve fictitious actions or any other form of deception or contrivance (the second scenario); disseminating information through the media, including the internet, or through any other means, that provides or is likely to provide false or misleading

signals about digital assets, when the disseminator knew or ought to have known that the information was false or misleading (the third scenario). In relation to the usage of the terms 'signals' or 'information' as elements of the crime, it is essential to mention certain debates in the literature (Radisavljević, 2023: 309). Additionally, the reach of the internet amplifies the opportunities for market manipulation (Swan, 2022: 196), as well as the commission of various criminal offences in general (Banović, 2019: 358-359). As for the subjective element, intent is required, despite the part of the incrimination using the construction 'ought to have known,' which is akin to the criteria of negligence, but can also suggest *dolus eventualis*, not solely *dolus directus*. It is important to underscore that punishment exclusively for intentional offences is justified from both a penal policy standpoint and a procedural perspective, as the occurrence of damage or benefit to a specific recipient facilitates evidence examination (Watters, 2023: 12). The prescribed penalties for this offense are imprisonment of six months to five years and a fine. Unlike the previous offence (Art. 140 of LoDA), where the special paragraph prescribing punishment for attempts is justified, in this case, attempted actions would be penalized according to Article 30 of CC (Official Gazette RS, 5/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016, and 35/2019), and therefore, no specific paragraph is needed. In any case, the offence is deemed complete upon obtaining a benefit or causing damage.

The qualified form arises when the previously explained actions have caused a significant disruption in the digital assets market. The term 'significant disruption' represents the consequence of the offence and is punishable in accordance with the legal construction of liability for graver consequence (Article 27 of CC). In simpler terms, it is enough to consequence be attributed to the offender's negligence. However, if there are no other offences that could cause 'a significant disruption in the digital assets market', even intention due to the more severe consequence is conceivable. On the surface, this situation seems real, considering that digital assets are specifically protected by the penal provisions of the Law on Digital Assets. Nevertheless, in the context of the theory of causality (and the potential ingenuity and creativity of offenders), numerous actions beyond the elements of a specific crime could lead to a significant disruption. The question arises – should all of these actions be considered as suitable acts of perpetration according to the norms of Criminal Law? The only prescribed criminal sentence for this form is imprisonment for three to eight years. A fine is not specified in this form, but it could be imposed based on the general provisions of fines. If a criminal offence is committed for gain, a fine may be applied as a supplementary penalty even when not explicitly stipulated by law. However, it is worth considering that this omission might also indicate a legislative oversight in explicitly including the option of imposing a fine.

Digital Assets and Certain Provisions of the Criminal Code

Digital assets operate within the market, further implying the potential for substantial value exchange. These characteristics create opportunities for potential illicit activities across a range of protected objects. Initially, virtual assets faced criticism due to their potential involvement in criminal activities such as narcotics dealing, terrorism, tax evasion, money laundering, fraud, and more (Stabile, Prior & Hinkes, 2020: 298, 315; Watters, 2023: 4). The above-mentioned offences encompass crimes that could be perceived as violations of certain 'traditional' criminal law norms.

First and foremost, the Criminal Code of Serbia provides broad definitions of certain important terms in the context of digital assets, such as movables, computer data, computer program, and property gain. These definitions pertain to the objects of actions. Article 112, paragraph 16 of the Criminal Code stipulates that *movables* also include any produced or collected energy for emitting light, heat or

movement, telephone pulse, and computer data and computer program. In paragraphs 17 and 19, the Law further defines *computer data* as any representation of facts, information, or concepts in a form suitable for processing in a computer system, including an appropriate computer program necessary for the functioning of the computer system, and additionally, a *computer program* which is a regulated assembly of orders serving to control computer operation, as well as to solve a specific task by means of a computer. Lastly, the definition of *property gain* (given in Article 112, par. 36 of the Criminal Code) encompasses goods of any kind, tangible or intangible, movable or immovable, or the estimates and invaluable documents in any form that proves right or interest in relation to such well. Property is considered income or other benefit that originates, directly or indirectly, from criminal offence, as well in which it is converted or with which it is merged. It seems that these definitions are precise, comprehensive, and applicable in the context of digital assets.

Starting from the premise that digital assets constitute a category of property, it is natural to begin review with criminal offences against property. Offences that would come to the forefront will be: Theft (Art. 203 CC) and Aggravated Larceny (Art. 204 CC). Among the contentious issues, for example, these offences can raise the question of attempted and completed crime. Besides that, Embezzlement (Art. 207 CC) can also be considered. Furthermore, Extortion (Art. 214 CC) and Blackmail (Art. 215 CC) can also be taken into account. Having in mind that Fraud (Art. 208 CC) is classical property-crime, it can lead the problem of relation to Computer Fraud in the context of specious joinder offences by principle of specialty. Considering the fact that digital assets primarily require the use of technology, it will likely involve Computer Fraud. Particularly based on the provisions of Law on the Organisation and Competences of Government Authorities Combating Cyber Crime (LOCGACCC, Official Gazette RS, 61/2005, 104/2009 10/2023, 10/2023) that stipulated cybercrime for the purposes of this law. It shall mean committing criminal offences where computers, computer systems, computer data and products thereof in hard or electronic form appear as the objects or the means of committing a criminal offence (Art. 2 LOCGACCC). However, we cannot exclude the fact that digital assets can be defined as property, even in the sense of traditional crimes. By now, it is difficult to take clear stance without appropriate judicial praxis and "real matter". In this context, Swan (2022: 182) explains difference between "online" and "offline" crimes where the latter involve demanding money transfers. In any case, it is important to clarify what exactly constitutes the object of action or which interests are predominantly protected. Undoubtedly, the previously presented legal definitions help in that regard (both from LoDA and CC). Also, it is true that some traditional crimes can easily get certain digital shape (Swan, 2022: 196).[3]

The second group of offences that can be related to digital assets and their virtual character is – security of computer data. Especially, the following crimes: Creating and Introducing of Computer Viruses (Art. 300 CC), Computer Fraud (Art. 301 CC), Unauthorised Access to Computer, Computer Network or Electronic Data Processing (Art. 302 CC), Unauthorised Use of Computer of Computer Network (Art. 304 CC) and Creating, Obtaining and Providing another Person with Means for the Committing Criminal Offences against the Security of Computer Data Article (Art. 304a CC). It is compelling to make a parallel with ransomware misuse in the context of offence from the Article 300 of CC and Extortion and Blackmail from the articles 214 and 215 of CC. Ransomware attacks have been causing significant concern for computer systems, but also for security in general and also acting "online". Moreover, even European legislation is being shaped, considering that the field of digital as-

3 An interesting case involves the theft of electricity in the monumental home of a Serbian officer from the period of the First and Second World Wars. Namely, equipment for so-called cryptocurrency mining was connected to the low-voltage network through a meter that had been previously deregistered and was not in operation. "Za ilegalno rudarenje kriptovaluta u Dražinom spomen-domu potrošili 55.000 kW/h" (2021), https://n1info.rs/vesti/za-ilegalno-rudarenje-kriptovaluta-u-drazinom-spomen-domu-potrosili-55-000-kw/, Accessed on August 28, 2023.

sets is an area that offers many possibilities, but at the same time entails substantial risks (Mihailović *et al.*, 2022: 141-144). Given that they involve various objects of protection, these criminal offences would be considered in relation to joinder of offences (Putnik, Milošević & Cvetković, 2022: 329, 336-337; Swan, 2022: 182). *Modus operandi* can be viewed as follow: hackers attack commercial computer systems and blackmailed or extorted them looking for the financial gain. In order to regain access to their networks, companies (mostly the large ones) opt for payment because it costs them less than reputational risks, fines due to inadequate system protection, and especially - data loss (Swan, 2022: 193). Consequences of these actions are not naïve. They raise important questions that can rightly be considered as the leading challenges of the modern era. Thus, Lambert (2022: 21-23, 383) recognizes the importance of crypto currencies and data protection.

From the group of offences against economic interests, it is worth to mention Abuse of Trust in Conducting Business Activity (Art. 224a CC). That could be situation when service provider causes damage to the user by managing digital assets based on contractual relation. After that, probably the most indicative virtual assets-related offence is Money laundering from the Article 245 of Criminal Code. In this regard, some issues are touched before. At this point, specific questions will be underlined. Given that cryptocurrencies are characterized by anonymity, establishing guilt as a subjective element can be linked to greater difficulties. Especially in accordance to specific negligence form of this offence (Vuković, 2019: 134; Delić, 2021: 261). Furthermore, tax aspects related to digital assets have been addressed within the Serbian legislative framework (Milojević Kolarević, 2021). This is why Tax Avoidance (Art. 225 CC) can also be examined in relation to these objects of action.

Findings/Orginality/Value

Through the previous analyses, certain findings will be presented below. It can be concluded that Serbia has a solid foundation for the regulation of digital assets. In addition to the Law on Digital Assets, which constitutes the primary regulation in the realm of virtual assets, the protection of these assets can also be ensured in accordance with the Law on the Prevention of Money Laundering and the Financing of Terrorism, and, of course, the Criminal Code. The first of the aforementioned laws is significant for addressing fundamental issues such as definitions, supervision, various procedures, and, finally, the criminal law aspect stipulated in Articles 140 and 141, which outline two offences. The second law is important because it has introduced the topic of virtual assets for the first time. Specifically, the main reason for legislative intervention in the context of virtual assets within this law was to prevent offenders and criminal groups from exploiting virtual currencies in their illicit activities. The third law contains the fundamental principles of criminal law and represents an integral part of this analysis.

Theoretically, keeping in mind the fundamental principles of criminal law, it can be concluded that fragmentarity (which means that criminal law does not create values it protects, but rather finds them in other fields of law) as a part of the *ultima ratio* principle confirms that we are currently witnessing a certain *vice versa* example – that digital/virtual assets first appear in the context of criminal law abuse, and only afterward in the conceptual framework for defining the terms of those institutes and concepts. Furthermore, insider dealing and market manipulation are prohibited under Articles 140 and 141 of the Law on Digital Assets as new offences in secondary criminal legislation. However, these crimes are relatively new, considering that the Capital Market Law already criminalizes similar offences. The primary difference lies in the object of protection. Moreover, digital assets can be examined in relation to some 'traditional' crimes. This presents an additional reason for considering offences

proscribed by the Criminal Code of Serbia. Offences against property, security of computer data, and economic interests are identified as representative for analysis. Regarding the definitions of movables, computer data, computer programs, and property gain given in Article 112 of the Criminal Code, it can be concluded that the above-analyzed offences can be taken into account in the context of virtual assets. Furthermore, the recently adopted EU Regulation 2023/1114 of 31 May 2023 on markets in crypto-assets (MiCA) is worthy of mention, especially considering that the Serbian Law on Digital Assets is generally aligned with it even before MiCA comes into force within the EU territory. It is important to emphasize that harmonization with European Union legal documents is an important obligation for both EU member states and candidate countries.

Finally, the digital landscape certainly introduces a new and fruitful dimension to various areas of law. It raises numerous questions that can challenge traditional norms, particularly within branches of public law like Criminal law. Its norms exhibit a moderate resistance to change, but this does not imply that even this field of law should not keep up with new trends. Consequently, the existence of regulation in this realm is beneficial. While it is true that this regulation can be improved, especially considering that life is often more creative than the law itself, it remains essential. From the perspective of Criminal law, however, there is no a specific practice for evaluating the effectiveness of prescribed norms. Proper enforcement serves as a strong indicator when examining penal provisions. This applies not only to offences related to digital assets, but also to general provisions (*e.g.,* seizure and confiscation of virtual assets). Overall, this holds significance for the future development of what can be termed 'Digital Criminal Law'.

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PROBLEM OF ATTRIBUTION OF CYBER-ATTACKS POLITICAL ASPECTS

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Purpose

The rapid rise of cyberspace and, more generally, information and communication technologies and their thorough penetration into daily life, is frequently framed in terms of "new technologies" and discussed in purely technical (or technological) terms. This is not necessarily the best or even sufficient theoretical framework for consideration of their workings. On the contrary, minority voices in both scholarship and popular culture were and are warning again and again, that all technologies are *political*, in their making as well as in their impact and consequences (see Damnjanović, 2015, 2018; MacKenzie & Wajcman, 1999; Street, 1992).

Cyberspace is increasingly becoming an indistinguishable part of most people's everyday experience. It is not surprising, then, that various malicious actors are also staking their claims in this domain, trying to subvert it for their own purposes. The number of cyber-attacks is steadily growing and has now reached 2,200 attacks per day, totaling 800,000 per year (James, 2022). Companies, states, and international organizations are at the same time increasing their efforts to make cyberspace a safer place, using both technical and social - including legal and political - instruments. One of the significant problems, when it comes to dealing with cyber-attacks, is how to determine who the perpetrators are and where they come from. This is due to some particular features of cyberspace, seen by some authors as tempting for those who wish to exploit it for illicit purposes. As Parish and Madahar (2016, p. 1) point out, "[u]nconstrained by borders or geography, cyberspace is omnipresent, it permeates most, if not all, civil and military sectors and is difficult, if not impossible, to regulate and impose national authority on. It is ethereal and complex offering a diversity of opportunities to do good as well as bad". Add the perceived anonymity and ambiguity of norms (Stalans & Donner, 2018, p. 36), or, similarly formulated, "conditions of unregulated interdependence, digital connectivity, and deterritorialisation" (Sandywell, 2010, p. 38), and the rise in various forms of misuse and malicious behavior in the cyberspace becomes, at the very least, expected.

To determine who is behind a particular instance of cyber-attack, or cyber-attack campaign, is a feat further complicated by conceptual confusion. The very definition of cyberspace is not at all undisputed: both administrative and academic definitions[2] abound but are frequently at odds with each other. Starodubtsev et al. (2020), for example, list no less than 23 different definitions of cyberspace. Furthermore, definitions of other key terms are also problematic - there is no consensus about "what constitutes an attack or what counts as critical infrastructure" (Edwards et al., 2017, p. 1). It is beyond doubt, however, that cyberspace has become a domain of political struggle, used by an array of political actors for distinctly political purposes. These aspects are especially pertinent in the discussion of the attribution of cyber-attacks, and yet, they were until recently virtually absent from the scholarly

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2 Unlike academic definitions, developed by scholars, administrative definitions are produced by national or international institutions, in accordance to their mission and goals (for further discussion of the distinction between these two types of definitions, see Simeunović, 2009).

deliberation. This is why this paper aims to reconsider the problem of attribution of cyber-attacks, arguably one of the most important issues in cybersecurity, from the point of view of political science. The purpose is to show what political aspects are involved in cyber-attacks and in the process of attribution and why they are important, from both academic and practical points of view.

Design/Methods/Approach

Drawing from the notion developed by Rid and Buchanan (2015), that the process of attribution is *a techno-political problem*, this paper will, through three chapters, discuss political components in the context of the classification of cyber-attacks, political aspects of the attribution process as well as the politically meaningful relationship between attribution and possible retribution for cyber-attacks. Starting from qualitative analysis of recent scholarly literature as well as available data on politically motivated cyber-attacks, the author will then use methods of induction and deduction, analysis, and synthesis, to form the conclusions.

The issues related to the attribution of the cyber-attacks were, until recently, been studied mainly within the field of cybersecurity and restricted to purely technical processes. This is one of the factors that severely limit the public debate on the issue of cyber-attacks, a debate that is even more relevant for the general public when those cyber-attacks are political in their nature (Rid & Buchanan, 2018). The same highly technical language, when used in the process of documenting and presenting evidence for attribution, can sometimes also be an obstacle impeding the understanding of political actors, that is, those decision-makers who have the authority to act upon that evidence (Rid & Buchanan, 2015). Furthermore, academic research on cyber-attacks and their attribution is limited by the nature of sources - which are mostly in the intelligence community or in the private cybersecurity sector, thus unavailable to university-based researchers (Rid & Buchanan, 2018). The first issue that has to be dealt with, at least to some extent, is the conceptual framework.

Cyber-Attacks

There is already a significant body of literature on cyber-attacks, replete with definitions and classifications. Still, there is no consensus on the definition of a cyber-attack, and it is deemed to be "a conflicted term" (Happa & Fairclough, 2017, p. 170). There are several reasons for this. Firstly, other terms, such as cybercrime or hacking, are sometimes used as synonyms for cyber-attacks. While certainly similar, and sometimes overlapping, they do not necessarily denote the same phenomena (see, for example, Shamsi et al., 2016). Secondly, cyber-attacks are defined from a variety of standpoints and within several fields of academic inquiry - from cyber-security studies to legal studies and philosophy (see, for example, Happa & Fairclough, 2017; Hathaway et al., 2012; Zhuang et al., 2015). In addition to these academic definitions, there are numerous administrative definitions developed by institutions and organizations.[3] For the purposes of this paper, the broader and non-technical definition of cyber-attack seems to be the most fitting. Thus, the cyber-attack will be understood as any deliberate access to the computer system or network with malicious intent, in order to disrupt the integrity or authenticity of data.

3 Several definitions used by USA government are listed on the National Institute of Standards and Technology website: https://csrc.nist.gov/glossary/term/Cyber_Attack (Accessed on July 15, 2023).

Attribution

The global nature of cyberspace, the open architecture of the Internet, as well as the hypothetical anonymity it provides, are among the key reasons why determining who is behind a particular cyber-attack is complicated. The process of identification of perpetrators of cyber-attacks is usually called attribution. It is usually defined as "the allocation of a cyber-attack to a certain attacker or a group of attackers in a first step and the unveiling of the real-world identity of the attacker in a second step" (Saalbach, 2019, p. 279). The attribution of cyber-attacks is important, among other reasons, because it allows for improvements in the protection of the systems, understanding of the rationale behind attacks, as well as pre-empting attacks against similar targets (Shamsi et al., 2016). Attribution is also a necessary prerequisite for any legal action against the attackers.

There is an extensive body of literature dealing with technical aspects of the problem of attribution. Several models for the investigation of cyber-attacks are developed, the diamond model being the most prominent (for a detailed description of this model, see Caltagirone et al., 2013). The quantity and complexity of the tools used in the investigations of cyber-attacks are constantly increasing, and the use of AI for these purposes seems to be rapidly developing (Iqbal et al., 2020; Nunes et al., 2018). However, as will be shown in the next section of this paper, technical forensics is not the only important aspect of the attribution.

Findings

In line with the stated purpose of this paper, the main findings of the paper - the identification of political aspects of the attribution process and their consequences - will be presented in the following sections. In order to complement the existing body of literature on attribution, political aspects of cyber-attacks, political actors and political issues emerging in the attribution process, and the politically significant relationship between attribution of cyber-attacks and the response to it will be identified and explained. Interestingly enough, despite the predominantly technical nature of the scholarly discussion, concepts of both cyber-attacks and attribution are seen by some as inherently and distinctly political (Steffens, 2020; *What Is a Cyberattack?*, 2022).

Political Aspects of Cyber-Attacks

The ever-expanding array of cyber-attacks, characterized by their growing diversity and sophistication, has underscored the imperative, driven by both academic and practical considerations, for the development of more precise tools for classifying these attacks. This resulted in a growing literature providing detailed classifications and taxonomies (see, for example, Simmons et al., 2009; Uma & Padmavathi, 2013). The primary criteria for classification, nevertheless, predominantly stay consistent, encompassing the means or methods of attack, the targeted entities, the underlying motivations, and the involved actors. It is worth noting that each of these factors can incorporate significant political elements, albeit to varying degrees.

The least controversial among the criteria are the tools and methods used in the execution of cyber-attacks. Most of the malicious actors use the same types of tools, even though the sophistication of those tools can vary - from readily available to custom-made. At times, though, the inherent nature of the employed methods can offer clues about the potentially politically motivated actors behind their use.

For example, strong suspicions that the state actors - in this particular case, the United States and Israel - were behind the Stuxnet attacks that targeted the centrifuges used by Iranian nuclear facilities were precisely due to the nature of the malware used. Not only was it extremely sophisticated, exploiting four zero-day[4] vulnerabilities (Bilge & Dumitraş, 2012), but testing it required access to the same model of centrifuges - a feat hardly possible for non-state actors (Rid & Buchanan, 2015).

It is easier to see the political relevance of the chosen targets of cyber-attacks. Ever since the beginning of the Internet era, the states have recognized the need to protect their critical infrastructure from cyber-attacks. In one of the earliest works on the topic, Denning (2001) identifies some of the systems that could be targeted by terrorists through cyberspace, such as the electrical grid or telecommunications. Among other systems commonly listed as critical infrastructure are banking and financial sectors, oil and gas production and distribution, water processing facilities, transport, emergency services, and government agencies. Today, however, there seems to be a consensus among researchers that the nature of politically motivated cyber-attacks has changed. In the aftermath of the 9/11 attacks, terrorist use of cyber tools to wreak havoc on critical infrastructure was seen as the most serious threat. Now, states or state-sponsored groups are those who target other nations' political targets, which are not limited to critical infrastructure but include also institutions and intelligence, with computer network attacks (CNA) becoming "a preferred semi-covert action tool of the early 21st century" (Rid & Buchanan, 2018, p. 4).

Targeting infrastructure - as seen in the case of Stuxnet and the disruption of the electrical power grid in Ukraine in 2015 - can have serious consequences. But it is even more alarming that political institutions and actors are increasingly becoming the targets of cyber-attacks. Rid and Buchanan (2018) specifically mention actors and institutions related to elections, and civil society actors - particularly groups advocating for democracy and human rights. Another possible target is the infrastructure necessary for the election - databases of eligible voters, voting machines, tabulation of votes, etc. In the United States, for example, voting machines are especially vulnerable to hacking. Their security is for decades known to be notoriously bad (see, for example, Bannet et al., 2004), and the problems are further exacerbated by the fact that manufacturers use digital rights management (DRM) to prevent researchers from examining them and disclosing vulnerabilities they have found (see Giblin & Doctorow, 2022).[5] Attempts to influence public opinion in another country are now, especially if they are assisted or accompanied by hacking, also considered to be cyber-attacks on political targets. This was the case with the campaign attributed to Russian intelligence agencies, groups, and individuals during the 2016 US elections. The way Rid and Buchanan (2018, pp. 8–9) use it as an example illuminates not only the fact that the American cybersecurity sector and at least part of the government certainly saw these events as an attack, but also several other important political aspects of the attribution process and outcomes, which will be further elaborated on in the next section of the paper:

"…the 2016 influence operations were poorly disguised, perhaps even semi-overt by design. Not only was it obvious that a hacking-aided influence campaign was going on, but it was reasonably apparent which foreign power was conducting it. As early as mid-June 2016, a range of outside experts squarely placed the blame of the budding leaking operation on Russia, following the initial hacking attribution of the cybersecurity firm CrowdStrike. Politically there may have been partisan incentives to call the evidence into question. Technically and historically, however, the evidence of a Russian hand was inescapable early on."

4 Zero-day vulnerabilities are previously unknown (and therefore unpatched) vulnerabilities in software.

5 The issue here is that article 1201 of the US Digital Millennium Copyright Act (DMCA) passed in 1998 prohibits circumvention of technological measures that effectively control access to a work protected by copyright (such as DRM) for *any* reason, including research.

Classification of a cyber-attack as political based on the motivation of its perpetrators appears to be tautological. The motivation can be obvious from the intended targets of the attack, or self-proclaimed by the perpetrators. The latter is frequently the case when the attacks consist of spamming or website defacing when individuals or groups involved usually state their goals and political positions. This was the case in one of the first uses of cyberspace by terrorist groups - the spamming campaign of Tamil Tigers in 1998 (Denning, 2001) and "cyberwars" between hacking crews from different countries.[6] Sometimes even within more sophisticated attacks, such as the Iranian attack on Saudi Arabian oil company Aramco, perpetrators leave messages on the infected computers or within code stating their political reasons for the attack (Buchanan, 2020).

Another possible way to determine the motivation for the cyber-attack is to identify the actors responsible for it. If it turns out to be a state agency or group known for its political activities, the motivation is probably political. On the other hand, in cases where perpetrators are identified as "hackers for hire," their motivation is harder to determine. In the words of Rid and Buchanan (Rid & Buchanan, 2015, p. 11), "[i]dentifying a monetary incentive is easier than examining a political incentive". The identification of actors is definitely the most certain way to determine if the specific cyber-attack or campaign is politically motivated.

There are several categories of actors who are interested in carrying out political cyber-attacks. First among them are, obviously, the states or, more specifically, their intelligence agencies or specialized military units. As it was already pointed out, the overt, covert, or semi-overt operations in cyberspace seem to be the new foreign-policy toolkit wholeheartedly embraced by great and regional powers alike. Great powers especially, Buchanan (2020) argues, are using cyber capabilities to shape the global political environment in line with their interests. This is generally done using specialized units or departments of military and intelligence organizations or proxies - more or less independent groups or hacking crews.

The United States was probably the first state to recognize the need for organizational adjustments in the age of the Internet. The formation of units for different tasks in cyberspace started already in the last years of the 20th century. After the recognition of cyberspace as one of the domains of conflict in 2004 National Military Strategy,[7] this process gained momentum, and culminated in the establishment of U.S. Cyber Command in 2009. The United States, according to most researchers[8], is at the moment in the lead regarding both offensive and defensive cyber capabilities. This stems, at least in part, from the "home advantage" provided by the fact that not only important parts of the Internet infrastructure but also most of the major global Internet platforms and companies are based in the United States. In recent years, however, this advantage may be shrinking (Buchanan, 2020).

Direct involvement of the states opens a certain set of issues in the attribution process, which will be addressed in the next chapter. The use of proxies, however, sets a completely different array of problems. The main motivation for states to use independent "contractors" for cyber operations is precisely to impede the attribution, that is, to establish plausible deniability (Steffens, 2020). Cyber proxies can be defined "as intermediaries that conduct or directly contribute to an offensive cyber action that is enabled knowingly, whether actively or passively, by a beneficiary" (Maurer, 2018, p.

6 Some of the examples include clashes between Israeli and Palestinian hackers, Indian and Pakistani crews, as well as several waves of "local" conflicts in cyberspace involving Serbian, Croatian and Albanian hackers.

7 The full text of the unclassified version of the Strategy is available at https://nssarchive.us/wp-content/uploads/library/nms/nms2004

8 This assessment should, however, be taken with the grain of salt for two reasons: 1) most of the scholarly research on these issues is published by Western scholars and in the Western academic journals, and 2) most of the attribution reports published by private cybersecurity companies also come from those enterprises that are either based in the West or are working mostly for Western clients (see, for example, Steffens, 2020).

xi). Not all proxy organizations, however, have identical relationships with the state employing them. Maurer (2018) identifies three different types of proxy relationships - delegation, orchestration, and sanctioning. Proxies who are in the first type of the relationship - delegation - are under the effective control of the state. Orchestration, according to Maurer, applies to those organizations that are funded by the state and provided with tools, and that share the state's ideology. Finally, sanctioning refers to the situation where "a state is aware of the activity of a non-state actor but turns a blind eye towards it and indirectly benefits from its actions" (Maurer, 2018, p. xii). Sanctioning seems to be very close to the concept of "patriotic hacking", described by Dahan (2013, p. 54) as " actions by private citizens of a country acting on their own initiative against a perceived threat by an enemy of the state or attacking countries involved in a conflict with their own."

There are also non-state actors who may use cyber-attacks in order to achieve political goals. Two groups have especially captured the attention of researchers - terrorists and hacktivists. While the use of the Internet by terrorist organizations is not only acknowledged but very well documented in scholarly literature, they generally do not seem to use cyberspace offensively (Damnjanović, 2009; Denning, 2010, 2001; Weimann, 2006, 2016). After the early spamming campaigns, occasional website defacing or DDoS attacks seem to be the extent of their efforts. Terrorist organizations have since realized that propaganda and recruiting are, for them, the most effective uses of cyberspace (see Liu, 2015).

Hacktivism is seen as different from patriotic hacking mostly by its ideology (Dahan, 2013), but this distinction tends to blur lately (Romagna, 2020). While usually associated with a distinct set of ideas about freedom of information and human rights, hacktivist groups (and occasionally "lone wolf" hacktivists) sometimes hold very specific political views and use cyberspace to present and promote them. Some hacktivist groups have achieved high visibility and caught the attention of the general public, political decision-makers, and academic researchers. Among them are collectives such as the *Cult of the Dead Cow*[9], *Electronic Disturbance Theater,* and the *Anonymous* (Coleman, 2001; Jordan & Taylor, 2004).

Attribution: Politics and Policy

In cybersecurity circles, there is a widely held belief that attribution is meaningless and unimportant - because the defenses built into the computer system should be designed in such a way that they are able to withstand any attack - no matter who is behind it and for what motives. While this is true in principle, in the real world there is scarcely an organization that can afford to implement all recommended security measures (Steffens, 2020). From the very definition used in the first chapter of this paper, it is obvious that the attribution is, essentially, a two-step process. These steps are described in different ways, but most authors agree that there is a difference between the attribution of the attack to the specific *machine* - host computer, server, or network from which the attack is launched, and the attribution of the attack to specific *persons* - groups and/or individuals performing the attack as well as their instigators. Boebert (2010) distinguishes these steps as different types of attribution techniques - technical attribution and human attribution, but seems more useful to see them as different phases of the attribution process (Clark & Landau, 2011).

The process itself is complex and multilayered. Shamsi et al. (2016, p. 3) describe it as an "ongoing interplay" between the types and level of attribution, the nature of the cybercrime, the desired level of attribution, and the level of proof that is required. They believe that in order to be complete, attribu-

9 This organization was, in a rather bizarre development, even mentioned during the trial of Slobodan Milošević in Hague (see "Hacktivism and How It Got Here," 2004).

tion must identify the cyberweapon, that is, the tool used for the attack, the location (country or city) of the attackers, and individuals or organizations behind the attack. The quality of attribution is, in the view of Rid and Buchanan, (2015) a function of available resources, available time, and the adversary's sophistication.

There is no dispute that the attribution is in its essence, at least on the operational level, a technical process. Cyber forensics is a highly specialized field, and, generally, only governments and cybersecurity companies are capable of effective attribution (Steffens, 2020). While it does seem that government agencies, at least in some countries of the West, do have superior capabilities, some of the biggest attacks, such as the long-lasting Chinese campaign against the USA and Stuxnet attacks were actually attributed by cybersecurity companies (Buchanan, 2020; Rid & Buchanan, 2018). Yet, in order for complete attribution to be provided, many other actors have to be involved, contributing to the political nature of the process. These include government agencies, political leaders, civil society, the cybersecurity industry, executives in other industries, researchers and scholars from different fields, as well as journalists (Rid & Buchanan, 2015; Shamsi et al., 2016). This, by itself, lends credence to the characterization of attribution as a techno-political problem.

One important area where policy-makers have a significant impact is resource allocation. Attribution is resource resource-intensive endeavor, in terms of hardware, software, and expertise available. How these resources are to be used and allocated depends on several circumstances. One of the most important is the character of the attack, its targets, and the financial, physical, or reputational damage it inflicts (Rid & Buchanan, 2015).

The main obstacle that investigators have to overcome is anonymity as one of the inherent features of the Internet. Ever since the 1990s, when the Internet became available to the general public, the possibility to use it anonymously was one of its most enticing features. In recent decades, however, this promise of anonymity is not only forgotten but also actively undermined, for example by "real name policies" more or less successfully imposed by platforms such as Facebook and Google. Nevertheless, anonymity is baked into the very architecture of the Internet (Shamsi et al., 2016). That can still change in the future. The United States seems to be intent on using its aforementioned "home advantage" "to reengineer the Internet to make attribution, geolocation, intelligence analysis, and impact assessment—who did it, from where, why and what was the result—more manageable" (McConnell, 2010, according to Clark & Landau, 2011, p. 323).

Identification of perpetrators of cyber-attacks as an element of successful attribution can be difficult for various technical reasons. The attackers are using different methods for systematically hiding their identities, and their success depends both on their skills and the resources at their disposal. This aspect of attribution, as already mentioned, can lead to different levels of identification. It can point to the country from where the attack was launched, to the group or organization behind it, or, even, to the specific individuals responsible. The decision of which level of attribution is desirable, especially in the cases of politically motivated attack, is also political in its nature.

In some cases, such as cyber-espionage, it is commonly assumed that the states are ultimately behind them (Steffens, 2020), and the identification of the engaged individuals is not a priority, especially if government intelligence agencies and/or military units are confirmed as perpetrators of the attack. Sometimes, however, the prior identification of individuals is necessary in order to identify the organization that they belong to (Rid & Buchanan, 2015). Also, as Steffens (2020) points out, it is extremely satisfying for the public to know the names and sometimes even faces of the persons responsible for the attack, and on the intuitive level, the responsibility of the actors becomes more palpable when we real individuals can be pinpointed. A particularly relevant challenge in the process of attribution is

how to establish the relationship between individuals, organizations, and states beyond reasonable doubt. Even when the point of origin of the attack is confirmed to be, for example, a military facility, that does not necessarily prove that the operation was sanctioned by the state (Edwards et al., 2017). The situation is even more complicated when states are using proxies in order to conceal its involvement.[10] It seems, however, that "governments are increasingly willing to hold other states accountable for cyber intrusions by hackers and proxy organizations" (Lee, 2023, p. 200).

Another important political aspect of attribution lies in the fact that, so far, the states seem to have unsurpassed attribution capabilities. Although one of the most important breakthroughs and the event that, most scholars agree, brought attribution to the spotlight and introduced it to the public debate, was the publication of the APT1[11] report by cybersecurity company Mandiant, and Stuxnet, probably the most publicized attack, was first discovered by a small Belarusian antivirus company, states have resources at their disposal that are not available to private entities. These resources are, mostly, concentrated within intelligence agencies, and are not necessarily technical. Quite the opposite, the intelligence available to the states and its analysts are the key advantages in attribution, especially in the case of involvement of other states. Frequently, the process begins with the *cui bono* questions, which cannot be answered without a thorough knowledge of geopolitics and current political affairs (Steffens, 2020).

From Attribution to Retribution

Correct attribution is necessary primarily in order to initiate an appropriate response, which is usually aimed toward either deterrence or punishment (Shamsi et al., 2016). Incorrect attribution can have severe consequences (Shamsi et al., 2016), and in some cases, as Rid and Buchanan (2015, p. 4) point out, "[d]ecisions of life and death depend on attribution". Clark and Landau (2011, p. 323, italics in the original) put it even more succinctly: "Attribution is central to deterrence, the idea that one can dissuade attackers from acting through fear of some sort of retaliation. *Retaliation requires knowing with full certainty who the attackers are*".

The United States has already declared its right to retaliate for the cyber-attack back in 2011 (*International Strategy for Cyberspace: Prosperity, Security, and Openness in a Networked World*, 2011, pp. 13–14), especially underlying that those attacks that have offline effect may be sufficient grounds for self-defense. Tsagourias (2012) also emphasizes that self-defense is in line with international law only if cyber-attack qualifies as an armed attack. That, however, does not prevent states from retaliating in other ways. Yet, at this moment, it seems that governments are quite reluctant to respond to cyber-attacks in kind. One significant, although somewhat confusing, exception is the Iranian retaliation for the Stuxnet attack. Even though the attack was attributed by cybersecurity experts to the United States and Israel with a significant degree of certainty, Iranian hackers retaliated by launching devastating cyber-attacks against Saudi state-owned oil company Aramco (Buchanan, 2020). Even milder responses, such as public and official statements about attribution, or legal action against individuals or organizations involved, are still rare, although their frequency seems to be increasing in the last decade. The turning point, at least for the United States, was the Russian interference in the 2016 election.

10 It is important to note that plausible deniability is not the only reason the states use proxies for cyber-attacks. Stephens (2020, p. 102) mentions "lack of skills on the government side, temporary demand for additional personnel, or paying higher salaries than rigid government pay schemes allow".

11 APT stands for Advanced Persistent Threats and is lately sometimes used as a synonym for cyber-espionage (see Steffens, 2020). Mandiant's APT1 report was published in February 2013 and detailed Chinese cyber-attacks on American networks. The company has since published reports on 41 groups associated with different countries. Summaries available at: https://www.mandiant.com/resources/insights/apt-groups

Since then, there have been several indictments against individuals identified as involved in the cyber-attacks against US targets. Legal action is, though, not always possible, since the standard for proof in the legal process is, as a rule, higher than for other types of response based on attribution. The public statements by elected officials and public servants attributing the attacks have also become more common, and are used as means of diplomatic pressure and possible deterrence.[12] The effectiveness of these actions seems to depend on a number of factors, including the level of direct involvement by the state and the type of the political regime, with democracies being more likely to cease cyber-operations when exposed, due to concerns about their public image and public opinion both within the country and internationally (see, for example, Steffens, 2020). Whatever the chosen course of action may be, the decision whether to retaliate, indict, publicly disclose attribution and evidence for it, or abstain from acting is in the hands of the political actors.

Originality/Value

While certain political aspects of the process of attribution of cyber-attacks have been considered in recent academic works, there seems to be no research focusing exclusively on this subject, nor starting from the point of view of political science. Therefore, the originality of the proposed paper is both in its scope and its approach. Apart from scientific contribution, the value of the paper consists in the production of tentative guidelines for state agencies tasked with dealing with the aftermath of cyber-attacks.

The key political aspects of cyber-attacks are identified - methods, targets, actors and motivations, as well as the most important political aspects of attribution.

The Republic of Serbia has already been targeted by politically motivated cyber-attacks in the recent past. In the early 2000s, there were several "hacking wars" involving Croatian and Albanian hacking crews, mostly interested in taking down or defacing commercial and public websites. Later, in 2012, cyberspace became an arena for internal political struggle, with the website defacing campaigns of a person (or persons) under the handle of John the Ripper and attacks on several high-profile institutional websites. More recently, the computer systems of the Republic Geodetic Authority were attacked and their operation was interrupted. Various media portals are frequently reporting being under distributed denial of service (DDoS) attacks. Therefore, findings presented in previous sections of this paper could be, at least, a useful reminder that building and improving attribution capabilities should be among the priorities of the corresponding government agencies. Furthermore, the experiences of other countries and the ways they used attribution and response to cyber-attacks in their internal and international politics can provide valuable lessons and guidelines for future decision-making in similar cases.

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12 Even before 2016, president Obama used evidence against Chinese groups as diplomatic leverage, but there were no public statements attributing the cyber-attacks.

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TYPES OF ISLAMIC EXTREMISM IN NIGERIA

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Purpose

One of the most frequently mentioned religious fundamentalisms is Islamic. Nevertheless, Islamic fundamentalism arises under the influence of the Christian one. Islamic fundamentalism and Christian fundamentalism are distinct movements within their respective religions with many similarities. Islamic fundamentalism is often associated with a strict and literal interpretation of Islamic texts and a desire to establish Islamic law (Sharia) as the basis for governance. It often takes the form of political and social activism and can sometimes lead to extremist ideologies and acts of violence. Christian fundamentalism, on the other hand, is a movement within Christianity that emphasizes a strict, literal interpretation of the Bible and often focuses on social conservatism. The comparison between the concept of jihad in Islam and the Crusades in Christianity is also a complex matter. Jihad is a concept in Islam that has multiple interpretations and has been used to justify a range of actions, from spiritual struggle and self-improvement to armed conflict in self-defense. The Crusades were a series of religiously motivated military campaigns by Christians to recapture the Holy Land from Muslim control in the medieval period.

The author's intention is to examine the thesis that when it comes to Nigerian politics, the influence of religion is a direct consequence of the colonial rule of Great Britain and that the exact same influence of religion on politics in Nigeria has produced religious violence and political insecurity in the country. The contact of European explorers with the entity known today as Nigeria occurred in two phases. The first phase took place in the fifteenth century, during the era of geographical discoveries when European explorers (the Portuguese) arrived in Benin around 1477 while seeking a route to India. The Portuguese initially engaged in trade but later took it a step further, believing that Africans needed to be civilized for trade to function more effectively. According to them, being civilized meant being Christian and having basic Western education. The first missionary activities were initiated in Benin in 1515 by Catholic missionaries who established a school for princes and children of prominent chiefs at the royal palace. The second phase and the beginning of enduring influences started in September 1842 when the first British Christian mission arrived in these areas, specifically in Badagry, near Lagos. The second phase of missionary activities was significantly stronger. Other Christian missions were established, including: The Methodist mission, The Church Missionary Society, The Baptist mission, The Catholic missionary organization, etc. Christian missions played a significant role in the transformation of Nigerian society through educational programs and institutions, medical work, the establishment of new churches, and other forms of spiritual, moral, and social work in these regions. No religion in this area spread as rapidly as Christianity in southern Nigeria. Today, we have a clear division of Nigerian society into the North and South, i.e. the Muslim North and the Christian South. This societal division has strengthened a sense of separation among the largest ethnic groups and has

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contributed to a general division that is imbued with a religious dimension. In itself, such a division of Nigerian society is a good precondition for the emergence of violence, which we will discuss later.

Politically speaking, modern fundamentalism is largely Islamic. Two sources of fundamentalist movements that emerged in the 19th century were Salafism in Arabia and Deobandism in India. Both movements arose as a kind of reaction to the influence of British colonialism and the spread of pro-Western modernist ideas, and are characterized by a rigid interpretation of the Quran and rejection of all modernist interpretations. While Salafism spread thanks to the wealthy Persian Gulf monarchies, Deobandism was carried by the poor sections of the society of the Indian subcontinent, under the influence of anti-Westernism and antipathy towards neo-colonialism. Both fundamentalist directions produced extremist currents, which marked the geopolitics of the Middle East, or are still marking it (Heywood, 2004: 126).

Design/Methods/Approach

In this paper, the methods of analysis, synthesis, hypothetical-deductive method, methods of generalization and concretization are used. Extremism represents behavior that is on the border of what is permissible with a tendency to cross that border. However, the boundaries are not uniform and can appear in the form of customs, laws, religious and moral norms, so the concept of extremism itself is different (Đorić, 2012: 46), and Islamist extremism represents an extremely conservative form of practicing Islam that does not necessarily incite violence, but it can lead to violence followed by bombings and murders, in order to achieve the planned Islamist goals (Baran, 2008: 16).

Islamist extremism appears in many variants, but common to all violent Islamists is the belief in the obligation to establish Sharia law on theological and political lines as the basis for the functioning of public and political life. All violent Islamists seek to restore Muslim dignity by restoring the caliphate and believe that violence and intimidation are legitimate methods of overcoming the perceived obstacles and enemies of Islam that limit its goals.

Many extreme Islamist groups count as enemy Muslims who benefit from non-Muslim rule over Muslim countries or encourage it, as well as those who imitate the lifestyle of 'infidels'. While some of these groups are focused on fighting within the state union, many have an expansionist vision and advocate crossing borders to secure territory and recruits. Although they often began their activities as rebels or fighters against local authorities with the aim of achieving national or separatist goals, their ideologies converged over time so that cooperation was established on the broader Islamist issue.

Sunni Extremism

The types of Islamist extremism in Nigeria are related to the basic ideological divisions within Islam, so the extremist or terrorist organizations in Nigeria are classified into the following types of Islamist extremism: Sunni extremism, Shia extremism, extremism of the Ahmadiyya Muslim community, and extremism of the Quranists. However, although the religious roots of extremism and terrorism in Nigeria are old, terrorism is nevertheless a modern phenomenon. "So, it is clear that we classify terrorism as a modern security threat and that as such it differs from traditional security threats on different grounds." (Bursać, 2022: 154).

Islam is a traditional religion in West Africa, and it came to Northern Nigeria in the 11th century. By the 16th century, Islam was rooted in the capitals of the region, spreading gradually through the villages towards the upper parts of the middle region of Nigeria. There, the advance of Islam was halted by the resistance of local peoples to incorporare it into the Emirati states. The Jihad led by the Fulani in the 19th century brought Islam to the northern Yorubaland area. Nevertheless, the colonial government stopped and slowed down the spread of Islam towards the south of Nigeria, and for the sake of peace in the region it established a rule according to which Christian activities could not take place in the northern Muslim region. Many years later, the two religions continued the competition for converts in the middle region of the country, where ethnic groups and families became supporters of one of the religions. "Thus, the inhabitants of modern day Nigeria were divided along ethnic, regional, cultural and religious lines even before independence. Thus, we conclude that the colonial system laid the foundations for the division of Nigeria, and various post-colonial actions and events significantly helped them." (Bursać, 2021: 63).

Christians and Muslims are relatively evenly represented in Nigeria, so that the proportion of the population of the Islamic religion is 50% compared to 40% of Christians. However, these data refer to the last census that included religious affiliation, which was conducted in Nigeria back in 1963. The central government has avoided releasing any recent data to prevent further unrest. Besides, the last census in Nigeria did not include questions related to religion and ethnicity. According to the International Religious Freedom Report, it is estimated that in Nigeria, Christians and Muslims each make up 49% of Nigerians, and 2% of the Nigerian population belong to other religions. About 90% of Muslims in Nigeria are Sunnis, who profess the Maliki school of Islamic law.[2] There has also been an increase in members of the Salafist movements, which are mostly linked to the Hanbali school (U.S. Department of State, 2022).[3]

Two features of Islam are central to understanding its place in Nigerian society and relate to the extent to which Islam permeates other institutions and its contribution to Nigerian pluralism. As an institution in Emirati society, Islam includes daily and annual ritual obligations, such as the pilgrimage to Mecca, observance of the Sharia, establishment of views on politics, family life, communal order and appropriate personal behavior in most situations. Thus, in one part of Nigerian society, Islam permeates daily life, whereby public meetings begin and end with Muslim prayer, and everyone should know the basic Muslim prayers and the five pillars of religion. Public decisions made by local leaders, with the help of religious experts, must be in accordance with the basic principles of Sharia law, primarily the legal school of Malik ibn Anas, a jurist from Medina. Each settlement must have at least one place designated for communal prayers, while larger settlements have mosques. Acquiring a better knowledge of the religion and going on a one or more pilgrimages to Mecca make a Muslim respectable and honorable, and those who are able to devote their daily lives to the beliefs and practices of Islam are deeply respected in society.

Islam in Nigeria is not highly organized but reflects the aristocratic nature of the traditional ruling groups in which there were clerical families whose male heirs were educated at home and abroad in theology and jurisprudence and later held major positions in mosques and the judiciary. For centuries, these ulema, or scholars, were the religious and legal advisors of emirs, nobility and wealthy merchant families in major cities throughout, primarily in northern Nigeria.

2 The Maliki school is one of the four schools of religious law in Sunni Islam. There are also the Hanafi, Shafi and Hanbali schools. The Maliki school is followed by 25% of Sunni Muslims, mainly from North and West Africa, the United Arab Emirates, Kuwait and Saudi Arabia.

3 The Hanbali school is considered the most conservative of all four Sunni schools, and it prevails mainly in the Arabian Peninsula.

"In a general sense, legitimacy means the voluntary submission of citizens to state authority. This means the awareness of the majority of people that their government is religiously, ideologically and above all legally justified and necessary in everyday life." (Terzić & Joksić, 2021: 69). This is how Islam created and ensured the unifying force of the population in the north, but also in the middle region of Nigeria, where it slowly spread, creating among other things a sense of legitimacy of state and religious authority. The wide range of Islamic beliefs and practices has created a strong sense of community among Muslims in northern Nigeria. This sense of community derives primarily from a set of cultural traditions that influence family life, dress, diet, behavior and personal qualities, which ultimately connect Muslims to each other within national borders, as well as to Muslims outside the territory of Nigeria. At the 1978 constitutional conference, Muslim delegates acted unanimously on the issue of establishing a separate Islamic supreme court. Although their request was not adopted at the time, by the year 2000 as many as 12 of Nigeria's 36 states had introduced the Sharia legal system. The states, such as Sokoto, Kebbi, Niger, Kano, Katsina, Kaduna, Jigawa, Yobe, Bauchi, Borno, Zamfara and Gombe adopted the Sharia legal system, and many Christians claim that they did not only introduce Sharia, but adopted Islam as their state religion too. Thus, the Nigerian Civil Liberties Organization considers that the formation of the Religious Affairs Commission in Zamfara State is tantamount to the adoption of Islam as the state religion (U.S. Department of State, 2008).

In order to fully adapt to life in northern Nigeria, non-Muslims had to remain in enclaves, living quasi-segregated lives within their churches, within their families and at work. In contrast, conversion to Islam would be a path to full participation in social life and that is why many people from the middle region of Nigeria, especially those with ambitions in politics and business life, embraced Islam. The exception to this rule is Plateau State, where the capital Jos is evenly divided between Christians and Muslims.

Sufism

Since the 11th century, Islamic practice in Nigeria has been Sunni. Sufism is a major feature of Sunni Islam in northern Nigeria, as a number of Sufi scholars visited Hausaland and succeeded in convincing the early Muslims to practice this very jurisprudence of Sunni Islam. Sufism, or Tasawwuf, is defined as an inner dimension in Islam, i.e. mysticism in Islam, which is characterized by certain values, ritual practices, doctrines and institutions that lead to asceticism. The original meaning of the word Sufi is related to the Arabic word suf, which means 'wool'. Hence, the Sufi represents the one who wears wool, and this very meaning is associated with asceticism, because the first Sufis wore coarse woolen clothes. Although it exists in both Sunni and Shia Islam, Sufism is not a different direction, but a method of approaching or understanding Islam as a religion. The famous North African scholar of the 15th century Abdulkarim al Magili, better known as Muhammad al Magili, visited Hausa, Kano, Zaria and Katsina states and converted the ruling class to Islam, influencing the emergence of political and religious reforms (University of Iowa, 2005). The influence of Al Magili and before him Abdul Qadir Gilani, after whom Qadiriya got its name, led to Muslims in Hausaland in the 15th century reluctantly accepting one of the Sufi orders, better known as Qadirich or Qadiriya. Later in the 19th century, the jihad led by Usman dan Fodio, his brother Abdullah and son Muhammad Bello, only consolidated and strengthened the power of the Qadiriya, being the members of it.

The Qadiriya is one of the most widespread Sufi orders in the Muslim world and can be found in most of West and East Africa, Central Asia, Turkey and the Balkans. The Qadiriya did not develop any separate doctrines or teachings outside the main framework of Islam. They believe in the fundamental principles of Islam, but interpreted through mystical experience. This monopoly over Sufi Muslims

was soon challenged by the arrival of another Sufi brotherhood, better known as Tijanih or Tijaniyya. And this brotherhood spread rapidly among the Sunnis in Nigeria, and in certain parts of northern Nigeria it overpowered the Qadiriyya. Its founder was Sheikh Ahmed al Tijani, after whom the brotherhood was named. The center of Tijaniyyah in northern Nigeria was established by Umar al-Futi, who befriended the then Caliph Muhammad Bela during a visit to the Sokoto Caliphate and married one of his daughters.

Advocating for improved lifestyles of poverty-stricken Muslims, social reform and Islamic revival, Tijaniyyah reacted against the conservative and hierarchical Qadiriya brotherhood, which was then dominant and close to the ruling classes. Unlike Qadiriyya, Tijaniyyah is a common man's fraternity, which is why it is still popular in many parts of Nigeria, including most parts of the North Central Zone. Because of all of the above, in many areas of northern Nigeria the Tijaniyya replaced the Qadiriya and became the main Sunni Sufi order in the region.

In addition to these two Sufi brotherhoods, the Muhammadi brotherhood was founded in 1986. Although not as influential and notable as the previous two, the Muhammadi Brotherhood was founded in Bayoga, Borno State, and is an independent order made up of all the residents of this city. It is not violent, but it has certain extreme characteristics that distinguish the members of this brotherhood from ordinary people. Namely, all members of the Muhammadi brotherhood wear a white kaftan (cloak or tunic), white trousers that do not fall below the ankles and a white cap or turban, and the men often have long beards. Women and girls do not belong to this strict dress code and can wear any color, but as a rule they must live according to Islamic rules and are restricted to their homes. Most members of the Muhammadi Brotherhood belong to the Fulani, but there are also followers of other ethnic groups, including the Hausa and Kanuri. The brotherhood is in constant contact and answers directly to the emir of Shani, on whose territory Bayuga is located. The Muhammadiyah also relies on the Maliki school of Islam, but unlike other Sufi brotherhoods in Nigeria, it has completely withdrawn from wider society into relative isolation within its city, where it functions unhindered.

Thus, there are three Sufi brotherhoods in Nigeria, two of which, Qadiriyya and Tijaniyyah, were in constant conflict, because the appearance of one represented a potential threat to the other, so intra-Sufi relations were marked by unrest, violence and open conflicts. It was intra-Sufi conflicts that led to the strengthening of anti-Sufi movements in Sunni Islam on the territory of Nigeria.

Salafism

In addition to Sufism, in Sunni Islam there is another type of Islamic extremism on the territory of Nigeria, which is Salafism. The members of Salafism are essentially the most extreme fundamentalists who strive to revive the original or authentic Islam. This kind of Islam refers to "al-salaf al-saleh", i.e. the first three generations of the followers of the Prophet Muhammad himself, better known as "pious predecessors". The term "Salafi" means a person who has special knowledge or abilities to consistently follow Salafist beliefs. In contemporary usage, Salafism is defined as an ultra-extreme form of Sunni Islam which seeks to reshape society in accordance with Islamic laws based on Sharia law. This direction draws its inspiration from the famous Salafist Ibn Taymiyyah (Taqi al-Din ibn Taymiyyah) and Muhammad al-Wahhab (Muhammad ibn Abd al-Wahhab), and it was further developed by prominent theologians from Saudi Arabia. The direction was further developed by Muhammad Jamal al Afghani and Rashid Reed. As Al Afghani was a political activist and Abduh a teacher who advocated social and educational reforms, the Salafist teaching was placed on a broad social foundation. (Bursać, 2019: 43).

The Salafi canon gives individuals and groups of Salafis a sense of identity and belonging to a unique and, for them, superior religious community, which is closely related to their understanding and reading of Islamic scriptures. Salafism as an intellectual stream, theology and methodological approach is transmitted through this canon, which serves not only as a means of proselytizing, but also as a rule book through which its followers determine the boundaries of what is and what is not "Salafism". The position of most Salafist theologians, officially formulated by Al Tami, is that Islam is a monotheistic religion that requires recognition and that any religious, social or political body can be legitimate only if it is deeply rooted in Islam.

Given that Salafism is a complex religious construction that appeared and spread in West Africa through preaching supported by global and later local Salafism, two currents of it can be distinguished. While one is related to the period from 1880 to 1950 when Sunni scholars from all over the world had a common methodology centered on hadiths, the other stream refers to the period from 1960 to the present day when key Salafist institutions were founded, such as The Islamic University of Madinah and other Saudi Salafist bodies that began to attract and grant scholarships to Sunni students from countries that included Nigeria. The goal of such scholarships is for former students to return to their home country as Muslims rooted in Salafist tradition and ideology in order to spread Salafism among the local population (Thurston, 2016: 34).

"Neutrality in a modern state has been achieved by bureaucratizing the judiciary and administration, but the legislative power in a state with universal suffrage still carries the possibility of prevailing over the interests of numerous social classes, i.e. lower classes." (Terzić, 2020: 83). In addition to universal suffrage, religion can also play a role as a catalyst for vertical social mobility of the masses. Nigeria's Muslim-majority north proved to be fertile ground for the spread of Salafism as it allowed local Muslims from humble social positions to challenge the long-standing dominance of hereditary rule by privileged families and the established religious class. Northern Nigeria has been and continues to be dominated by the Sufis, their brotherhoods, sheikhs and emirs, but their long-standing right to rule the region is facing new challenges after the return of Nigerian students from the Salafi scientific institutions of Saudi Arabia.

Like all ideologies, Salafism is perceived in different ways. Followers of this direction of Islam show diverse forms of their Salafist preferences. Due to the wide spread of this ideology, diverse financial status and way of life, Salafists, depending on their orientation, have a different vision of the Salafist mission. Some focus on intellectual endeavors, i.e. the search for purity and justification, as well as the spread of Salafist ideology, while others strive for political changes that have their support precisely in Salafism. The combination of these two directions gave rise to the third, which is known as the Salafist Jihad.

Thus, there are three leading directions in Salafism. While the followers of intellectually oriented Salafism focus primarily on finding and disclosing the Salafist heritage, the politically oriented Salafists advocate the direct application of the Salafist tradition in society. The proponents of the third, jihad-oriented Salafism, believe that jihad is the only and right way to achieve religious goals, while characterizing existing government structures as hostile and doing everything possible to overthrow them.

Salafists are not only regionally connected, but seek to establish networks and set models of how to live and work in a global context. Thus, many Salafists from West Africa are well connected to Saudi Arabia, Sudan and Egypt. In this relationship, Salafists become local figures of the global religious discourse, which seeks to oppose its traditional enemy, Sufism, but also new actors, such as Shiites, Pentecostals and Ahmadis. The rivalry between Saudi Arabia and Iran at the global level influenced the shaping of relations among Muslims throughout Africa. Thus, the Salafists and Shiites in Nigeria became participants in that global conflict, but at the local level.

Salafism spread rapidly and became a powerful ideology due to the fact that it presents itself as a new order which offers prospects for improving living conditions, if not materially, then at least in the moral sphere. The promise of a reformed moral order in accordance with human ideals made it a powerful discourse that transformed many communities, not only in West Africa, but throughout the world. Salafism strives to end trust in the existing state, which is often characterized as post-colonial, secular and imposed. They seek to take power in such a state and run it on the basis of Sharia law.

Salafists in Nigeria believe that they have suffered enough, but also tested the existing state, which they label as unjust, corrupt and un-Islamic. That is why they are doing everything possible to promote the anti-state agenda, which should include the emergence of numerous extreme and terrorist organizations. It should be noted that Salafists sometimes encouraged institutional engagement in political processes, asking their supporters to register and participate in elections. Thus, Sheikh Gumi claimed that participation in the elections was of crucial importance for the Islamic issue, and in this way he tried to mobilize Muslims to vote and defend the Islamic interest in the federal system, in which they felt marginalized and abused. Political participation was therefore essential for Salafism and its relationship to the state.

Shi'ite Extremism

In addition to the aforementioned types of Islamist extremism, extremists from the Shiite school of Islam also operate in Nigeria. Although the majority of Nigeria's Muslim population is Sunni, there is a significant Shiite minority in the northern states of Kano and Sokoto. Despite being treated as religious outlaws in the north, Shiites play a significant role in the religious and social life of the region. It is estimated that there are between 5 and 10 million of Shiites (Muhammad & Abdullahi, 2019: 34).

Shia Islam did not have a significant presence in Nigeria until the Iranian Islamic Revolution of 1979, which inspired many Muslims from northern Nigeria. Sheikh Ibrahim Zakzaky, who studied Shia theology in Iran, is the primary figure in this direction of Islam in Nigeria. Inspired by the 1979 revolution, Zakzaky founded the Islamic Movement, which quickly established itself as a leader among Shiites in northern Nigeria. Their goal involves the establishment of an Iranian-type Islamic state in Nigeria, and that is why this movement is subject to constant attacks by the security forces and other Islamic currents, both Sufi and anti-Sufi. What separates the Shiites from other schools of Islam is that they exclusively recognize Muhammad's cousin ʿAlī ibn Abī Tālib and his descendants as the only full heirs to Muhammad's secular and spiritual authority (Esposito, 2002: 39). According to the Sunni interpretation, Muhammad did not designate a successor, so after his death, the successor was chosen through shura, i.e. by vote or consensus of the community. Then a group of Muhammad's followers chose Abu Bekir as the first caliph. On the other hand, the Shiites believe that Muhammad during his lifetime designated ʿAlī ibn Abī Tālib as the true successor several times, and therefore designated the first three righteous caliphs as usurpers.

Shia Muslims do not recognize the authority of elected Muslim leaders. Instead, Shiites have chosen to follow imams, whom they believe were appointed by the Prophet Muhammad or God himself. The word Shia in Arabic means group or support group. From this root arose the term Shia't-Ali or the group of Ali, better known as the Shiites.

Shia Muslims believe that the Imam is sinless by nature and that his authority is infallible, as it comes directly from God. Therefore, they often view imams as saints. They believe that a well-defined clerical

hierarchy can also play a role in state affairs, and a classic example is Iran, where the imam, not the state, represents the ultimate authority.

Shia political thought entered its modern phase during the Iranian Constitutional Revolution which occurred between 1905 and 1911, when the Shiites were divided between the forces of constitutionalism, modernism, reason and secularism, on the one hand, and more traditional interpretations of religion, religious law and the role of priests in society, on the other. The clerical establishment then finally joined the secular revolutionaries in opposing the common enemy, European colonialism. Until the 1940s and 1950s, Shia political thought dealt with issues of communism and nationalism, often presenting Shia thought as an alternative.

During the 1960s, institutional foundations for the spread of modern Shia political thought through Quranic schools and voluntary student associations from Muslim universities were formed. Informal gatherings, led by clerics and intellectuals, were aimed at the promotion of Shia political thought and the general mobilization of like-minded people, and the result of these gatherings was the uprising of 1963 under the leadership of Ayatollah Ruhollah Khomeini, which was raised in order to overthrow the Shah of Iran, Muhammad Reza Pahlavi.

The most effective ideologue of modern Shia Islam was Ali Shariati. In the late 1960s and early 1970s, Shariati combined Islam with Third World theories and revolution, transforming it into an activist political ideology. He believed that class war and revolution would create a just and classless society, but also produce a process of decolonization.

The Islamic Revolution of 1979 and the constitution of the Islamic Republic of Iran represent the institutionalization of modern Shia political ideas. Thanks to Ibraheem El-Zakzaky and the successful Islamic revolution in Iran, Shia Islam penetrates the soil of northern Nigeria and manages to spread effectively despite daily government repression in the predominantly Sunni state. The Islamic Movement of Nigeria is a product of El-Zakzaky's radicalism, originating in Zaria among the students of Nigeria's largest university, Ahmadu Bello.

The Iranian Revolution of 1979 inspired many Nigerian Muslims and Sunnis, among whom was El-Zakzaky. For them, Iran symbolized the model that Muslims in Nigeria can and must achieve. Fascinated by Iran, El-Zakzaky took a radical path and eventually adopted the religious features of Shiite Islam. Shiites in Nigeria, including members of the Islamic Movement of Nigeria themselves, are the followers of twelve-imam Shiite Islam. El-Zakzaky's hometown Zaria remains his base, but also the base of Shia Islam. While El-Zakzaky spent years in prison due to clashes with the authorities, across northern Nigeria his followers and society were viewed as troublemakers.

The Islamic Movement of Nigeria has long been the face of Shia Islam in Nigeria, but not its only expression. The Islamic Movement of Nigeria itself, as well as its predecessors, were prone to schisms. Some of Al Zakzaky's followers fled after the conflict with the authorities, others left after his conversion and adoption of Shia principles of Islam, and in the meantime, other Shia currents and organizations were founded, which partially or completely differed from Al Zakzaky's Islamic Movement of Nigeria. Among them are the Society for the Restoration of Islam and the Rasul Azam Foundation.

Ahmadiyya Muslim Extremism

Ahmadiyya is a well-known Islamic, messianic revivalist movement originating in Punjab, India, founded in the late nineteenth century. It has been present in Nigeria since the 1920s and is the most

prominent among the Yorubas. It is related to the life and teachings of Mirza Ghulam Ahmad, who proclaimed himself as the Mahdi, i.e. the eschatological savior of Islam who will appear in order to peacefully achieve the final triumph of Islam and, according to different interpretations, rule for five, seven, nine or nineteen years (Glasse, 2008: 33).

Ahmadiyya was introduced to Nigeria by a group of Muslim youths in the 1920s, believing that there was a need to modernize Islam. Ahmadiyya Muslims follow the same scriptures and teachings as other Islamic believers, the key difference being that they believe the promised messiah (Mahdi) arrived and founded the Ahmadiyya Muslim community in 1889. Ahmadiyya Muslims also follow Islamic sources, instructions and judicial practices, and their main authorities are the Quran, the Sunnah (the traditional customs and practices of the Islamic community, which the Prophet Muhammad transmitted in writings, deeds and sayings) and the Hadith (the sayings of the Prophet Muhammad recorded in the works Sahih Bukhari, Sahih al Muslim, Sunan abu Daud, Sunan at Tirmidhi, Sunan ibn Maja, Sunan al Sugra by Al Nisai).

Ahmadiyya Muslims also take into account the interpretation of Islamic law (Sharia) provided by classical scholars. They follow the Hanafi school of thought, and consider all matters in the light of the instructions given by the Promised Messiah. Their acceptance of the authority of the four righteous caliphs as the legitimate leaders of the Muslim community after Muhammad's death, and their belief that a caliph need not be a descendant of Muhammad, basically drew Ahmadiyya Muslims closer to the Sunni than to the Shia Islamic tradition.

According to Ahmadiyya Muslim belief, jihad can be divided into three categories: Jihad al-Akbar (the Magnificent Jihad), which refers to the struggle against feelings such as anger, lust and hatred, and Jihad al-Kabir (the Great Jihad), which involves the peaceful spread of Islam, with special emphasis on spreading the true message of Islam and jihad al Asghar (lesser jihad), i.e. armed struggle that is resorted to only in cases of self-defense, i.e. in situations of extreme religious persecution (Why Ahmadi, 2015).

Ahmadiyya Muslims believe that one of the purposes of the arrival of Mirza Ghulam Ahmad, i.e. the promised Mahdi, was to remove the innovations and customs that have appeared in Islam over the years, with the clear aim of returning Muslims to true religious teachings.

Ahmadiyya was established in Lagos as early as 1916 and became popular among young intellectuals. The Nigerian branch of Ahmadi Islam was formed under the leadership of the champion of the Nigerian Youth Movement, Alhaji Jibril Martin, and it established the first centers in the north of Nigeria only in 1960. At that time, Ahmadiyya came into conflict with local Muslim leaders, led by Abubakar Gumi.

Like most Muslims in the world, Islamic believers in Nigeria consider Ahmadi Muslims heretics and non-Muslims, primarily because of the view that Mirza Ghulam Ahmad is the expected Mahdi. When Ahmadiyya Islam was declared heretical by Abul al-Maududi and the Islamic World League, the members of this movement were subjected to systematic persecution and sometimes state oppression. When Saudi Arabia banned Ahmadiyya Muslims from hajj visas in 1973, there were violent protests in Nigeria in which Ahmadiyya Muslims occupied the Saudi embassy in Lagos. According to some estimates, there are between two and three million Ahmadiyya Muslims in Nigeria, making up approximately 3% of Nigeria's Muslim population (Huang, 2020).

Ahmadiyya, however, is not the only Islamic group among the Yoruba. Similar Islamic groups, consisting mostly of Yoruba members, include the Ansarudin and Navairudin societies. Both are present to a small extent in the northeast of Nigeria, and most Muslims from that part of the country label these groups primarily as Yoruba Islamic groups, and only then as Islamic. Certain mosques founded

50 years ago by these groups in the Hausa-Fulani part of Maiduguri are called Masallacin Yarabawa, i.e. mosques belonging to the Yoruba. Therefore, the ethnicity prefix is clearly highlighted in this regard as well (Loimeier, 1997: 212).

Extremism of Quranists

Quranism represents a type of Islam in which the Quran is the sole source of Islamic law and guidance. Quranists reject Muhammad's Sunna and Hadith, believing that the message of the Quran is clear, unambiguous and complete, so that it is possible to understand the Quran without the help of Sunna and Hadith.

Quranic ideology dates back to the time of Muhammad, who was against hadiths, and his friend and later successor Umar/Omar banned the writing of hadiths, destroying the existing collections (Aisha, 2008: 6). Adherents of Quranism, therefore, oppose the religious authority, authenticity and reliability of hadith and are all united in the view that the Quran is the only source of Islamic law. Quranists consider both Sunni and Shiite hadiths to be apocryphal, as they were written at least three centuries after the death of the Prophet Muhammad. That is why they cannot have the same status as the Quran or the similar one.

Many Islamic scholars, including those often condemned as too moderate, condemn Quranism. They believe that the Quran even commands Muslims to follow the example of the Prophet Muhammad or the Sunnah, and that without the hadith many Islamic concepts would be abstract and without substance, because it is the hadith that teaches and describe in detail how Muslims should pray, fast, and how they should give obligatory alms, or how Muslims should go on the pilgrimage to Mecca. Moreover, authors led by Hawramani believe that Quranism is an attempt to simplify the lives of Muslims by providing them with a single and clear source of guidance. However, that simplification can be bad if overdone. Hawramani further states that the Quran clearly implies that one should follow the Prophet Muhammad and respect his views, i.e. that the Quran is the main source of instructions supplemented by hadiths wherever necessary (Hawramani, 2019). It is difficult to estimate the number of people who follow this direction in Islam, due to the fact that, as a general rule, they avoid functioning in the form of an organized religious group or organization. There are, however, several Quranic groups that have gathered and organized into a recognizable unit, such as the Ahle Quran, whose founder is Abdullah Chakravali. This movement relies entirely on the chapters and verses of the Quran, and its adherents consider the Quran to be the most perfect hadith and the only source of Islamic tradition. While the second group is represented by Izgi Amal, a Quranic organization in Kazakhstan whose leader is Alsbek Musin, the son of an influential Kazakh politician, Kala Kato is a Quranist movement with its headquarter in Zaria, the capital of Kaduna state in northern Nigeria.

This organization is considered the direct heirs of Muhammad Marwa, an Islamic scholar and preacher who moved from Cameroon to Nigeria in 1945 and established the radical Islamic Maitatsine sect there. The Kala Kato, like their Maitatsine predecessors, reject the Hadith and the Sunnah, and accept only the Qur'an as an authoritative guide to faith and practice. Kala Kato marks as unbelievers all those who do not blindly follow their beliefs. They do not pray in mosques with other Muslims, nor do they associate with them in any other way. They publicly preach their religion, burn hadiths and condemn parents who send their children to school. Most often, these public sermons end in clashes between members of Kala Kato and the authorities. Members of Kala Kato are considered uneducated, both by Western standards and in the Muslim understanding of education. They still exist in many places in northern Nigeria, but they live on the margins of society.

The majority of these associations, as well as the majority of Quranists, are bound by the fact that they see the Quran as the only Islamic authority, while they reject all hadiths, be they Shia or Sunni, in whole or in part. Among them is the Malaysian Quranic Society, which was founded by the Malaysian intellectual, writer, poet, politician and scholar Kasim Ahmad. This organization was created as a result of efforts to bring the Quran back into the heart of Malaysian society. They believed that Muslims had lived in ignorance for thousands of years and that they had to return to the Quran, as the only and clear source of Muslim tradition.

Sunni-Quranic Society, Submitters, Tolue Islam and Zumratul Jamiu Mumin are among the Quranic groups. The Sunni-Quranic Society is a Quranic organization based in India. In this society, for the first time in the history of India, a woman led congregational prayers. Their base is in Kerala, where there is a large Quranic community (Khan, 2016: 49). The Submitters is a Quranic organization whose followers believe in absolute devotion and submission to God. Adherents believe that the Quran is the complete and clear message of Allah and that it can be understood without reference to any other sources. Although they appreciate the Prophet Muhammad's role in revealing the Quran, they do not believe that it is necessary for believers to observe and study his life in order to understand and interpret his words. Submitters reject all hadith literature, viewing them as forgeries and the scholars who base their opinions on them as inauthentic. They point to alleged inconsistencies in the hadith literature that emerged after the death of the Prophet Muhammad and characterize these inconsistencies as "proof", indicating that the hadiths cannot be trusted. They also criticize the practice of some Muslims who put the Prophet Muhammad on a pedestal and point out that only Allah should be truly respected. The founder of this movement is the Egyptian chemist Rashid Khalifa. Rashid Khalifa was a self-proclaimed messenger, who came to "return" the Islamic religion to its original form and purify the faith from man-made innovations. He believed that the chapters, verses, words, number of words from the same root and other elements in the Qur'an followed a complex 19-based code (Gardner, 1997: 16). Rashid Khalif was killed in the Tuscan Mosque in Arizona in 1990, and his followers split into several organizations with headquarters around the world: The Submitters, the International Community of Submitters, and The Submission, Quranic Islam movement.

Tolue Islam is a Quranic organization which focuses on understanding the Quran through logic, empiricism and appropriate application of rules. The founders of this Quranic organization are considered to be a Pakistani philosopher, academic and politician Muhammad Iqbal, who is also called the spiritual father of Pakistan, and Ghulam Ahmed Pervez, an Islamic Pakistani theologian. The organization still publishes and distributes books, pamphlets and recordings of Pervez's teachings (Farasat, 2013: 6).

Unlike other Muslim organizations whose goal is to gain new followers and reawaken the Muslim spiritual consciousness, the main intention of Zumratul Jamiu Mumin is to involve different religious leaders, among them Muslims, in discussions on religious issues. This organization believes that only the Quran and the Bible are holy books and that they represent the only authority in determining religious matters. According to them, the use of hadith is a deviation from true Islamic values. This organization is based in Ogun State, western Nigeria (Modish Project, 2018).

There are two organizations of Quranists in Nigeria. Kala Kato is most present in the Samuru area, in the ancient Nigerian city of Zaria and is characterized by radicalism, and their actions represent forms of classical extremism. In contrast to the members of the Kala Kato, the followers of the Nigerian penitents are characterized by the great sophistication and high education of the followers. This group consists of the followers of Rashid Khalifa, and their headquarters are in Nigeria, more precisely in Kano, Kaduna and Katsina. In Nigeria, they are also known as Al Quran, i.e. those who accept only the Quran as the source of Islamic tradition, view Muhammad as the messenger of Allah and are focused

on obeying Allah's orders in the Quran, while rejecting all hadiths. Their well-known representative was Maiduguri High Court judge Isa Othman. The composition of the group can be described as elitist, because its followers are mostly Western-educated, and they also have their own version of the Quran, different from the one used by other Muslims (Abdalla, 2002: 5). Although the Nigerian Penitents are believed to still be present, little or nothing is known about the group following the death of its benefactor, Justice Isa Otaman. The majority of Muslims claim that Quranism arose as an American attempt to destroy Islam by distorting the content of the Quran, so Quranists are often the subject of attacks by other Muslim groups.

Findings, Originality and Value

Religion in Nigeria is the foundation of the divisions of Nigerian society. Under the influence of colonization, i.e. artificial amalgamation, after independence, Nigeria became a society of religious, ethnic, and regional divisions, i.e. a "state without a nation" and thus opened the way to constant conflicts.

Central to the formation of the identity of religion and its transformation from conflict to violence is the rise of religious extremism throughout the country. Extremist groups show significant intolerance towards members of their own and other religions. In the beginning, there is the creation of stereotypical assumptions between ethnic and religious affiliations, which lead to many discriminatory practices, and eventually can lead to conflicts.

In the paper, we made a clear distinction between the leading types of Islamist extremism in Nigeria and classified them into four groups: Sunni, Shia, extremism of the Ahmadiyya Muslim community, and extremism of the Quranists. We also stated that it is precisely the violent Islamists, i.e. Islamic extremists, who strive to restore Muslim dignity by returning the caliphate and believe that violence and intimidation are legitimate methods to overcome the perceived obstacles and enemies of Islam, which limit the success of this project. Instead of unifying a highly heterogeneous nation, colonial policies promoted political and religious ideologies that fueled ethnic, religious and regional prejudices and led to escalation of violence.

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THE COOPERATION WITH THE ICC – THE ONLY POSSIBLE WAY TO JUSTICE?[1]

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The International Criminal Court

The need to punish the perpetrators of the crimes is not a new one. The fight against impunity has been lying in the foundations of the international criminal law for several centuries. There are even some mentions of the 13th century and one of the first international prosecutions when a person was sentenced to death for treason by a king. But, as Babaian pointed out, the precedent was in year 1474 in the Breisach trial. A governor was convicted for committing crimes such as confiscation of private property, murder, rape, and pillage. This trial took place in front of an *ad hoc* tribunal which we may declare as the first international one, because it consisted of Germanic and Swiss judges. Later, in the World War I aftermath, there was the *ad hoc* "Allied High Tribunal". But it was only an attempt, since the Netherlands did not extradite the former German Kaiser Wilhelm II, nor did Germany extradite any of the accused (Babaian, 2018: 7-9). The doctrine and the international community above all have a different perspective on the international criminal law ever since the International Military Tribunals at Nuremberg in 1945 and Tokyo in 1946. The joined Allied forces decided to form tribunals that were supposed to convict those guilty of crimes in the Second World War. The Charter of the Nuremberg Tribunal did not contain any provision regarding cooperation of the states and the tribunal, but it was not really necessary, since the Tribunal had a police force and most of the accused were on the Allies' territories, so it was easier to arrest them. When it comes to the Tokyo Tribunal, Japan had already surrendered and made it easier for the Allies to go there and arrest the accused (Mutyaba, 2012: 938-939). Of course, only several states were involved in the creation of these tribunals, which were the Allied powers, so we cannot say that this was a universal project. Nevertheless, it had a huge impact on the development of the international criminal law. The importance of these tribunals is mentioned even nowadays.

After the Second World War, the Cold War followed. When it ended, two *ad hoc* tribunals were formed – The International Criminal Tribunal for the Former Yugoslavia and the International Criminal Tribunal of Rwanda, based on the Chapter VII of the United Nations Charter. These tribunals had a provision regarding the mandatory cooperation, so the States had to cooperate and comply with requests of the tribunals. Their jurisdictions were territorially and temporarily limited to certain time and place. That is why, similarly, we cannot address them as the universal project, but at the time that they were founded, they were supposed to play a big role in peacekeeping and in fight against impunity.

These tribunals had primary jurisdiction, as opposed to the ICC that is based on complementarity jurisdiction. This practically means that the state where the crime occurred is obliged to either prosecute the criminal or to surrender him to the ICC. This complementarity would also require that both States and the ICC function and that if the state jurisdiction fails to punish the perpetrator, the ICC would

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have to intervene (Sarkin, 2020: 29-30). Furthermore, this is the exact reason why the cooperation is so desirable and necessary for the ICC functioning.

When it comes to further development of the international criminal jurisdiction, the creation of the International Criminal Court was supposed to be the final step. In the summer of 1998, the General Assembly of the United Nations gathered States at the Rome Conference. Around 160 states were involved in negotiations. So, on July 17, 1998, the Rome Statute was adopted by 120 states. After that, the Preparatory Commission wrote the Rules of Procedure and Evidence and the Elements of Crimes (Kirsch, 2007: 541). It is interesting to mention that Trinidad and Tobago proposed the establishment of the ICC. Firstly, the African states were interested in establishing the court, but the relationship later on changed, which we will discuss in the later part of this paper.

The International Criminal Court does not have the universal jurisdiction. The ICCs' efficiency depends on the states. The reason why the cooperation is so important for the ICC to function is that there is no enforcement power and whole procedure actually depends on the States and their willingness to cooperate with the ICC. The ICC will not have any power if the states decide not to help.

Speaking of the cooperation with the ICC, there are many reasons why the States decide whether or not they should cooperate. The States might be in the fear of sanctions if they do decide not to cooperate. Furthermore, every State makes decision in the international community based on the national interests. The States are often concerned about what their reputation is and how domestic courts will react. There is another factor that is often mentioned in the doctrine. It is the reputational cost of non-compliance. This is related to the reputation that the ICC has in the international community, i.e. the more efficient and legitimate the ICC seems, the bigger reputational cost the States that do not comply will have (Jones, 2016: 194).

The Rome Statute

We could not discuss this topic without pointing out the most relevant articles of the Rome Statute. The Rome Statute is the founding instrument of the International Criminal Court. It is the result of the United Nations Diplomatic Conference of Plenipotentiaries on the Establishment of an International Criminal Court on 17 July 1998 that we mentioned, and it entered into force on 1 July, 2002. At the very beginning of the Statute, in the Preamble, it is said that all people are "united by the common bonds, their cultures pieced together in a shared heritage and concerned that this delicate mosaic may be shattered at any time" (Rome Statute of the International Criminal Court – Rome Statute, 1998, Preamble). As we can see, the very first sentence of this important document brings to our attention the importance of all peoples' unity and shared concerns. It is very important to mention that the Rome Statute and the ICC lie on three main principles. Those are - the principle of complementarity, the principle to deal only with the most serious crimes of international concern and the principle of legality.

The entire Part 9 of the Rome Statute is devoted to the international cooperation and judicial assistance. It is very interesting to mention that the negotiations about these provisions of the Rome Statute were very hard. This Part is believed to be the result of the compromise. Moreover, there were several different terms than those that are usually in this kind of legal documents. For example, the term "mutual assistance" was changed to "other forms of cooperation". Likewise, "extradition" is turned into "surrender". It is also engaging to notice how the Article 86 is a great achievement if we compare it to the original draft. From "best efforts" to cooperate, they came to the text that says that State parties "shall cooperate fully" (Babaian, 2018: 92-93).

Let us now take a closer look at those articles. Firstly, the State Parties are invited to cooperate fully with the ICC when it comes to investigation and overall prosecution of the crimes. Article 87 discusses the requests for cooperation which are to be transmitted through the diplomatic channels. Furthermore, the Court may seek the protection of the information and the victims and witnesses together with their families. When it comes to the states that are not parties to the Rome Statute, the request might be made based upon some *ad hoc* agreements. If a State Party did not fulfil the request for cooperation, the Court can refer that matter to the Assembly of States Parties or to the Security Council, if it referred the matter in the first place (Rome Statute, 1998, Article 87). Thus, this article is the general provision and gives the ICC the authority and it relates to the entire Part 9. This final part of the Article 97, the paragraph 7, is perhaps the most important one since it discusses what will happen if there is no compliance. From this Article, we find out that the only response that the ICC can give when it comes to non-cooperation is a judicial finding of non-cooperation and diplomatic pressure through the Assembly of State Parties (Jones, 2016: 188). Here might lie one of the answers to our question of how the cooperation might be improved. We suggest that this Article changes or amends by adding some additional paragraphs. Most importantly, we highlight the absolute need for sanctioning non-cooperative states. It will certainly be more efficient than just pure diplomatic pressure and judicial finding of non-cooperation that are important as well. Only the joined forces of these threats and sanctions can improve the cooperation of the states with the ICC.

When it comes to aspects of procedure in which a State might cooperate with the ICC, it is mostly the surrender of persons to the court. This aspect of cooperation is extremely important because the trials *in absentia* are not allowed in the ICC. The State Parties shall comply with both these provisions and their national law regarding criminal procedure. The Rome Statute specifies what the request for surrender should look like and what facts should it contain, such as a description of the transported person, a brief statement of the facts of the case and their legal characterization and the warrant for arrest and surrender (Rome Statute, 1998, Article 89). It is possible that there are competing requests, which would mean that at the same time when the ICC issued its request, the same did another state for the extradition of the same person. If that occurs, the State Party which received the request is obliged to notify both the ICC and the requesting state. The ICC would have priority if the ICC decided that the case is admissible based on the investigation or prosecution conducted by the requesting State. If the requesting State is not a State party, then the ICC will have priority, if the requested State is not under the obligation to extradite the person to the requesting State (Rome Statute, 1998, Article 90). The Rome Statute also informs us what the request for arrest and surrender are supposed to look like: in writing, containing the information describing the person and its probable location, a copy of the warrant of arrest and any necessary documents (Rome Statute, 1998, Article 91). Article 92 deals with the provisional arrest in urgent cases (Rome Statute, 1998, Article 92).

Article 93 discusses other forms of cooperation. State Parties shall cooperate with the ICC when it comes to the identification and whereabouts of persons, any kind of production of evidence and documents that might be helpful. State Parties shall also provide the examination of sites and provide the protection of witnesses and every sort of evidence. If any of these requests for assistance is denied, the requested State Party should inform the ICC which were the reasons for this denial (Rome Statute, 1998, Article 93). One more aspect of the cooperation is in a form of the consultations. Namely, if the State Party has received a request that may be problematic when it comes to its execution, that State shall consult with the ICC to find a solution. It is usually the situation when there is insufficient information to execute the request if the person cannot be located or if the requested State would have to breach its already existing obligation in respect to another State (Rome Statute, 1998, Article 97).

The cooperation that the Rome Statute provides is a compromise between the horizontal and the vertical cooperation models. The horizontal one is between the states, and it relates to their sovereignty. This kind of approach we can see in the ICTY and the ICTR. Correspondingly, this kind of cooperation aims at the traditional law of the extradition. The vertical cooperation is the cooperation between the states and the ICC and authors describe it as a *sui generis* system. The vertical approach is about the international community and its interest. This cooperation system is weaker than the first one, since the *ad hoc* tribunals were products of the Security Council and their decisions have the binding effect (Smith-van Lin, 2016: 122-123; Kaul & Kreß, 1999: 158). There are authors that believe that this horizontal approach is not useful when it comes to prosecution of the international crimes. It just might seem that it is not in the nature of these crimes. On the other hand, the vertical approach had its critics. It is said that it just is not realistic, because the States need to have the will to cooperate (Kaul & Kreß, 1999: 159).

This differentiation caused certain debate in the opening of the Rome Conference in 1998. The vertical approach had more support. The States that actively supported it were Argentina, Australia, Austria, Belgium, Denmark, Finland, Germany, Italy, Malawi, the Netherlands, New Zealand, Norway, Portugal, Sweden, Switzerland, the United Kingdom, and Canada. The horizontal approach was supported by a number of Arab States, China, India, Israel, Japan, Mexico and the United States (Kaul & Kreß, 1999: 161). As we could see, the Rome Statute adopted the hybrid model, a sort of mixture of the horizontal and vertical approach, since there is "a general obligation of States to comply with the Court's request for assistance" (Mutyaba, 2012: 944).

Nevertheless, this cooperation model is not so easily adopted. In the literature we came across some authors that believed that by supporting the ICC, the States lose their sovereignty. There were even some that were discouraging the States of cooperating with the ICC (Ba, 2020: 91). The state sovereignty is one of the fundamental principles of public international law and even the United Nations Charter points that out (Author, 2022: 213). Our opinion is quite opposite – in order to achieve a higher goal, which is in this case punishing the perpetrators and put a stop on the impunity for the international crimes, the States should be ready to share a part of their power and abilities.

The Case Law

In this part of the paper, we discuss the case law in the ICC, more specifically two famous cases that showed the lack of cooperation between the States and the ICC. These cases highlight the importance of the cooperation of the States in order to achieve interests of the international community – punishing the criminals.

One of the most familiar cases in the ICC practice is the case of Omar Al-Bashir, the former president of Sudan. The situation in Darfur was referred to the ICC by the United Nations Security Council in January 2005. The International Commission of Inquiry in Darfur stated that there were serious violations of human rights and other serious international crimes and that the Government forces and militias were involved. Based on this, the ICC issued two warrants against a sitting Head of State Sudan. The first one was charging him with the crimes against humanity and the war crimes and second one with the genocide The States were supposed to cooperate with the ICC in order to bring Al-Bashir to justice. But the opposite happened. He travelled and visited many countries that refused to arrest and surrender him. This was the first case that the Prosecutor began to investigate and did not have any support of the territorial state, in this case, Sudan. There were many states that did not cooperate, such as Chad, Kenya, Djibouti, Malawi and the DRC. Each time the ICC referred this to the Security Council, but the Security Council never imposed any sanctions on these states (Jones, 2016: 189-190). This

was the practical example of what we mentioned earlier: lack of cooperation, but also lack of sanctions. The outcome of the case might have been different if more attention was brought.

Speaking with the cooperation of the State Parties with the ICC, we must also mention the case of Kenyatta. It is famous because Kenya denied any form of cooperation with the ICC, which led to dismissal of the case. Moreover, this case was famous because it was the first time that the Prosecutor initiated an investigation in a State Party on the approval of the judges (Mutyaba, 2012: 960).

Uhuru Muigai Kenyatta was at the time of summons, in 2011, Deputy Prime Minister and Minister of Finance. He was charged with five counts of crimes against humanity allegedly committed during the 2007-2008 post-election violence in Kenya. Kenyatta was the president of Kenya from 2013 until 2022 and Minister of Finance since 2009 up to 2012. After the presidential elections in Kenya in 2007 and 2008, there were riots on the streets which led to the death of 1200 people and over 300 000 people who were internally replaced. Kenya signed the Rome Statute in 1999 and ratified it in 2005. The ICC prosecutor, Ms Fatou Bensouda, decided to start the investigation *proprio motu*. Based on the Memorandum that Kenya signed 2010, Mr Kenyatta and Mr Ruto, who was also charged, showed up in front of the ICC in the Hague voluntarily in 2011. At that time, Kenyatta was the president of Kenya. In the following year the Pre-Trial Chamber confirmed the charges. But the problems occurred. The ICC had difficulties finding evidence. That was the reason why the charges were withdrawn in 2014. Furthermore, the Chamber had indicated that the principle *ne bis in idem* did not apply here and that it might be possible for the Prosecution to bring new charges later (International Criminal Court, Trial Chamber, ICC-07/09-02/11, 13 March 2015, paras. 1-10).

Kenya was the first State Party in which the Prosecutor acted *proprio motu* and was authorized to open an investigation. This case was the perfect example of non-cooperation. The Kenyan government decided not to cooperate with the ICC which resulted in ending the case.

There are several similarities between the Kenyatta case and the Al-Bashir case. Both of them were sitting Head of State at the time they were charged with serious international crimes and both cases were in favour of the hypothesis that the ICC is a Western court that only judges the African leaders. The main difference is that Sudan is not a State Party of the ICC, and Kenya is.

In both cases the non-cooperation of the States brought many problems to the ICC. A lot of time was spent, as well as a lot of money. The potential perpetrators of international crimes were left unpunished for their deeds because the States did not want to cooperate and contribute to bringing them to justice. It affected the efficiency of the ICC.

These cases perfectly describe one of the most mentioned critics regarding the ICC. It is true that most cases involve African states. In that sense, the ICC is criticized to be racist, neo-colonial and biased towards Africa (Babaian, 2018: 140). This was one of the reasons why there was an African Union conference in 2009 when the heads of African states decided not to cooperate with the ICC. This resolution was response to one specific event. Namely, on 4 March, 2009, the Pre-Trial Chamber issued an arrest warrant against Omar Al-Bashir, the case that we previously mentioned. The African Union held a summit in July 2009 and adopted the Resolution Assembly/AU/Dec.245 (XIII) in Libya stating that they were not going to cooperate in arresting and surrendering Al-Bashir (Nyawo, 2017: 204). Furthermore, in 2014 the Malabo Protocol was adopted. It was the protocol regarding the African Court of Justice and Human Rights that gave immunity to heads of states and other officials from prosecution while they were in office (Sarkin, 2020: 31). This is the way that African states tried to protect their States and officials through the African Union and show their discontent with the way they think they are being treated in the international community.

On the other hand, we cannot but mention the successes that the International Criminal Court achieved. There are 123 ratifications of the Rome Statute, which leads us to believe that countries are decided to put an end to the human right violations. This means that those states also had to rise their standards in the criminal procedure and make perhaps significant changes in their legislature. Of course, it is possible that there was not enough time for States and the ICC to completely raise their standards and that the fight against impunity is still at its beginning. Nevertheless, the ICC is showing some effort in improving cooperation which we will discuss in the next chapter.

The Efforts of the International Criminal Court

One of the biggest problems that the ICC is facing is the cooperation and it disables the ICC from performing its duties. Sarkin says that one of the biggest issues is the effecting of the arrest warrants, which was the example with the Al-Bashir. Not only that, but as we have already mentioned, the African Union and African states decided not to cooperate and called ICC "an impotent European white elephant" (Sarkin, 2020: 30. 34).

It was long ago realized that the cooperation aspect of the ICC is of extreme importance. Therefore, some steps were taken. For example, the Assembly of State Parties adopted number of resolutions dealing with this issue. In 2007 the Resolution ICC-ASP/6/Res.2 was adopted on the topic of the "Strengthening the International Criminal Court and the Assembly of States Parties". The ICC thanked the Secretary-General and the United Nations for their efforts and help in improving cooperation. It also welcomed the implementation of the "Cooperation Agreement between the ICC and the European Union". It encouraged the State Parties to implement in their national legislation the international crimes mentioned in the Rome Statute and emphasized the necessity of State Parties to cooperate "in preserving and providing evidence, sharing information, securing the arrest and surrender to the ICC of persons for whom arrest warrants have been issued and protecting victims and witnesses" (Resolution ICC-ASP/6/Res.2, 2007: 5). This Resolution also included an annex dedicated to the recommendations on cooperation.

Moreover, in 2010 the Assembly of State Parties established a Study Group on Governance in order to achieve the structured dialogue between the State Parties and the ICC and to strengthen the framework and efficiency of the ICC. This Study Group provided a report that recognized some issues and proposed some steps how to deal with them (Jones, 2016: 200).

The State Parties of the Rome Statute have signed cooperation agreements with the ICC. These agreements are believed to be essential for successful cooperation and they address the whole spectre of activities, such as the protection of victims and witnesses, enforcement of sentences, interim release, and release of persons. This is the way that State Parties still use their powers in making decision and form certain rules and procedures in order to fulfil their obligations toward the ICC. Moreover, in this way States share their experiences, case studies, knowledge and show their commitment to help the ICC (International Criminal Court, Cooperation agreements: 5).

Relationship with the Security Council

The United Nations are the most important international organization. The Charter of the United Nations proclaimed the Security Council to be the most important organ due to its functions and powers. The main task of the Security Council is to maintain international peace and security that was achieved after the Second World War (Author, 2021: 164).

The ICC cooperates with the United Nations based on the Relationship Agreement signed in 2004. This Relationship Agreement proposed that the United Nations should give logistical and administrative support to the ICC, but also substantive by providing information and materials. The staff and experts that work for the United Nations will also be available for the ICC, but in order for them to testify, the Secretary-General of the United Nations had to waive their immunity, which often happened in the past (Cummings-John, 2013: 224-225).

In the context of the ICC, the Security Council has the right to refer certain case to the Prosecutor. But Security Council should also have the right to intervene and make cooperation with the ICC more efficient. It is noticeable that the states that are not supporting the ICC, usually abstain when the Security Council is discussing matters that are in the ICC's jurisdiction. Correspondingly, the ICC is referring to the Security Council cases of non-cooperation by states. Unfortunately, the Security Council did not make any significant steps in that matter. The Security Council ought to be more supportive and responsive when these issues arise (Sarkin, 2020: 53, 55).

We mentioned the Darfur situation in Sudan. It was also the moment when the ICC prosecutor Bensouda criticized the United Nations Security Council because it did not support the ICC enough. Later on, Ba commented that the relationship between these two institutions was not good enough, or as he citied, it was "one defined by friction" (Ba, 2020: 93).

Findings

This paper finds that the key component to the effective Rome Statute legal systems is the cooperation between states and ICC, for example with the cooperation agreements that are being signed. Those agreements usually deal with the enforcement of sentences, witness relocation and other forms of judicial assistance. Other important aspect is the diplomatic and public support that is expected from the State parties. It is also important to address the relationship between the ICC and the United Nations.

Conclusion

It has been more than 20 years since the Rome Statute entered into force. So far, the efficiency of the International Criminal Court is very questionable. There are only a few judgments. The ICC is very slow in reaching its decisions.

Based on the previous chapters, we cannot evaluate the cooperation of the States and the ICC as a successful undertaking so far. Even though there are many critics, it would be wrong if the ICC bluntly did everything to make those critics go away. For example, the mentioned critic of only prosecuting the Africans should not be erased by just charging any individual from any other state. In order for the ICC to get and maintain its figure as the world criminal court, it ought to investigate and punish for the most serious crimes in the entire international community. It is necessary to have more non-African trials in the future, which ICC tried to achieve by bringing the charges against Vladimir Putin, the president of the Russian Federation in 2022. The withdrawal of States from the Rome Statute is making this harder. The States should support and encourage the ICC and finally help it, not abandon it.

Of course, this cooperation part depends on the political will of the States, as we can see in the cases described earlier. In order to make them help the ICC, some newer approaches should be tried. Those approaches should be using the channels of diplomacy and persuasion, but also imposing sanctions.

By diplomatic channels, the ICC should try to have more states ratifying the Rome Statute and become more universal in that sense. The Assembly of State Parties should use its powers and address the states that do not cooperate. It is also advisable that there are more conferences, round tables, workshops. The international community and its key subjects ought to be more educated and more aware of the ICC and how important it is to communicate and cooperate. The ICC should invest more time and money in organizing these events and educational seminars. Furthermore, the conferences would be an excellent opportunity for states to share their experiences and for the ICC to hear them and try to improve. The sanctions are also a great way to improve the situation. By threating with sanctions, above all the financial ones, the state might be more inspired to fulfil the cooperation agreements and obligations they have based on the Rome Statute. The Rome Statute should have an annex dedicated specifically to this topic that will declare how the states will be sanctioned together with the Security Council. In this way, the Security Council could show the political support that is much needed.

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POSSIBILITIES OF IMPROVING THE QUALITY OF THE REGISTER OF EXPERT WITNESSES IN THE REPUBLIC OF SERBIA IN THE AREA OF BALLISTICS, COLD WEAPONS, AND FIREARMS

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Introduction

Science development and developments in engineering are unfortunately used in criminal activities (Bjelovuk, Jaramaz & Micković, 2012). Firearms can be used as both a tool and an object of perpetration of a variety of crimes. It is most frequently used to commit violent crimes. "According to statistical data, (hand) firearms are the most common weapon used to perpetrate the crime of murder. They may be military (gun, revolver, rifle, machine gun), hunting and sporting, or hand-made, with short or long barrels." (Lajić & Marinković, 2016:31).

For the purpose of solving and proving the commission of these crimes, as well as identifying their perpetrators, expert witnesses who appear in criminal proceedings as persons with specialized knowledge in a particular area play a crucial role (Criminal Procedure Code, Article 113). Expert witnesses are individuals who possess specialized training, education, or experience (Gardner & Anderson, 2004) and who, in accordance with the established principles of their respective scientific field, technical knowledge, skills, or artistic orientation, examine objects of expertise and subsequently provide their expert findings and opinions (Bošković & Kesić, 2020). The Law on Expert Witnesses of Serbia (LEW/S) defines expert work as professional activities that involve the application of scientific, technical, and other advancements to provide the court or any other relevant authority conducting the proceeding with necessary professional knowledge utilized in the process of establishing, evaluating, or clarifying legally relevant facts (Article 2). The Law on Expert Witnesses of Serbia states that expert opinions can be conducted by natural and legal persons who meet the requirements outlined in this law, state bodies authorized to perform expertise, as well as scientific and professional institutions. In addition, it is permissible for expert witnesses (natural and legal persons) from foreign countries to perform expert work, so long as there are no expert witnesses of appropriate profession in Serbia or if there are other legal or practical justifications for expert witnesses from Serbia being unable to perform expert work in a particular case, and if they meet the requirements for performing expert work as set forth in the law of the country they come from (Article 3). In Serbia, a natural person may be appointed as an expert witness provided that, apart from the statutory general requirements for employment in state bodies, they satisfy the following special conditions: possess appropriate Master's or Bachelor's degree for a relevant area of expertise; possess a minimum of five years of professional experience; possess professional knowledge and practical experience in a specific area of expertise; and that they are deserving of performing expert work. In exceptional cases, a person possessing a minimum of a high school diploma may be appointed as an expert witness in a particular area of expertise

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where there is insufficient number of expert witnesses holding higher education degrees (Article 6 of the LEW/S). It is important to underscore that a natural person can perform expertise only if they are registered in the Register of Expert Witnesses (Article 8 of the LEW/S) and if no criminal proceedings have been initiated against them for a criminal offense that makes them unfit to perform expertise during the course of the said proceedings (Article 20, paragraph 1 of the LWE/S). To provide additional clarity regarding the requirements pertaining to professional knowledge and practical experience, the law mandates that these facts be substantiated through published professional or scientific papers, a certificate of attendance at consultations organized by professional associations, or the opinions or recommendations of courts, other governmental bodies, scientific or other institutions, or legal entities in which the individual was employed or provided professional services (Article 7 of the LEW/S). Many studies have been conducted on the criteria for selecting expert witnesses and the legal basis for registration in the register, and they exhibit notable similarities with the countries surrounding the Republic of Serbia (Žarković, Bjelovuk & Borović, 2014; Bjelovuk, Kesić, & Žarković, 2021).

An expert witness engaged in the analysis of the submitted material from the crime scene, where there are traces and objects related to the criminal offense in which a firearm was used, should be entered in the Ministry of Justice of the Republic of Serbia's Register of Expert Witnesses. The Register of Expert Witnesses is organized by areas, and an expert witness who deals with the analysis of traces connected to the use of firearms is listed in the area termed ballistics, cold weapons, and firearms. In this paper, the Register of Expert Witnesses of the Republic of Serbia in this area is analyzed to determine the possibility of its improvement. The analysis of the data from the Register of Expert Witnesses is necessitated by the fact that the public availability of the data on expert witnesses is crucial for all parties to the proceeding in order to make a well-informed decision regarding which expert witness to hire. In addition, the data on expert witnesses are directly related to the assurance of the quality of the paid service, i.e., the expertise. A poorly performed expertise would necessitate the hiring of another expert witness to provide findings and opinions, which would impact the course and costs of the procedure and could jeopardize the right to a fair and timely trial.

The analysis was conducted based on a variety of criteria, including gender, age, vocation, and specific area of expertise.

Previous research has revealed that similar analyses dealing with expert witnesses and their competencies for performing expert work were conducted in the area of fires and explosions (Bjelovuk, et al., 2021). In one of the papers that analyzed the jurisdiction and competence of expert witnesses and the manner in which the register was maintained, an overview of the educational profiles of expert witnesses in the Republic of Serbia was provided without a detailed analysis (Žarković, et al., 2014). In these papers, the authors also addressed the legal basis for engaging in expert work in certain countries, i.e. they performed a comparative-legal analysis of legal solutions and made recommendations for the optimal solution with regard to expert work. A 2016 study that examined jurors' perceptions of expert witnesses revealed that it was crucial for jurors to be informed about the qualifications of expert witnesses and that they accorded greater respect to those with better qualifications (Freckelton, Goodman-Delahunty & McKimmie, 2016). In addition, an analysis of the role of expert witnesses in the judicial systems of the Western Balkan countries revealed that the number of expert witnesses was insufficient and that they were not equally burdened. Furthermore, it was established that court decisions relied heavily on the findings and opinions of expert witnesses. This study did not analyze the competencies of specific expert witnesses (Senderayi, Runyararo, Sipka, & Sofijanic, 2019).

The European Network of Forensic Science Institutes (ENFSI) defines recommendations for dealing with certain traces at the level of the European Union and beyond. There are 17 Expert Working

Groups within the ENFSI framework, including the Firearms/GSR group. (https://enfsi.eu/about-enfsi/structure/working-groups/). In addition, the accreditation procedure for forensic laboratories significantly increased the guarantee of the quality of expertise conducted in forensic laboratories (Bjelovuk, Kesić, & Radosavljević-Stevanović, 2013). Accreditation improves the quality and reliability of physical evidence, as well as the implementation of quality systems both at crime scenes and in forensic laboratories (Bjelovuk, Kesić, & Žarković, 2012). The English courts developed the rule about the acceptability of evidence, according to which expert evidence must have a sufficiently reliable scientific basis to be admitted (Ward, 2020).

Material and Methods

The research conducted utilized statistical and content analysis methods.

For the purpose of research justification, a diagram depicting the number of crimes committed in the Republic of Serbia between 2013 and 2022 in which firearms were used is presented. According to the types of firearms used, criminal offenses are classified as follows: hunting rifle carbine, automatic gun, hunting rifle shotgun, short-barreled shotgun, gun, revolver, gas gun, rifle, air rifle, and automatic rifle. It is evident from the diagram that the number of crimes committed with firearms is not negligible; therefore, any research that can contribute to an increase in the number of firearm-related crimes solved and proven is significant. The type and method of use of firearms represent relevant facts for drawing conclusions about the motive and profile of the perpetrator of the crime (Đurđević, 2014). The profile of the perpetrator, that is, the most likely characteristics of the perpetrator based on the method of execution, the place, and the profile of the victim, serves as the foundation for selecting a strategy to prove the criminal offense and the perpetrator's guilt (Đurđević, et al., 2019). The exchange of information regarding firearms, both as a means and object of execution, is defined as one of the priorities in the cooperation between the Republic of Serbia and the EU in combating organized crime (Radović, & Đurđević, 2016).

Figure 1 is a diagram depicting the number of firearm-related crimes committed in the Republic of Serbia between 2013 and 2022.[2]

The largest number of crimes involving the use of firearms were recorded in 2013, with a total of 926 cases. Among these, 833 (89.95%) involved the use of a gun. The data reveals a gradual decline in the number of crimes involving firearms over the years. Specifically, in 2014, 712 crimes were committed, with 628 (88.20%) of them involving the use of a gun, in 2015 – 644, with 578 (89.75%) involving a gun, in 2016, 454 with 395 (87.00%) involving a gun, in 2017, 358, with 295 (83.57%) involving the use of a gun, in 2018, 313 with 261 (83.38%) involving a gun, in 2019, the number of crimes further decreased to 277, with 202 (72.92%) involving a gun. In 2020, there were 249 crimes, with 191 (76.70%) involving a gun. In 2021, 223 crimes involving firearms were committed, of which 163 (73.09%) involved gun. In 2022, 203 crimes were committed, of which 131 (62.98%) involved a gun. Over the observed period, a hunting rifle carbine was most used in 2013 – 13 times, and the least in 2020 – three times. A rifle was most used in 2013 – 32 times, and the least in 2016 – 10 times. An automatic gun was most used in 2013, 2015, and 2016 – three times, but not in 2022. A revolver was most used in 2013 – 18 times, and the least in 2019 – once. An air rifle was most used most in 2021 and 2022 – 7 times, and the least in 2018 – once. A rifle hunting shotgun was most used in 2013 and 2014 – 25 times, and the least in 2021 – 10 times. A gas gun was most used in 2022 – 19 times, and the least in 2013 and 2014 – 8 times. An automatic rifle was most used in 2016 and 2018 – 6 times. During the observed

2 Ministry of Interior of the Republic of Serbia.

period, a short-barreled rifle was least used firearm – twice in 2019 and twice in 2020, while it was not used in any other year.

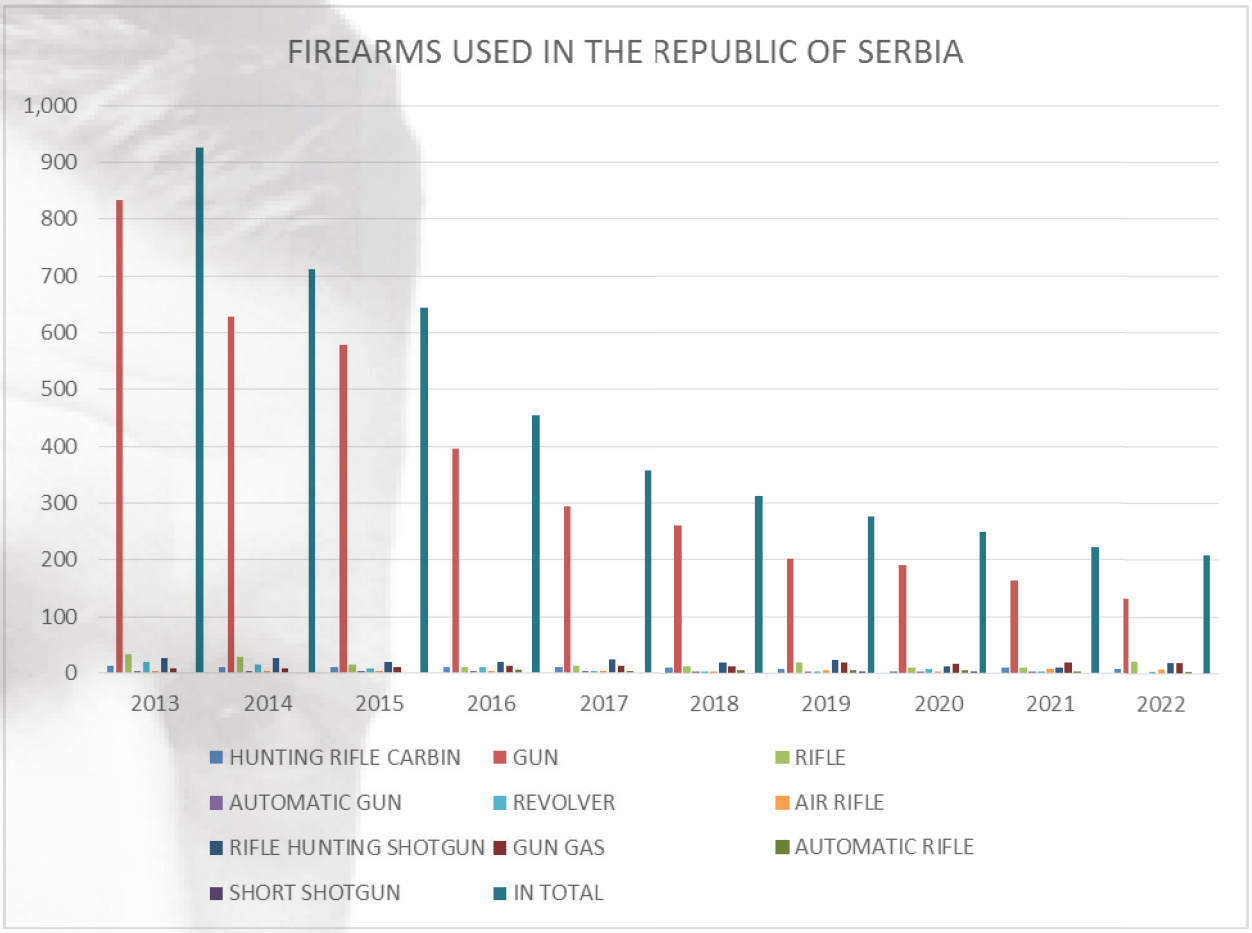


Figure 1 *The number of criminal offenses committed by different firearms (hunting rifle carbine, automatic gun, rifle hunting shotgun, short-barreled shotgun, gun, revolver, gas gun, rifle, air rifle, automatic rifle) in the period 2013–2022*

The perpetrator leaves traces following the use of a firearm, either in the form of powder particles or mechanical traces on the cartridge case, projectile, at the crime scene along the path of the projectile, or on the victim. At the crime scene, traces are processed, packaged, and transported to a certified ballistics laboratory, where expert witnesses conduct their analysis. The laboratory should be licensed and accredited in accordance with ISO 17025. The ballistics laboratory should be equipped with a comparative microscope or automatic ballistic identification system IBIS, which compares disputed and non-disputed projectiles and cartridge cases, as well as devices for measuring speed, 3D scanners for projectile path reconstruction, microscopes for observing gunshot residues (GSR), ultra-fast cameras, and trigger force measurement devices, among others. Expert witnesses should be entered in the Register. The Ministry of Justice's Register of Expert Witnesses in the Republic of Serbia has 32 registered expert witnesses for the area "ballistics, cold weapons, and firearms", including their following data: name and surname, year of birth, vocation, area of expertise, specific area of expertise, number and date of the decision, and contact details (https://www.mpravde.gov.rs/court-experts.php). By examining the Register of Expert Witnesses in the area of ballistics, cold weapons, and firearms, it was determined that each expert witness possesses a valid license to perform expert work. In 2010, 31

of them were entered in the Register, whereas in 2006, only one expert witness was entered. 30 expert witnesses renewed their licenses in 2011, one in 2006, and one in 2013.

Regarding the area of expertise, as reported by the expert witnesses upon registration, all of them specified expertise in the area of ballistics, firearms, and cold weapons. Additionally, the Register contains contact information for all expert witnesses.

The age of each expert witness was established based on their year of birth, and this information is depicted in Figure 2. The age of all expert witnesses who are registered is above 50 years. The diagram clearly indicates that there are the most expert witnesses aged 71 (4). There are 9 expert witnesses in their sixth decade of life, 12 in their seventh decade, and 11 in their eighth decade.

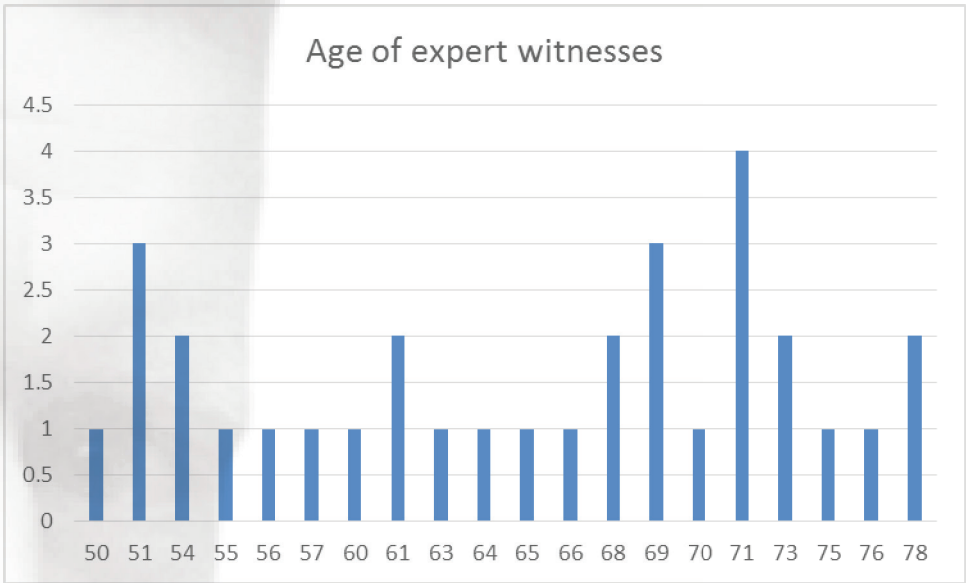


Figure 2 *Age of expert witnesses in the Republic of Serbia*

On the basis of the names of expert witnesses, conclusions about their genders were drawn, and among the 32 expert witnesses in this area, 30 men and two women were registered, as depicted in the diagram in Figure 3.



Figure 3 *Gender of expert witnesses in the area of ballistics, firearms and cold weapons in the Republic of Serbia*

The analysis of the data on expert witnesses for the observed area was also conducted according to the *specific area of expertise* criterion that the expert witnesses specified when they entered the register. 28 out of 32 expert witnesses, or 87.5%, specified an identical phrase for the area name, namely ballistics, cold weapons, and firearms, as their specific area of expertise. One expert witness identified their specific area of expertise as the identification of traces of tools (3.125%), one as the technical functionality of personal weapons, one as firearms, and one as weapons, ammunition, and explosive devices (3.125%).

Regarding the criteria of vocation specified by the expert witnesses, the majority of the expert witnesses in the Register for this area are graduated mechanical engineers – 9 (28.125%), MSc – master of technical sciences – 3 (9.375%), PhD – doctor of technical sciences – 2 (6.25%), graduate in physics and chemistry – 2 (6.25%), gunsmith – 2 (6.25%), and major – 2 (6.25%), graduated engineering officer – 1 (3.125%), graduated engineer in chemical technology – 1 (3.125%), officer – 1 (3.125%), graduated engineer – 1 (3.125%), fire protection engineer – 1 (3.125%), security management specialist – 1 (3.125%), bachelor of law of internal affairs – 1 (3.125%), bachelor of laws – 1 (3.125%), mediation specialist – 1 (3.125%), professor of sociology – 1 (3.125%), graduated marketing manager – 1 (3.125%), and not specified – 1 (3.125%). Vocations of expert witnesses for the area of ballistics, cold weapons, and firearms are shown in Figure 4. From the aforementioned data on the vocation of expert witnesses, it can be concluded that the vocations are quite diverse, some of which are extremely loosely defined.



Figure 4 *Vocation of expert witnesses in the area of ballistics, firearms and cold weapons in the Republic of Serbia*

Discussion

Ballistics experts examine cartridge cases, bullets, and gunshot residue (Rolins & Dahl, 2004). Every expert witness registered in the Register for the area of ballistics, firearms, and cold weapons possesses a valid license. It is evident that all of the expert witnesses' licenses have not been renewed in over a decade, which is a considerable amount of time. Consequently, there is no information regarding the potential update of the Register data. In some registers of expert witnesses, such as the one in the Republic of North Macedonia, there is information about whether an expert witness has lost their work license (Bjelovuk, et al., 2021) or maybe is no longer able to conduct expert work.

The majority of expert witnesses are older than 65 (17 expert witnesses, or 53.12% of the total number of expert witnesses in this area of expertise). As the right to an old-age pension in the Republic of Serbia is acquired upon reaching the age of 65, the question of access to accredited laboratories for those types of expertise that require modern devices arises (e.g. access to a comparative microscope or an automatic system for ballistic identification – IBIS, access to a ballistics laboratory to determine the trigger force, the velocity of the projectile, etc.). The access of expert witnesses to accredited laboratories has a significant impact on the quality of their expertise; therefore, it is crucial that each expert witness has access to an accredited laboratory with a valid work permit. The observed data provided by the Register of Expert Witnesses does not indicate whether or not the expert witness has access to an accredited forensic laboratory or to which particular one. This information should also be included in the Register of Expert Witnesses.

In comparison to the total number of expert witnesses, the number of female expert witnesses is negligible, accounting for only 6.25%.

The vocations of expert witnesses are not specified precisely (one expert witness did not even specify their vocation), such as: doctor of technical sciences, master in technical sciences, officer, or major. Certain occupations seem inadequate at first glance, such as graduated marketing manager, professor of sociology, mediation specialist, bachelor of law of internal affairs, bachelor of laws, security management specialist. Even upon further reflection, most faculties have modules, that is, majors, and consequently there is also a difference in education and courses that expert witnesses took as students. At the Faculty of Mechanical Engineering, for instance, an expert witness who graduated in the field of weapon systems did not receive the same education as a graduate in another field. (https://www.en.mas.bg.ac.rs/faculty/). Modules at the University of Defense and other universities in the Republic of Serbia follow the same pattern. The competencies of an expert witness are not solely determined by their vocation and level of education but also by other variables. In contrast to the UK Register of Expert Witnesses, the Register of Expert Witnesses in Serbia contains no information about the work experience of expert witnesses. An expert witness could be trained through various forms of training, seminars, workshops, and other professional development opportunities. This information about expert witnesses in this area of expertise is also not evident in the Register.

The ratio of the number of crimes committed with firearms to the number of expert witnesses is inadequate. The average number of crimes committed with firearms over the course of the observed ten-year period is 436, and there are 32 registered expert witnesses. Within a ballistics examination, an expert witness may be asked several questions for which they are expected to conduct a ballistics analysis and provide a response, including: Is the item submitted for expert examination indeed a firearm, and if so, does it function properly? Is the firearm factory-made, or has it been modified? Is this an illegal weapon? What is the trigger force value? Was a firearm discharged? When was the firearm discharged? What distance was the firearm discharged from? What was the projectile velocity? Is it

possible to reconstruct the projectile? Whose hand discharged the firearm? Multiple bullets can be discharged from a single firearm during the commission of a crime, so the number of expert reports per firearm exceeds one. An expert witness who examines traces of the use of firearms can examine traces on ammunition and its components (cartridge cases, projectiles), traces on the firearm and its components, traces at the crime scene, i.e. on the trajectory of the projectile (parabolic ballistic curve), and traces of particles and other combustion products left after a discharge. It is implied that, when examining the traces on the projectile and cartridge case, the expert witness checks whether the weapon from which the bullet was discharged, from which the cartridge case or projectile originated, was used in a previously committed crime. The number of working hours per an expertise varies from case to case based on the number of traces being examined and the number of questions. An expert opinion can be rendered by either an individual expert witness or a team of expert witnesses.

The UK Register of Expert Witnesses was used for comparison (https://www.jspubs.com/expert-witness/index.htm?l=b). A comparative review of the UK Register of Expert Witnesses revealed differences in the structural organization and content of the Register. This Register is organized completely differently compared to the Register of Expert Witnesses in the Republic of Serbia. The UK Register of Expert Witnesses is unique (https://www.jspubs.com/experts/register.htm). A list of expert witnesses is provided, with the areas of expertise arranged alphabetically by the areas names. It contains a list of areas of expertise that are much more narrowly defined than the areas in the Republic of Serbia. One of the areas is ballistics (https://www.jspubs.com/expert-witness/si/b/ballistics/). Five expert witnesses are registered within this area, of which three are gentlemen, and two are ladies (one identifying as Ms., and the other as Mrs.). On the basis of this criterion, the gender and marital status of the expert witnesses can be determined. There are different areas of expertise in which the expert witnesses are registered, as stated by the expert witnesses themselves. Furthermore, the specific areas of expertise in which the expert witnesses are registered are listed along with the name and surname of each expert witness. Some expert witnesses have many years of experience, as well as a variety of expertise they perform. Many of them have different areas of expertise listed. The Register can be searched, and when the word ballistics is entered, 19 ballistic expert witnesses are displayed (ballistics – 4 expert witnesses, ballistics external – 2, ballistics forensic – 3, ballistics internal – 1 expert, ballistics terminal – 2, ballistics wound – 2, forensic ballistics – 3, wound ballistics – 2 expert witnesses).

Conclusions

The prevalence of firearm-related crimes is evident in the Republic of Serbia. A range of ballistic tests can be conducted for each firearm used, depending on the questions posed by the procedural authorities to the expert witness. Given the number of firearms-related crimes committed, as well as the fact that after each use of a firearm, many different traces are left behind that can be used to identify the firearm based on the markings on the projectile and cartridge case and a person who used firearms based on gunpowder particle traces, to reconstruct projectile trajectory, firing distance, firing time, etc., as well as considering the fact that a large number of questions can be posed to a ballistics expert witness, it can be concluded that there is a large number of ballistic tests and expert reports. Due to the fact that only 32 expert witnesses are registered in the Republic of Serbia, one gets the impression that the number of expert witnesses is small compared to the number of examinations and expertise they should perform and that they are consequently overburdened. There is a need to recruit a substantial number of expert witnesses due to the perception that the number of expert witnesses in the Register is inadequate given that there is a significant number of crimes involving the use of firearms. So, there is a need for a greater number of expert witnesses in the area of ballistics, cold weapons, and

firearms because of the high number of crimes committed with the use of firearms. Further research that exceeds the boundaries of this scope is required in order to ascertain the exact number of working hours and expert witnesses.

The Ministry of Justice is responsible for the maintenance of the Register of Expert Witnesses in the Republic of Serbia. Name and surname, year of birth, vocation, area of expertise, specific area of expertise, date of license issuance, license number, and contact information are all available information pertaining to expert witnesses. It would be useful if the Registry of Expert Witnesses included details regarding the date of update, specifically the renewal of each expert witness's license, in addition to whether and which accredited forensic laboratory the expert witness utilizes. The data contained in this list should be regularly updated to reflect any developments that may occur that would render certain expert witnesses incapable of providing their expert opinions (e.g. death, illness) or whose contact information may have been changed, rendering them unreachable.

It is evident from the Register that males comprise the majority of expert witnesses for this type of expertise (93.75%). Efforts should be directed towards promoting the profession so that expert witnesses of both genders are more evenly represented. An intriguing observation when comparing the UK Register of Court Witnesses to this list is the prefixing of each expert witness's name with the titles Mr., Mrs., and Ms., so that the expert witness's gender and marital status are evident. Furthermore, according to the research findings, individuals aged 65 and above comprise the majority (53.12%) conducting this type of expertise. Notably, the Register does not contain any individuals under the age of 50. In this context, younger individuals should get involved in expert work.

When it comes to the specific areas of expertise of expert witnesses for ballistics, cold weapons, and firearms in the Republic of Serbia, they are not standardized and appear to be specified arbitrarily. The situation is identical with the UK Register of Court Witnesses.

Certain expert witnesses' vocations are not sufficiently precisely defined in the Register, and therefore it is advisable to supplement it with relevant data. Although there may be vocations that appear unsuitable, this does not inherently indicate that the expert witness lacks sufficient competence. On the other hand, the expert witness might possess competencies obtained via some other type of education, including specialized courses, seminars, workshops, military service training, and so forth. Furthermore, an expert witness may have acquired knowledge in the area of ballistics, cold weapons, and firearms through their work experience, experimental research, and professional and scientific papers. Given the aforementioned, it is advisable to supplement the Register of Expert Witnesses with more comprehensive data pertaining to the expert witness's acquired knowledge from diverse professional development and education programs, published papers, work experience, etc., which would provide the one who hires the expert witness with a more comprehensive understanding of the expert witness's capabilities.

The analysis of the Register of Expert Witnesses in accordance with predetermined criteria revealed that its quality could be improved. The comparative analysis of the UK Register of Expert Witnesses and the Register of Expert Witnesses in the Republic of Serbia unveiled differences in both the structure and content of the registers. This Register exhibits a completely different organizational structure, wherein the areas of expertise are significantly more numerous and arranged alphabetically. The areas of expertise are defined differently and are considerably more specialized (for instance, ballistic interior, ballistic external, ballistic terminal, ballistic wound, etc.). Navigating through the UK Register of Court Witnesses is much easier.

The analysis of the Register of Expert Witnesses is very significant from the aspect of the availability of visible data on expert witnesses in the Register for the participants of the proceedings. The quality and content of the Register of Expert Witnesses in the field ballistics, cold weapons, and firearms in the Republic of Serbia are directly related to the outcome of criminal proceedings because they affect the length of court proceedings, and therefore should be improved.

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JOINT INVESTISTIGATION TEAMS – POSSIBLE ANSWER TO CHALLENGES OF INVESTIGATIONS OF SERIOUS AND ORGANIZED CROSS-BORDER CRIME

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Introduction

It has been widely acknowledged on countless occasions that criminal activity and criminals do not stop at state borders as state jurisdictions do, and that a successful fight against crime, especially its organized forms, which almost always have cross-border character, is only possible through the coordinated cooperation of the judicial authorities of different states. More pressing challenges posed by rapidly developing complex forms of trans-border crime require faster and more efficient coordination of national authorities, as well as the development of new and improvement of existing instruments of cooperation of competent authorities in order to improve the effectiveness of the response against cross-border crime. In complex cases with an international element, i.e. in cases in which quick joint action, coordination of investigations or execution of a larger number of requests for international legal assistance is required in a short period of time, the need for fast and efficient action of the national authorities in gathering evidence is especially emphasized. In such circumstances, the traditional instruments of international legal assistance are not adequate, primarily as they neither enable direct communication between involved authorities and services, nor allow the competent authorities to react at the moment when the suspected criminal actions take place (Vinković, 2020:800). The traditional mutual legal assistance instruments may appear to be slow in urgent cases, in particular when letters rogatory - usually requiring translation, which is time-consuming process in itself, are sent through central bodies of the executive arm, rather than directly to the competent judicial authority. In addition, the limited reach of the traditional instruments of cooperation is apparent because a couple of letters rogatory may not be sufficient for undertaking concerted investigative actions in two or more countries (Spapens, 2011:239). Efforts to enhance the fight against cross-border crime over time led to the optimization and innovation of the instruments of international cooperation and eventually to the creation of new, advanced tools of cooperation.

The joint investigation team (hereinafter: the JIT) is an innovative and original *sui generis* tool of international cooperation in criminal matters. It enables a more flexible framework for action, allowing speed and efficiency of action, permitting to overcome common difficulties encountered by national authorities in the investigation and prosecution of the cross-border crime, in particular its serious and organized forms, as "experience has shown that where a state is investigating an offence with a cross-border dimension, particularly in relation to organized crime, the investigation can benefit from the participation of authorities from other states in which there are links to the offences in question, or where co-ordination is otherwise useful" (Explanatory Report, 2021:15). This tool of cooperation enables not only the presence and participation of national authorities of one state in the investigation led in another state, but indeed reunites competent authorities of two or more states in joint action.

Notion and Principal Advantages of Joint Investigation Teams

> "A joint investigation team is an international cooperation tool based on an agreement between competent authorities - both judicial (judges, prosecutors and investigative judges) and law enforcement authorities - of two or more states, established for a limited duration and for a specific purpose that conducts criminal investigations in one or more of the states involved."
> (JITs: Practical Guide, 2017:9)

The innovative character of this tool lies primarily in the fact "that such a team is comprised of investigators from multiple jurisdictions, functioning as a single unit tasked with performing a criminal investigation" (Geelhoed, 2011:470). Team leaders are supervising and directing the investigation. Information and evidence are freely and directly shared between members of a team, without the need for exchanging mutual requests for legal assistance. In this way, representatives of various national authorities - prosecutors, judges, police officers – may function as one team and may exchange information faster and more efficiently, so that quick adaptation of investigation strategies is also made possible. "The JIT agreement can speed up the investigation process because instead of multiple letters rogatory, only one agreement needs to be concluded, which creates a common judicial space" (Block, 2012:84). As it was duly emphasized by C. Riehle: "while traditional mutual legal assistance as well as the EU's European Investigation Order (Directive, 2014/41/EU) are limited to specific investigation measures that are requested, JITs grant the partners unlimited, real-time exchange of information" (Riehle, 2023:1). The JIT enables the operators and officers from different countries to be present during investigative measures, such as searches and hearings, on each other's territories, providing added value with their knowledge of the facts of the case and of the relevant national legislation requirements, in particular with regard to the admissibility of evidence. One of the most original and advanced elements of the JIT is the possibility of the seconded members to request from their colleagues in their home country to undertake particular investigative measures, without the need of addressing a mutual legal assistance request, and such "measure shall be considered in this Member State/Party under the conditions which would apply if they were requested in the national investigation" (Article 13(7) 2000 EU MLA Convention). Besides its numerous advantages, the use of a joint investigation team indeed may require mobilisation of significant resources, both human and financial, in order to ensure its efficiency and successful results. The support of Eurojust in particular has shown to be of great added value, ensuring over time not only legal and operational support and access to the centre of expertise, but as well financial support, facilitating the access of the national authorities to this tool.

To enable the use of this very advanced cooperation tool, the first step was to provide the adequate legal framework for the formation and functioning of JITs on the international level, but national legislation was required to further implement or develop main lines set by the international framework. However, the existence of legal provisions permitting the formation of a JIT, as perfect as any provision might be, is not sufficient to guarantee that this tool will be widely used in practice or used in an efficient manner. Awareness of practitioners needed to be raised with respect to the existence of its tool and the best practice of its use needed to be shared. In addition, the main challenges or obstacles encountered by the practitioners during the first attempts of the use of this instrument needed to be efficiently acknowledged and addressed.

Before examining in more detail the formation of joint investigation teams and practical considerations to be taken into account when setting up a JIT and during its operations, the authors will first provide an overview of the international and national legal framework related to joint investigation teams. Subsequently, the attention of the authors will be paid to the role Eurojust may play in the joint investigation teams, with particular emphasis on the possible support of Eurojust to joint investigation teams in which Serbia is taking part.

Legal Framework for the Formation of a Joint Investigation Team – International Legal Framework

United Nations

Several key multilateral UN instruments addressing different forms of crime are focused on strengthening the international cooperation between law enforcement agencies and judicial authorities and provide a legal basis for the formation of joint investigative teams or bodies. Following examples should be noted - Article 9, paragraph 1 (c) of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, Article 19 of the United Nations Convention against Transnational Organized Crime (hereinafter: UNTOC) of 2000 and Article 49 of the United Nations Convention against Corruption of 2003 which all prescribe the possibility of setting up a joint investigation team which is of a general nature, without regulating more in detail the establishment and functioning of a joint investigation team.

Notwithstanding the fact that the possibility to set up joint investigation teams based on the enumerated UN conventions is limited with respect to the scope, as it is applicable to the criminal offences covered by each respective treaty,[1] and although "the JIT provisions stemming from UN instruments are generally considered as 'enabling clauses' (…) and that they are far less detailed and leave open a number of issues, which will be regulated in the JIT agreement between the participating countries" (JITs: Practical Guide, 2021,16), they have been considered as a useful tool particularly in situations when no other legal grounds can be found for carrying out joint investigations.

Article 19 of UNTOC may have the potential to be the most referred to in practice, in particular bearing in mind the number of the parties to this treaty.[2] This Article establishes a possibility for its parties both to consider the establishment of joint investigative bodies, "distinct from both a JIT and a joint parallel investigation in that it is intended to be a more permanent structure formed on the bases of a bilateral agreement" (CTOC/COP/WG.3/2020/2:2, point 9) and to conduct joint investigation on case-by-case bases based on this provision. Conducting joint investigations based on Article 19 of UNTOC is possible at any stage of the criminal proceedings in the respective state, be it the stage of "investigation, prosecution or judicial proceedings", but "experience has shown that it is prudent to make a decision to carry out joint investigations at the earliest opportunity so that sufficient evidentiary material can be gathered and shared" (CTOC/COP/WG.3/2020/2:4, point 15).

European Union

The Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union (hereinafter: 2000 EU MLA Convention) was the first legal instrument that provided fairly detailed provisions for the setting up of joint investigations teams, an achievement that was possible bearing in mind the attained level of integration and trust between Member States, requiring the development of more advanced and efficient tools to respond to the exploitation of the freedoms of movement by the criminals.

1 For instance, the United Nations Convention against Transnational Organized Crime applies to the prevention, investigation and prosecution of laundering of proceeds of crime, corruption, obstruction of justice, serious crime meaning an offence punishable by a maximum deprivation of liberty of at least four years or a more serious penalty where the offence is transnational in nature and involves an organized criminal group.

2 Status of ratifications available at: *https://www.unodc.org/unodc/en/treaties/CTC/signatures.html*

The development of the legal framework enabling the formation of joint investigation teams on the European Union level was a response to the European Council meeting held in Tampere in 1999, which called "for joint investigative teams as foreseen in the Treaty to be set up without delay, as a first step, to combat trafficking in drugs and human beings as well as terrorism" (Tampere EC 1999: IX, 43).

Due to the slow process of the ratification of the 2000 EU MLA Convention, its provisions on joint investigation teams contained in Articles 1, 15 and 16 of the 2000 EU MLA Convention regulating setting up and operation of the JITs and criminal and civil liability of the officials, were reproduced in the Council Framework Decision of 13 June, 2002 on joint investigation teams[3] (hereinafter: 2002 FD on JITs), requiring from the EU Member States to incorporate it into their national law by 1 January, 2003. The 2002 FD on JITs should cease to have effect once the 2000 EU MLA Convention has entered into force.[4] Although Conclusions of the European Council in Tampere restricted the scope of JITs only to criminal offences mentioned above, neither the 2000 EU MLA Convention nor the 2002 FD on JITs have "limitations with respect to the area of criminality which would justify the setup of a JIT" (Rebecchi: 98).

To date, all Member States have implemented one or both of these legal bases (JITs: Practical Guide, 2021:12). Certain Member States implemented the framework on JITs in the form of the specific law on joint investigation teams,[5] other Member States inserted the provision of the joint investigation teams in their respective criminal procedure codes,[6] laws regulating mutual legal assistance in criminal matters[7] or other domestic legislation,[8] while several Member States referred to the direct applicability of the 2000 EU MLA Convention.[9]

The Network of National Experts on Joint Investigation Teams (the JITs network) was established in 2005 "with a view to encouraging the use of JITs and exchanging experience on best practice" (Council Document establishing the JITs Network, 2005:1) in line with the commitment in the Hague Programme endorsed by the European Council in November 2004, fixing the priorities for an area of freedom, security and justice for the next five years. The main purpose of this network, whose Secretariat is hosted and supported by Eurojust, is to facilitate the work of practitioners, promote the use of JITs, and provide a forum for exchanges of experience and challenges between the practitioners.[10]

In relation to the legal framework within the EU law, it is important to note that JITs fall in the realm of judicial cooperation in criminal matters and police cooperation. That is the area for which the Lisbon Treaty introduced the most flexible variety of "enhanced cooperation", a mechanism allowing asymmetric enactment of legislative measures within the EU, provided that there are at least nine Member States participating in any given instance of enhanced cooperation (Lukić, 2016:146-148).

3 *OJ L* 162, 20.6.2002, 1–3. *https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32002F0465*

4 Which was achieved on 23 August, 2005.

5 For example: Spain, Cyprus, Luxembourg.

6 Examples of France, the Netherlands, Bulgaria, Czech Republic, Estonia.

7 Examples of Austria, Belgium, Romania.

8 For instance, in Croatia, 2022 FD on JITS was firstly implemented by the Law on Public Prosecution. Since 2018, the provision regarding JITs have been contained in the Law on Judicial Cooperation in Criminal Matters with the EU Member States.

9 For example: Denmark and Norway.

10 For more information on JITs network, please refer to its website: *https://www.eurojust.europa.eu/judicial-cooperation/practitioner-networks/jits-network.*

Council of Europe

The Second Additional Protocol to the Council of Europe Convention on Mutual Assistance in Criminal Matters (ETS No 182, hereinafter: the Second Additional Protocol to CoE MLA Convention) signed in Strasbourg on 8 November, 2001 regulates the creation between two or more parties of joint investigation teams, reproducing in its Article 20 almost to the word the Article 13 of the 2000 EU MLA Convention.

In this way, setting up of joint investigation team based on an equally detailed framework, besides for the EU Member States, became an option opened for the states that ratified the Second Additional Protocol to CoE MLA Convention,[11] which increased substantially the possibilities of use of this advanced tool of international cooperation and became an important legal basis for joint investigations in particular in relations between EU and non-EU Member States.

Legal Framework of the Republic of Serbia

The Republic of Serbia has ratified all three abovementioned United Nations conventions providing the legal basis for setting up of a JIT and the Second Additional Protocol to CoE MLA Convention.[12] As pursuant to the Constitution of the Republic of Serbia, generally accepted rules of international law and ratified international treaties are an integral part of the legal system in the Republic of Serbia and are applied directly (Constitution of RS, Art. 16 and 194), these international treaties and their provisions regulating joint investigation teams constitute the legal basis for setting up of joint investigation teams.

In addition to multilateral treaties, Serbia has signed and ratified a number of bilateral international agreements, some of which contain provisions on setting up of joint investigation teams, particularly with the following countries: Bosnia and Herzegovina (Agreement between Serbia and Montenegro and Bosnia and Herzegovina on Mutual Legal Assistance in Civil and Criminal Matters - MLACCM, Official Gazette RS, 13/2010, Articles 33 and 36a), the Republic of North Macedonia (Agreement between Serbia and Montenegro, and the Republic of Macedonia on MLACCM, Official Gazette RS, 5/2012, Articles 25 and 30) and Montenegro (Agreement between the Republic of Serbia and Montenegro on MLACCM, Official Gazette RS 1/2010, Articles 33 and 38).

Police Cooperation Convention for Southeast Europe (PCC-SEE) provides in its Article 27 another legal grounds for setting up JITs in a very similar way to the 2000 EU MLA Convention and Second Additional Protocol to the CoE Convention, which may find the application among the states that have ratified this Convention.[13]

In cases where no ratified international treaty exists or certain matters are not regulated by it, (Art. 1), the Law on Mutual Legal Assistance in Criminal Matters (Official Gazette of RS, 20/2009) is applied to the procedure of provision of mutual legal assistance. As it has been noted by Grubač, Ilić & Majić, this legal provision should, besides the provision of mutual legal assistance, refer to requesting mutual legal assistance. Serbian Law on Mutual Assistance in Criminal Matters law contains only two specific provisions concerning the joint investigation teams, but classifying it by one of those provisions (Article 83) in the so-called other forms of international legal assistance (i.e. "minor" mutual legal assistance, which has been not entirely adequately labeled as "other forms of mutual legal assistance") (Grubač et

11 Chart of signatures and ratifications available at: https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treatynum=182.

12 "Official Gazette of SCG" – International agreements No. 2/2006.

13 Please refer to: *https://www.pccseesecretariat.si/index.php?page=documentspcc&item=35*

al., 2009:167) actually classifies it in the regime provided for by the Law for those forms of legal assistance (Janićijević, Manojlović, Nedeljković, Milićević, 2019:51). The other provision is contained in Article 96 of this Law,[14] which is, as professor A. Klip has noted "rather ambiguous as it merely states that joint investigative teams "may be formed" (Klip, 2014:153; Article 96).[15] Serbian legislator provided in Article 96 of the Law on the Mutual Legal Assistance in Criminal Matters that the Minster of Justice of the Republic of Serbia is competent to conclude the agreement on formation of a JIT.

In view of scarcity of provisions of national legislation related to the formation and functioning of the joint investigation teams, it has been recommended (Handbook on JIT, 2014:41) that adoption of more elaborate regulation of this instrument be considered for the purpose of facilitating setting up and functioning of joint investigation teams.

Formation and Functioning of a Joint Investigation Team

The below analysis is made bearing in mind in particular the EU and Council of Europe framework, taking into consideration certain examples of national legislations with respect to JITs specific aspects.

Cases Suitable for Joint Investigations

Analyzed international conventions that may be used as legal basis for establishing a JIT does not limit the use of this instrument of international cooperation with respect to a certain type of criminal offences, its gravity or the complexity of the investigation. Therefore, as long as the criminal offence is sufficiently specified, a JIT may be used equally for joint investigations of smaller-scale cross-border cases, which can prove to be particularly useful because "a JIT can facilitate co-operation in the specific case and also prepare the groundwork for future JITs by building mutual trust and providing experience in cross-border co-operation" (JIT Manual, 2011: 7). However, national legislation may provide for the restrictions in this respect and therefore should be verified in each respective case when the formation of JIT is being considered.

From the wording of the 2000 EU MLA Convention, the 2002 FD JITs, and the Second Additional Protocol to CoE Convention on MLA, which is substantially the same in this respect in all three instruments, it may be deduced that a joint investigation team may be particularly suitable tool for cooperation in two following situations: in a "demanding investigation", i.e. an investigation into criminal offences requiring difficult and demanding investigations with links to other Member States/Parties; and in cases of "connected investigations", i.e. in cases in which several Member States/Parties are conducting investigations into criminal offenses in which the circumstances of the case(s) necessitate coordinated and concerted action in the Member States/Party involved.

Practical considerations to be taken into account prior to setting of a JIT

The team is set up in the state in which investigations are expected to be predominantly carried out. The states concerned will have to take into account the question of costs, including the daily allowances for the members of the team (Explanatory Report, 2001:15). A JIT carries out its operations in accordance with the law of the state in which it operates.

14 Article 96 reads: "If the circumstances of the case justify it, joint investigative teams may be formed by an agreement between the Minister in charge of the judiciary in the Republic of Serbia and the competent authority of a foreign country."

15 Article 96 reads: "If the circumstances of the case justify it, joint investigative teams may be formed by an agreement between the Minister in charge of the judiciary in the Republic of Serbia and the competent authority of a foreign country."

Eurojust Guidelines on Joint Investigation Teams Involving Third Countries (Guidelines on JITs Involving Third Countries, 2022) contain an overview of the practical issues identified from an analysis of Eurojust casework, suggesting their consideration when assessing whether in a particular case a JIT would be the adequate tool for cooperation or other modalities of cooperation (such as parallel investigations or mutual legal assistance requests) might be a more adequate choice. These considerations are equally applicable to JITs between the EU Member States and to JITs between the EU Member States and non-EU countries and include: the existence and stage of investigations in the countries involved; the number of potential JIT partners; the urgency of action; the estimated time frame for finalizing the JIT agreement; and the availability of resources in the countries involved (Guidelines on JITs Involving Third Countries, 2022:6). Involvement of both Europol and Eurojust is often recommended at the earliest stage possible, as both Europol and Eurojust can provide various types of support to national authorities.

Agreement on Setting Up of a Joint Investigation Team

A joint investigation team is established by the signature of a written agreement between the competent authorities of the concerned states. The work of a JIT may be substantially simplified if the most important arrangements between the parties are regulated in detail in advance. To facilitate the work of the practitioners, various models and templates of the JIT agreement have been developed, the most notable one being the model agreement adopted by the Council of the European Union for the first time in 2003 by the Recommendation,[16] subsequently amended by a Resolution adopted in 2010[17]. The consolidated text of the model agreement on the establishment of a joint investigation team, following the approval of the Council Resolution of 22 December, 2021 on a revised Appendix I[18] is available in all EU languages on Eurojust website and may serve as non-mandatory starting point for the negotiations, as guide encompassing all the elements of importance to be agreed upon before starting joint investigations, such are in particular purpose and duration of the JIT, its composition and leadership, operational action plan and gathering of information and evidence and their exchange. This revised model agreement no longer refers specifically to the 2000 EU MLA Convention or to the 2002 FD on JITs and includes a non-exhaustive list of international agreements enabling the setting up of JITs with non-EU Member States (Guidelines on JITs Involving Third Countries, 2022:7).

In addition, it is worth noting the existence of other templates of the agreement for setting up a JIT such as the model agreement developed by the Council of Europe (Guidelines and model agreement on JIT, Appendix 4, 4) or the bilateral models developed by certain countries. The French Ministry of Justice has for example negotiated and concluded model bilateral agreements based on the EU template with several EU Member States to address in a "standardized manner legal issues with a specific country to facilitate and accelerate the signing of the JIT agreement". The Republic of Serbia is the first non-EU Member State with which France established such a model agreement on the formation of a JIT, by signing a Memorandum of understating between the French Ministry of Justice and the Republic Public Prosecution Office on 6 October, 2016.[19]

16 Council Recommendation of 8 May, 2003 on a model agreement for setting up a Joint Investigation Team (OJ C 121 of 23.05.2003, p.1). The consolidated text of the model agreement on the establishment of a Joint Investigation Team, following the approval of the Council Resolution of 22.12.2021 on a revised Appendix I (OJ C 44, 28.1.2022, p. 1.) 2022/C 44/02.

17 Council Resolution of 26 February, 2010 on a Model Agreement for setting up a Joint Investigation Team (JIT) (OJ C 70 of 19.03.2010)

18 (OJ C 44, 28.1.2022, p. 1.) 2022/C 44/02

19 See more on: *https://www.rts.rs/lat/vesti/drustvo/2478440/srpsko-francuski-istrazni-timovi-u-borbi-protiv-kriminala.html* or *http://www.rjt.gov.rs/sr/aktivnosti/republi%C4%8Cko-javno-tu%C5%BDila%C5%A0tvo-i-ambasada-republike-francuske-organizuju-konferenciju-srpsko-francuske-saradnje-na-temu-borbe-protiv-nedozvoljene-trgovine-oru%C5%BDjem-i-terorizma.*

The issue of the authority competent to conclude the agreement on the formation of a JIT has an important practical bearing on the procedure and time needed for the setting up of a JIT and has to be considered at the earliest possible stage of negotiation. This issue pertains to national legislation (2000 EU MLA Convention, Article 13) which varies in solutions, ranging from the competence attributed to prosecution service (examples of Croatia, the Netherlands, Austria, Slovenia, Romania) to the Minister of Justice (as provided for by the Serbian legislation) (Law on mutual Legal Assistance in Criminal Matters of the RS, Article 96). In France for instance, the Minister of Justice is the authority competent to authorize the setting up of a JIT, while the agreement itself is signed by the prosecutor or investigative judge in charge of the case (depending on the stage of the investigation and the complexity of the case). Bugarski has remarked that although the formation of JITs takes time, the flexibility of this team once established significantly contributes to the speed of the investigation, which rebuts the claim that the time for the formation of the JITs is considered as lost time in the investigation (Bugarski, 2017:471).

Participants of Joint Investigation Teams

Every JIT has a team leader, "representative of the competent authority participating in criminal investigations from the Member State/Party in which the team operates" (Article 13 and Article 20). Article 13 of the 2000 EU MLA Convention and Article 20 of the Second Additional Protocol to CoE Convention do not precise whether the leader should be the public prosecutor, a judge or a police officer, thus leaving the decision up to the national authorities. The practice has shown the preference in appointing representatives of judicial authorities as team leaders.

The team is composed of the "members" and "seconded members."[20] Prosecutors, judges and police officers from the state in which the team operates are referred to as "members", while members from states other than the states in which the team operates are referred to as "seconded members" (2000 EU MLA Convention, Article 13 and Article 20). Seconded members of the joint investigation team may, in accordance with the law of the country in which JIT operates and the JIT agreement, be allowed to be present when operational activities such as searches of premises or hearings are carried out. "Where the JIT needs investigative measures to be taken in one of the Member States, members seconded to the team may request their own competent authorities to take those measures" (Paragraphs 7 and 9 of Article 13, Article 20 of the Second Additional Protocol to CoE MLA Convention). This prerogative conferred to seconded members of a JIT is being labeled by many authors as one of the most innovative and important elements of this cooperation tool. Its purpose is to avoid sending mutual legal assistance requests (even in cases of need for coercive investigative measures such is for instance house search). The relevant measures will be considered in accordance with the conditions that would apply had they been sought in national investigations, which also means, as noted by Conny Rijken, "that a check for ground for refusal will not take place" (Rijken, 2006:103).

It may be envisaged by the agreement on the formation on JIT, "to the extent that the laws of the Member State/Parties concerned or the provisions of any legal instrument applicable between them permit" (2000 EU MLA Convention, Article 13 and Article 20) that persons other than representatives of the competent authorities of the parties to a JIT take part in the activities of the team, primarily in an advisory role. What the drafters had in mind was that additional assistance and expertise could be provided to a joint investigation team by appropriate persons from other states or international organizations (e.g. Europol, Eurojust, OLAF), (Explanatory Report, 2001:16).

20 Pursuant to terminology of Articles 13 of 2000 EU MLA Convention and Article 20 of the Second Additional Protocol to CoE MLA Convention.

The Use of Information Obtained within a JIT

The information lawfully obtained by a JIT may be used for the purposes for which the JIT was set up, for the investigation of other offences (subject to the prior consent of the jurisdiction concerned), for the prevention of an immediate and serious threat to public security, if subsequently a criminal investigation is opened and for other purposes if agreed by the parties setting up the JIT (Article 13(10) of MLA 200 and 20(10) of Second Additional).

Role of Eurojust in JITs

What is Eurojust

Eurojust is the European Union Agency for Criminal Justice Cooperation, "a unique hub based in the Hague, the Netherlands, where national judicial authorities work closely together to fight serious organized cross-border crime."[21] Created in 2002 as the EU Judicial Cooperation Unit operating on the basis of Council Decision 2002/187/JHA, Eurojust has gone through significant strengthening of its role and scope of its action over the years. Eurojust performs its functions on the basis of Article 85 of the Treaty of Lisbon (*OJ C* 306, 2007) and Regulation of the European Parliament and of the Council on the European Union Agency for Criminal Justice Cooperation, replacing and repealing Council Decision 2002/187/JHA adopted on 6 November, 2018 (*OJ L* 295, 2018), which regulates Eurojust mandate, governance structure, data protection regime and the framework for establishing agreements with non-EU countries. Pursuant to the Lisbon Treaty (Article 85), Eurojust mission is "to support and strengthen coordination and cooperation between national investigating and prosecuting authorities in relation to serious crime affecting two or more Member States or requiring a prosecution on common bases, on the basis of operations conducted and information supplied by the Member State' authorities and by Europol". Eurojust works with national authorities to combat a wide range of serious cross-border crimes[22] involving two or more countries, with a principal mission to coordinate their efforts in investigation and prosecution. Each participating EU Member State seconds, in accordance with its own legal system, its National Member a prosecutor, a judge or a representative of a judicial authority with competencies equivalent to those of a prosecutor or judge under national law. The College of Eurojust, which is responsible for the Agency's operational work, is formed by National Members seconded to Eurojust. M. Helmberg has pointed out that "the advantage of this concept is that experts from all Member States work together in the same building, next to each other, so that they can communicate spontaneously and informally without any bureaucratic obstacles" (Helmberg, 2007: 246).

It seems particularly important to note that the coordination of efforts of national authorities includes both the EU Member States and non-EU Member States. Although being an EU Agency with a focus primarily on the EU Member states, Eurojust has developed over the years a wide international network of countries with judicial contact points and the countries with "privileged" relations with Eurojust, having signed cooperation agreements and/or having seconded liaison prosecutors to Eurojust.

"Eurojust evolution has been as rapid and significant as that of JITs" (Da Mota, 2009:88). Pursuant to Eurojust Annual Report for 2022, in one year only "Eurojust contributed to the arrest of more than 4000 suspects, the seizure and/or freezing of criminal assets worth almost EUR 3 billion and the

21 *https://www.eurojust.europa.eu/sites/default/files/assets/2021_09_eurojust_factsheet_practitioners_en.pdf*

22 Please referrer to Article 3 of the Eurojust Regulation in its Annex I for more details on the competence of Eurojust with respect to the forms of serious crime.

seizure of drugs worth almost EUR 12 billion" (Eurojust Annual Report, 2022:11). In 2022, Eurojust provided support in 11,544 cases across 13 categories of serious cross-border crime, ranging from trafficking in human beings and drugs to terrorism and cybercrime (Report 2022:11), which represents 14% increase in caseload compared to the previous year.[23] If we go back only half a decade in time, and compare the number of cases in which support was provided in 2018 – 6,654 and 2017 – 5,608 (Eurojust Annual Report, 2022:12), we may establish that the number of cases supported by Eurojust has increased by over 100% since 2017, evidencing the strengthening of its role and support over time.

Most of the cases Eurojust has dealt with over the years concern the facilitation of judicial cooperation, i.e. assistance when it comes to the execution of requests for judicial cooperation, i.e. European arrest warrant, European investigation orders and mutual legal assistance requests. However, Eurojust is also providing support in relation to complex and sophisticated forms of assistance and cooperation between national authorities, such as in particular coordination meetings, coordination centers, i.e. joint planning of action days and joint investigation teams. As a tool for coordination of investigations and prosecutions led by national authorities in cross-border cases, the coordination meetings are designed to bring together the "prosecutors, investigative judges and law enforcement representatives (…) to share information and agree on the next steps – how to resolve legal and practical issues, what actions to take and which measures to apply"[24]. Held in Eurojust premises in the Hague or via secure video-conference, these meetings of national authorities are facilitated by Eurojust which, besides practical and logistical aspects such as ensuring simultaneous interpretation - enabling for the national authorities to explain subtitle details of their respective cases in their own language – and ensuring the coverage of travel expenses, assist national authorities by providing its expertise in judicial cooperation in criminal matters.. Just for the purpose of illustration, we note that 528 coordination meetings have been organized by Eurojust in 2022 (Eurojust Annual Report, 2022:68). These meetings are very often an opportunity for the involved national authorities to assess the adequacy of a case for joint investigation team, guided by Eurojust know-how and vast experience. Coordination meetings have as well great importance for further functioning of a JIT as they represent an opportunity for enabling regular exchanges between its participants during the entire lifespan of a JIT.

Support of Eurojust to JITs

One of the key roles of Eurojust is providing operational, legal and financial support to joint investigation teams, together with enabling access to the expertise of the JITs Network. Starting from allowing direct contact between involved national authorities, providing the possibility of identification of linked or parallel investigations that would benefit from joint action, through providing guidance on types of cases in which a JIT can be a suitable tool of cooperation and advising on the steps to be taken for the purpose of setting up of a JIT, facilitation of negotiation of a JIT agreements and drawing attention on potential issues to be timely dealt with, Eurojust expertise and assistance have been proven to be of great added value to the use of this instrument of international cooperation.

Various supporting tools developed by JITs Network, Eurojust and Europol are at the disposal of the national authorities, such as in particular JITs Practical Guide, published in 2017 and updated in 2021, as one of the most notable example (Practical Guide, JITs Network, 2021). This guide was developed by the JITs Network in cooperation with the Eurojust, the European Union Agency for Law Enforcement Cooperation (Europol) and the European Anti-Fraud Office (OLAF).

23 In which support was provided in relation to 10,105 cases according to Eurojust Annual Report 2022.

24 Eurojust website: *https://www.eurojust.europa.eu/judicial-cooperation/tasks-and-tools/coordination-meetings*

Participants of a JIT, especially of the JIT benefiting from financial support from Eurojust, are requested to perform an evaluation of a JIT once finalized, with the assistance of an evaluation form developed by the JIT Network. The results of such evaluations are included in the periodic reports published since 2014 by the Secretariat of JITs Network, "summarizing the practical findings, lessons learned and best practices form the JIT evaluation project" (Riehle, 2023, 164). The most recent, Fourth evaluation report, was published in June 2023 and is available at the Eurojust website.[25]

"Financial support provided by Eurojust and/or other EU agencies to JITs is another important benefit to national authorities, reducing the impact on national budgets of costs incurred due to the transnational dimension of cross-border cooperation" (Supporting judicial authorities in the JITs, 2020:2). Eurojust funding is available upon request and according to specific funding scheme.[26] Eurojust assists national authorities in reimbursing the costs of travel and accommodation of a JIT participants, interpretation and translation, transfer of items[27]and specialized expertise costs. In addition, in an attempt to provide support to national authorities in enabling secure communications among JIT participants, a loan of IT equipment is possible to national authorities or financial grants to enable JITs to purchase their own low-value equipment (such as hardware or software) for use within the JIT operational activities, facilitating significantly the exchange of information between a JIT members and increasing the security of the communication.

As the answer to the challenge of ensuring secure electronic exchange of information and evidence and secure electronic communication with other JIT members and JIT participants such as Eurojust, Europol and OLAF, on 1 December, 2021, the European Commission adopted a new initiative[28] establishing a collaboration platform to support the functioning of JITs, with the aim of "increasing the efficiency and effectiveness of investigations and prosecutions carried out via JITs in cross-border cases, by facilitating communication and collaboration among JIT parties through a dedicated digital tool". The Regulation (EU) 2023/969, establishing a collaboration platform to support the functioning of Joint Investigation Teams and introducing amendments to Regulation (EU) 2018/1726, was adopted on 10 May, 2023 (Regulation (EU) 2023/969, 1-20), establishing a voluntary dedicated IT collaboration platform to facilitate the cooperation of competent authorities participating in JITs established on the basis of the EU frameworks and to increase further the security of the exchanges of information and communication between a JIT members and participants. The platform is currently developed by the EU Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (EU-LISA) and it is expected to be operational no later than 7 December, 2025.

Statistical information of the JITs supported by Eurojust demonstrates a clear increase of the use of this advanced cooperation tool among EU Member States and consequential increase of Eurojust support contributing to successful results in a wide range of cases, including priority crime areas as defined by the Council of the European Union, such as terrorism, cybercrime, migrant smuggling, drug trafficking and trafficking in human beings. In 2021, Eurojust supported financially and operationally 254 JITs, representing an increase of more than 200% compared with 2015. Pursuant to the Eurojust Annual Report for 2022, a slight but certain increase in the number of supported JITs was noted in 2022 (265).

25 Available at: *https://www.eurojust.europa.eu/publication/fourth-jits-evaluation-report*

26 For more information please refer to the Eurojust website: *https://www.eurojust.europa.eu/judicial-cooperation/instruments/joint-investigation-teams/jits-funding*

27 Such as procedural documents, evidence or items seized during a JIT operations.

28 For more information please see: *https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/digitalisation-justice/joint-investigation-teams-jits-collaboration-platform_en*

Support of Eurojust to JITs with Non-EU Member States

Although Eurojust is an EU Agency and its assistance is primarily oriented towards the EU Member States, non-EU Member States may benefit from its expertise and support under certain conditions. Besides the network of judicial contact points, to date in 60 non-EU Member States[29] devoted to strengthening and facilitating cooperation between judicial authorities, 13 countries signed a cooperation agreement with Eurojust[30] enabling the participation of the non-EU countries in the work of Eurojust and their access to the practical operation tools offered by Eurojust. Ten[31] out of these thirteen countries have seconded the liaison prosecutors to Eurojust headquarters, possibility envisaged under the Cooperation Agreement, enabling more direct contact and cooperation between practitioners.

As it was acknowledged in the Third JIT Evaluation Report published by the JITs Network in 2020, "JITs are increasingly seen as a valuable tool of judicial cooperation with third states" (Third JIT Evaluation Report, 2020:4). Coordination meetings attended as well by the practitioners of the non-EU countries with links to a particular case have been recognized as a "valuable platform to deliberate on the suitability of a case to set up a JIT, to draft the JIT agreement and decide on the operational way forward" (Third JIT Evaluation Report, 2020:4). A significant increase of newly established JITs involving non-EU Member States supported by Eurojust may be noted, rising from 3 in 2016 to 21 in 2019, 36 in 2020 and 32 in 2021 (Guidelines on JITs Involving Third Countries, 2022, 37). To respond to the increased interest and to facilitate further the work of the practitioners, new support material was developed, to address specific issues raised in the framework of cooperation between the EU and non-EU Members States within a JIT, with particular emphasis on Guidelines on Joint Investigation Teams Involving Third Countries prepared by JITs Network and Eurojust and published on Eurojust website on 17 June, 2022 (Guidelines, 2022) and Checklist for Practitioners on Joint Investigation Teams Involving Third Countries published on the same day (Guidelines on JITs Involving Third Countries, 2022).

The legal basis for setting up a JIT between countries that are not members of the EU and between the EU and non-EU Member States depends on the partners of a particular JIT and may include Article 20 of the Second Additional Protocol to CoE MLA Convention, Article 19 of the UNTOC or a number of other international multilateral and bilateral treaties, with the possibility to combine the legal bases in a multilateral JIT in case not all the participants to JIT are parties to the same international instrument used as a legal basis for setting up of a JIT.

The flexibility of a JIT as a tool of international cooperation enables its adaptation to the needs of practitioners and allows to respond to varied legal frameworks, differences in requirements of national legislation and the needs of the specific case to adequately perform its functions.

Cooperation Between Eurojust and Serbia

After a long-lasting successful cooperation between the Republic of Serbia and Eurojust that was ongoing through contact points in the Ministry of Justice of the Republic of Serbia and the Republic

29 For more information, please refer to the Eurojust website: *https://www.eurojust.europa.eu/states-and-partners/third-countries/contact-point-network*

30 Albania, Georgia, Iceland, Liechtenstein, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Ukraine, the United Kingdom and the United States.

31 Albania, Georgia, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Ukraine, the United Kingdom and the United States.

Public Prosecution Office, the Republic of Serbia signed the Agreement on Cooperation with Eurojust on 12 November, 2019.[32]

As stated in the preamble of this agreement, it established a basis for facilitation of the coordination of investigations and prosecutions covering the territory of Serbia and one or more Member States of the European Union, and has as a purpose "to enhance the cooperation between Eurojust and Serbia in combating serious crime, particularly organized crime and terrorism" (Agreement on cooperation between Eurojust and Serbia, Article 2), which is of particular importance for the negotiations between the Republic of Serbia and the European Union, within Chapter 24: Justice, Freedom and Security (Report on the work of public prosecutor's offices for 2020, 145).

The Cooperation Agreement regulates the scope of the cooperation (Agreement on cooperation between Eurojust and Serbia, Article 3) and confers the competency for the execution of this Cooperation Agreement to the Republic Public Prosecutor's Office of the Republic of Serbia for Serbia and to the National Members concerned and the Eurojust College within Eurojust (Article 4). Based on the Cooperation Agreement (Article 5), with the purpose of strengthening and facilitating cooperation, Serbia seconded a Liaison Prosecutor to Eurojust. The office of the Liaison Prosecutor was opened in Eurojust premises in the Hague in March 2020 (Eurojust – Annual Report 2022).

The results of the cooperation between Serbia and Eurojust qualified Serbia among the top three non-EU Member States with the highest casework load in 2020 (Eurojust – Annual Report 2020: 27). In 2022 only, according to the Eurojust Annual Report, Serbia participated in 181 cases, 22 coordination meetings, and one action day. Providing assistance in forwarding, monitoring of the execution and informing the requesting state of the status of execution of the request for mutual legal assistance was the dominant of assistance provided by the Office of the Liaison Prosecutor in 2022, (Report on the work of public prosecutor's offices for 2022, 132) and in previous years, but the number of coordination meetings within Eurojust attended by Serbia has been significantly increasing over time.

More particularly with regard to joint investigation teams, it is worth noting that Serbia has so far acquired certain experience in the use of this advanced cooperation tool. In the previous year only, Serbia participated in four joint investigation teams enjoying the support of Eurojust (Report for 2022, 132), while in 2021 Serbia took part in three such joint investigation teams, the same as in 2020 (Report for 2021, 146), some of which yielded significant results, such as joint investigation team with Spain leading to dismantling large scale drug trafficking network and arrest of 43 members of a Serbian organized criminal group for their involvement in the production and distribution of marijuana and hashish, mainly destined for sale in Germany (Eurojust, July 22, 2021)[33] or a joint investigation team enabling the authorities in Austria, Bulgaria, Germany and Serbia to successfully carry out operations against two organized criminal groups suspected of large-scale investment fraud in cyber-trading (Eurojust, April 7, 2020). [34]

32 *https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/mu/skupstina/zakon/2019/14/1. https://www.eurojust.europa.eu/sites/default/files/InternationalAgreements/Eurojust-Serbia-2019-11-12_EN.pdf*

33 For more information please refer to: Eurojust coordinates dismantling of Serbian marijuana trafficking network operating from Spain. (2021, July 22). *Eurojust.* Accessed on August 25, 2023. https://www.eurojust.europa.eu/news/eurojust-coordinates-dismantling-serbian-marijuana-trafficking-network-operating-spain

34 See more in: Action against large-scale investment fraud in several countries. (2020, April 7). *Eurojust*, Accessed on August 25, 2023. https://www.eurojust.europa.eu/news/action-against-large-scale-investment-fraud-several-countries

Conclusion

JITs were envisaged as an innovative and very advanced tool of international cooperation in criminal matters. Their use was expected to produce important results in strengthening international cooperation in the fight against serious cross-border crime. More than two decades have lapsed since this tool was introduced by virtue of the EU law and Council of Europe treaties. In these two decades, many success stories have taken place, and this instrument has been increasingly used by law enforcement officials and prosecutors in the investigation of serious cross-border crime.

It has been noted that according to available statistical information, in 2022 Eurojust provided its support to 265 JITs. Underlining that this statistics provides only a partial illustration of the overall use of its instrument as it encompasses only the JITs supported by Eurojust, we must note that what remains under the radar of statistics are the best practices developed in response to various challenges by the practitioners supported by the expertise of Eurojust, Europol and JITs Network. What escapes to quantification is the value of experiences exchanged between judicial and law enforcement authorities in view of resolving various issues encountered during joint investigations, caused by the great variety of contemporary forms of crime and complexities resulting from differences between national systems. What the overall number of joint investigation teams formed in twenty years of the existence of this tool, even if known, would not tell us is the widespread of the network the practitioners created as the outcome of joint actions and the extent to which mutual trust has been developed over the years between the practitioners that have had the opportunity to be a part of a joint investigation team and to work united in a common goal to jointly fight against trans-border crime.

Over the years, the JITs Network, Eurojust and Europol have developed a great amount of material containing extremely useful guidance to the competent national authorities in relation to both setting up of a JIT and participating in one. Diverse types of support have been put in place in particular by Eurojust, "to encourage and enable setting up of JITs in a swift, efficient and effective manner" (Da Mota, 2009:88) and to assist the national authorities in practically every step of such process, starting from the noticing an actual opportunity to put this very advanced tool of cooperation into work.

Raising awareness of the national authorities in charge of investigation and prosecution, not only with respect to the existence of this innovative tool of cooperation that would enable them to join forces in the fight against cross-border crime, but also with respect to a great variety of useful material and guidelines and a vast array of available expertise and support throughout the lifetime of a JIT, might greatly contribute to even more efficient and effective use of joint investigation teams by the competent national authorities and lead to an even greater number success stories.

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HIGH PROSECUTORIAL COUNCIL AND JUDICIAL REFORM

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Reform of the Serbian Constitutional and Legislative Framework Regarding Judiciary

The reform of the public prosecution system in the Republic of Serbia, which formally began with the amendment of the Constitution through the adoption of constitutional amendments, is the result of long-term efforts of the scholarly and expert-like public, as well as the holders of public prosecutors and judicial functions themselves, to bring the legal framework into harmony with European values that guarantee better realization of the ideal of the independence of the judiciary and the autonomous status of the public prosecution. The specificity of the situation in this domain in Serbia is the obvious discrepancy between the proclaimed constitutional principles and the way of their realization. "For the realistic realization of the independence of the judiciary, it is far more important whether the principles guaranteed by the Constitution are operationalized with appropriate institutional guarantees" (Simović, 2014: 162). The Serbian Constitution of 2006 proclaims in its very first article: "The Republic of Serbia is a state of Serbian people and all citizens who live in it, based on the rule of law and social justice, principles of civil democracy, human and minority rights and freedoms, and commitment to European principles and values." The Republic of Serbia is hence committed, by the letter of its Constitution, to European principles and values – "European identity is legally rooted in the core of the modern Serbian constitutionality, even though Serbia is not an EU member state" (Petrov & Đorđević, 2022: 137-138).

The pursuit for constitutional reform in the domain of judiciary did not however solely have for its goal to prove the adherence to European legal standards. In other words, since the joining to the EU is officially considered to be the political strategy of the country (and Serbia was given the EU candidate status), implementation of European standards is to be expected from the political standpoint. Changes in the judicial domain, and especially when public prosecution is in question, were needed for the sake of Serbian citizens, buildup of legal culture and safety and further developing of rule of law.

The provisions of the Serbian 2006 Constitution were criticized by the European Commission for Democracy through Law (Venice Commission) right after the enacting of the Constitution. In its opinion the Venice Commission stated that the provisions on the public prosecutors contain solutions that "create a risk of unduly politicizing the appointment process", as well as room for "political interference in prosecutions" which it had found to be "disturbing" (Venice Commission, CDL-AD-2007-004-e). In its final remarks, the Opinion states: "The National Assembly elects, directly or indirectly, all members of the High Judicial Council proposing judges for appointment and in addition elects the judges. Combined with the general reappointment of all judges following the entry into force of the Constitution provided for in the Constitutional Law on Implementation of the Constitution, this cre-

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ates a real threat of a control of the judicial system by political parties". All of this can be applied to the State Prosecutors' Council, because this state body, envisaged as the protector of public prosecutors' autonomous status, "closely followed the model of the High Judicial Council" (Venice Commission, CDL-AD(2007)004-e). The Venice Commission concludes that "the respective provisions of the Constitution will have to be amended" (Đorđević & Stanić, 2023: 6).

Apart from being criticized by the Venice Commission (which is one of the greatest authorities for constitutional law issues in the Western legal culture), the position and functioning of the judiciary and especially public prosecution was put under scrutiny by Serbian scholars and practitioners. A group of eminent Serbian professors and constitutional law scholars conclude in their thorough analysis of the Constitution that it "contains weaknesses that endanger the judicial independence, which presents one of the fundamental principles of the rule of law" (Pejić *et al.,* 2017).

Before any serious consideration of legal framework changes, during 2008 and 2009 the so-called "judicial reform" took place, essentially with only one goal: to dismiss all and (re)elect judges and deputy public prosecutors in Serbia. This questionably constitutional action caused the odium of the holders of judicial offices, whose status did not correspond to the nature and significance of their profession. Not only did the constitutional and corresponding legal frameworks not provide satisfactory guarantees for the independence of the judiciary, but such a "reform" practically rendered meaningless the proclaimed permanence of the holders of judicial functions (Đorđević & Stanić, 2023: 7).

Additionally, just a few years after the enacting of the Constitution, the new Code on Criminal Procedure came into power with the aim to introduce accusatorial instead of inquisitorial criminal prosecution system (much like an American one). This tectonic shift was not followed by the adequate changes in the public prosecutor's office system, leading to the strange mixture of legal traditions, incompatible but all in force at the same time. The situation was described in literature as: an American criminal procedure with the Soviet public prosecution: "The writers of the (Criminal Procedure) Code did not take into account that the independence of the prosecution is vitally threatened by the constitutional decision according to which public prosecutors are elected by the National Assembly on the proposal of the Government, as well as by the fact that the members of the State Council of Prosecutors are elected by the National Assembly. So, we are witnessing a completely contradictory process. On the one hand, the prosecution is subordinated to the executive power by the Constitution, and on the other hand, the powers of an independent judicial body, the investigating judge, are transferred to the prosecution in criminal proceedings. This, we are convinced, also calls into question the objectivity of the criminal procedure, especially the investigation in which the prosecutor occupies a central place. In addition to not taking into account the constitutional position of the public prosecutor's office, the creators of the Code did not take into account the fact that the prosecutor's office is organized according to the traditional model, with excessive centralism and a practically unrestrained hierarchy, which to a large extent makes it impossible to adapt to the new procedural role and reduces its ability to fully respond to the tasks that are set before it" (Ilić, 2012: 133-134).

It was obvious that changes have to be introduced, but because of either lack of political or scholarly consensus all the attempts were not to progress pass the starting point. The only time when it seemed that a certain significant effort was given was in 2018, though, as the time will tell, in vein. The 2018 Draft of the Constitutional Amendments was heavily criticized by the vast majority of the scholarly and expert-like public. It was not uncommon to state that it would present even a step backwards from the already unsatisfactory position of the Serbian judiciary. Various aspects of the proposed Draft were seen as problematic from the standpoint of striving towards depoliticization, and especially the position and role of the judicial councils (Beljanski, 2019: 59-61). After much deliberation in scholarly

circles, the Draft was abandoned (but it will however serve as a reference point a couple of years later– for the most part on ways how *not* to resolve particular issues which were troubling holders of judicial functions at the time).

The "critical mass" of political will and scholarly consensus was finally reached in 2020. The Proposal for the constitutional revision in the domain of judiciary that was placed before the National Assembly embodied much of the critical approach expressed by the judicial function holders and scholarly circles. The Proposal was adopted with the 2/3 majority of all MPs, and the Working group was created with the single task – to draft the Constitutional Amendments in the domain of judiciary. This time, the process was transparent. The Working group did include political representatives, but the large majority of members were professors and research fellows (doctors of Constitutional law), judges, public prosecutors, representatives of professional associations. After months of intensive work on the Draft, series of public hearings were organized with the intention to seek for constructive criticism, new insights and opinions. Regular consultations with the experts from the Venice Commission also took place.

In late 2021 the Draft of the Constitutional Amendments was completed and it was welcomed by the Venice Commission (and got mostly very favorable comments in its Opinion CDL-AD-2021-032). The National Assembly of Serbia adopted the proposed Amendments (with the very high 2/3 majority of all MPs) and the only thing left was, according to the Constitutional provisions on its own revision, to place the Amendments in front of the voters, who had to support the changes (with simple majority) in order for Constitutional changes to come into life.

The Constitution of 2006 had foreseen the presented changes in the domain of judiciary as one of those for which the referendum is obligatory (Art. 203). This solution is, as the situation will show, questionable to say the least. The voters, "ordinary" citizens, were placed into uncomfortable situation to have to decide upon matters that were far beyond their capabilities. It was not because of some general lack of education or access to relevant information, but for the mere fact that the Amendments had to do with something highly legally specialized – judiciary. Even for some lawyers the issues and dilemmas at hand were complicated since they were not dealing with such constitutional law topics in their professional lives. But to expect from engineers, doctors, merchants, workers, artists, IT specialists and all the other people of various occupations to differentiate between sophisticated differences, such as e.g. "independence" and "autonomous status" of public prosecutor's office[2], pros and cons of newly introduced system for the election of judicial function holders, or means for weakening the hierarchy of the public prosecutors' system – was illusionary. Voters were therefore vulnerable for effects of negative campaigns that could (and for a significant part – did) use completely false arguments in order for referendum to fail (hence gaining political points on the fact that the government failed in a

2 Some of the most famous scholars tend to define public prosecutor's office as a "quasi-court power": "In the organizational sense, the Public Prosecutor's Office is a separate, autonomous state body, while in the functional sense, it is the bearer of special powers related to the exercise of judicial (CS) power" (Marković, 2014: 528-529). There is no doubt that by the nature and function of PP it stands close to courts. However, from the constitutional law and the tripartite division of power point of view, PP undoubtedly has to belong to the executive power, with the special, highly autonomous status. Because of all the aforementioned reasons, it cannot be a part of CS power – it does not decide on the law dispute, but enforces laws, like the executive power. "The Public Prosecutor's Office is not part of the judiciary (CS), but it is part of the judicial system in a broader sense. Given their function in the field of criminal justice, public prosecutors are required to act objectively and impartially, like judges." Finally, PP surely cannot be regarded as a part of the legislative branch of government, hence, within the tripartite division, leaving only the third one – the executive power. "What was once combined in the inquisitorial procedure now stays strictly separated - accusation, defense and trial. The prosecutor is allowed to bring the accusation (*thesis*), the accused opposes the defense (*antithesis*), and the court makes a final decision (*synthesis*)." (Škulić & Bugarski, 2015: 93) Consequently, the prevailing opinion in Serbian literature states that "the public prosecution cannot enjoy the independence of the same nature and quality as courts, among other things, due to the fact that courts present a separate state power, while the public prosecution does not."(Petrov, 2022: 253) Public prosecution is therefore considered to be "autonomous" but not "independent".

way as well). The matter of the utmost significance for future development was left to political interpretations and various misconceptions.

However, in spite of all the difficulties, the referendum was a success. With the turnout of approximately one third of all voters, out of which circa 2/3 were in favor of the proposed Amendments, constitutional changes have passed this "test of the sovereign people" and came into force on February 9th 2022.

Constitutional Amendments introduced a list of novelties in the Serbian constitutional system when it comes to judiciary, including: changing the way judicial office holders are appointed, fundamental reform of the way the judicial councils work (whose jurisdiction has now been significantly expanded), abolishing the monocratic system of public prosecution, strengthening the constitutional guarantees of the independence of the judiciary and the autonomy of the public prosecution, systematically reducing the possibility of the politicization of the judiciary, strengthening the integrity and individual responsibility of public prosecutors guaranteeing the permanence of the judge's office (the abolition of trial terms with constitutionally prescribed reasons for early termination of office); judges, the president of the Supreme Court (instead of the former "Supreme Court of Cassation") and the presidents of courts are now appointed by the High Judicial Council; the role of public prosecution is now performed by the Supreme Public Prosecutor, Chief Public Prosecutors and Public Prosecutors (deputies have been abolished); the Supreme Public Prosecutor is still elected by the Parliament, but the Chief Public Prosecutors and Public Prosecutors are now appointed by the High Prosecutorial Council; it is stipulated that a lower chief public prosecutor or a public prosecutor who considers that a mandatory instruction (received by a higher prosecutor) is illegal or unfounded has the right to object; the composition of the judicial councils was rearranged in such a way that now in both councils (of 11 members each), the majority is made up of representatives of the profession, i.e. six judges elected by their peers and the president of the Supreme Court in the High Judicial Council and five public prosecutors elected by the public prosecutors and the Supreme Public Prosecutor in the case of High Prosecutorial Council, while maintaining the legitimacy of sovereign citizens through the participation of four members each appointed by the National Assembly from among the ranks of prominent lawyers (Đorđević & Stanić, 2023: 10).

All the solutions that the Constitutional Amendments introduced were further regulated in more detail by the set of new judicial laws: Law on Judges, Law on Organization of Courts, Law on the High Judicial[3] Council, Law on the Public Prosecutor's Office and Law on the High Prosecutorial Council.

Introduction of the New High Prosecutorial Council

One of the major "culprits" for such an extensive criticism of the original solutions (envisaged by the Constitution of 2006) on judiciary was the regulation of the "State Council of Prosecutors" – an organ that is to be constitutionally fundamentally reshaped, as well as renamed with the adoption of Constitutional Amendments into "the High Prosecutorial Council". In order to fully understand the position and the role of the State Council of Prosecutors, one has to bear in mind the structure of the prosecutorial system before the Constitutional Amendments. It was a true representative of the monocratic model – with the Republican public prosecutor on the top of the hierarchy, with numerous

3 Here the use of the term "judicial" refers solely to courts and the court system. There is a particular terminological mix-up when translating Serbian technical, legal terms to English. In Serbian, the term "pravosuđe" refers both to public prosecutor's office and the court system and is usually translated as judiciary. The problem emerges since the same word "judiciary" is also being used to denote the court system/courts alone – "sudstvo". Hence, when needed, this difference is specially underlined in the paper in order to avoid confusion. If not otherwise suggested, the term "judiciary" is here used as a cover term for both public prosecutor's office and courts/ court system.

competences to direct and control the whole system of public prosecution. Each public prosecutor's office had a public prosecutor who was in charge while all the others in that particular office were his deputies. Higher prosecutor's office had an authority over the lower ones, with the Republican public prosecutor standing on the very top of the hierarchical pyramid. The responsibility laid for the most part on the behalf of public prosecutors, while all the deputies could "hide" behind his or her authority. The other side of the coin was the fact that such a strong hierarchical structure could not provide the necessary space for alternative opinion and clear distinguishing of responsibility. If one also takes into consideration that all the deputies were firstly to be elected for only three years' term, and then they could apply and be elected (again) – this time for a permanent tenure, it is easy to see why such a system caused dissatisfaction among many deputies, as well as why it was difficult to achieve coherency and transparency. Hierarchical powers of the higher-ups were not followed by the effective legal remedies that could balance out all the possible problems and disagreements in practice. The State Council of Prosecutors had a role in the election of the function holders, but the National Assembly was present both in the process of the deputy public prosecutors' election, as well as in the election of the very members of the State Council of Prosecutors. This caused major concerns for the possible politicization of the process that should remain strictly professional and impartial as much as possible.

The powers and competences of the State Council of Prosecutors were set in the constitutional text: "The State Council of Prosecutors proposes to the National Assembly candidates for the election of deputy public prosecutors, elects deputy public prosecutors for the permanent tenure of the function of deputy public prosecutor, elects deputy public prosecutors who are on a permanent position as deputy public prosecutors in another public prosecutor's office, decides in the procedure for the termination of the deputy public prosecutor's office of public prosecutors, in the manner provided for by the Constitution and the law and performs other tasks specified by law" (Art. 165, subsequently amended). It is obvious that *de facto* and even *de jure* in a way, the State Council of Prosecutors was not potent enough to be considered recognized as an effective protector of the public prosecutor's office autonomous status and operational independence. The structure of the State Council (the Republic Public Prosecutor, the Minister of Justice and the President of the authorized committee of the National Assembly as *ex officio* members and eight electoral members, out of which six prosecutors and two prominent lawyers elected by the National Assembly) was also not adequate mostly because of the fact that all its members were either elected by the parliament (that serves to represent *political* opinion of the sovereign people[4]), or were political by their nature (Minister of Justice and the President of the authorized committee of the National Assembly).

Constitutional Amendments and subsequent legislative reform in the domain of judiciary changed the structure and role of the prosecutorial council significantly. The new High Prosecutorial Council is to be considered as a legal successor of the State Council of Prosecutors, but essentially has far greater competences and substantially different composition. The High Prosecutorial Council is foreseen as "an autonomous state body that shall guarantee the autonomy of the public prosecutors' offices, the Supreme Public Prosecutor, Chief Public Prosecutors and public prosecutors" (Art 162, Para. 1).

By the letter of the Constitutional Amendments, the High Prosecutorial Council "shall propose to the National Assembly the election and dismissal of the Supreme Public Prosecutor, elect acting Supreme public prosecutor, Chief Public Prosecutors and public prosecutors and decide on the cessation of their term of office and on other issues concerning the status of the Supreme public prosecutor, Chief Public Prosecutors and public prosecutors and performs other duties within its remit of jurisdiction

4 "The basic function of the parliament as a body of political representation is that which is assumed, so sometimes it is not explicitly mentioned, and it is certainly a representative function - representing the people, basically, the political opinion of the citizens in order to achieve the ideal of semi-direct democracy" (Đorđević, 2021: 90).

defined by the Constitution and law" (Art 162, Para. 2). Those "other duties" are significant in scope, as well as impact on the overall system of the public prosecution. For instance, the High Prosecutorial Council has a decisive role in the creation of the budget for the whole public prosecution system in Serbia. On the other hand, it serves to protect the integrity of the individual function holders.

The judicial reform had for one of its goal the quite clear intent to systemically and deliberately weaken the hierarchical structure of the public prosecution system, in order to empower individual function holders, as well as strengthen the overall accountability and allow transparency. After the adoptions of Amendments, there are no more deputies – each and every one of them became public prosecutor, while the former public prosecutors came to be chief public prosecutors. This change bears much more than sole terminological importance (which is present as well, since the term "deputy" was considered to be somewhat derogatory or at least diminishing in the light of the importance of everyday tasks that these people are facing). Abolition of deputies meant that the public prosecutors were responsible themselves. Permanent tenure of a Public Prosecutor is now absolute – there is no probationary period and reelection anymore. Additionally, more effective remedies against hierarchical powers were introduced – a complaint of a person to whom a mandatory instruction was issued. This remedy may be used if there is concern that the instruction is either unlawful or simply ill-founded, and the competence to resolve the dispute is given to the High Prosecutorial Council (to be more precise: to the special prosecutorial Commission that is being elected by the High Prosecutorial Council and operates within it), and not the same hierarchy that was disputed, as was the case before the reform.

The second aspect of striving towards integrity strengthening reveals itself in the new composition of the High Prosecutorial Council and the way how its members are elected. There are still 11 members of the Council: two *ex officio* members (Minister of Justice and the Supreme Public Prosecutor – formerly the Republican Public Prosecutor), five public prosecutors elected by their fellow public prosecutors (not by the National Assembly anymore) and four prominent lawyers, elected by the 2/3 majority of all the MPs in the parliament.[5] The idea behind such composition of the Council is to find the balance between two goals – decisive participation of practitioners (public prosecutors) in the matters of their greatest importance, as well as avoiding possible "corporatism", alienation of the High Prosecutorial Council from the sovereign people.

No state power elects itself; hence the indirect legitimacy of the people through prominent lawyers elected by their political representatives in the parliament serves to provide counter-weight and balance. In order to "prevent the pendulum from going too far to the other side" certain requirement for the candidates for prominent lawyers were introduced. Apart from obvious conditions of expertise and relevant work experience, no candidate is allowed to be a member of any political party or be in the position to fundamentally influence making of party-political decisions (e.g. through non-partisan participation in political party councils, different activities and working bodies, etc.). Prominent lawyers who were to be elected members of the Council should be persons impartial and neutral as much as possible from the partisan politics standpoint. "The President of the authorized committee of the National Assembly" is no more *ex officio* member of the Council, but the Minister of Justice remained (though with somewhat limited competences in comparison to other members), since the

5 Since this majority is very high, an anti-deadlock mechanism was introduced as well. If the National Assembly is incapable to reach a consensus on the future members of the High Prosecutorial Council, a special Commission consisting of the President of the National Assembly, the Supreme Public Prosecutor, the President of the Supreme Court, the President of the Constitutional Court and Ombudsman is to elect the member of the Council out of all the candidates who passed the administrative requirements of the parliamentary competition. The idea was to "push" the political elites into making healthy compromise, rather than allowing the National Assembly to basically lose its competence over such an important issue. The first election for both the Judicial and Prosecutorial councils that took place in May 2023 ended however with the inevitable use of this anti-deadlock mechanism, since the parliament managed to elect only one out of eight required prominent lawyers for both prosecutorial and judicial councils. It is reasonable to expect this practice to change in future.

public prosecutor's office does not present a separate, independent branch of government, like judiciary (court) does. Even if it did not become formally independent, public prosecutor's office autonomous status became protected better than ever before.

Important aspect for the proper operation of the High Prosecutorial Council had to do with the procedure for decision making. Specific "breach" between circles of public prosecutors and prominent lawyers was desirable in order to create a sort of "melting pot", and the most effective means to achieve such a goal was to introduce a high required majority for decision making (8 out of 11) that would strongly discourage corporatism. Such a melting pot does not serve solely to avoid alienation or politicization of the Council, but more importantly to initiate a strong cooperation between legal experts of somewhat different professional backgrounds, because the very nature of the Council's competences requires pure practitioners, as well as a bit wider legal considerations at the same time. The required majority for decision making did not find its place in the Constitutional Amendments, but was subsequently introduced with the adoption of the Law on the High Prosecutorial Council.

First Steps and Challenges

The envisaged regulation of the new High Prosecutorial Council came to life with the election of the prominent lawyers on May 10th, 2023, when the Council was constituted and the application of the new public prosecutorial laws started. The decision making system served as predicted to encourage cooperation between public prosecutors and prominent lawyers within the Council. The process of judicial reform was however not yet over. All the constitutional and legislative novelties had to be regulated in detail by the long list of bylaws, out of which only a couple have been completed in the time of writing of this paper (though including most important of them all: the Rulebook on the operation of the High Prosecutorial Council), and all the other ones will have to be adopted before May 2024, within the deadline that relevant laws have set.

The transfer of many important competences from the National Assembly to the Council, such as full election authority, leaves the new High Prosecutorial Council with a list of challenges. There is literary no previous practice when it comes e.g. to issues relating to the election procedure and legal remedies before the Constitutional court, hence setting well founded basis for future practice is of the utmost importance. In the first months of the Council's operation some (at first glance) trivial problems burdened its members, like being seriously understaffed for all the new competences. At the same time, employment of new personnel for the Administrative office (that serves to provide assistance and logistics to the Council's members) proved to be difficult because of inadequate spatial capacities at the moment.

Still, the new High Prosecutorial Council has started to make noticeable steps forwards towards goals envisaged by the constitutional and legislative reform. For the first time in Serbian history, public prosecutors were elected to permanent tenure by the High Prosecutorial Council, significant efforts were made to ensure transparency of work, hence all the Council's sessions are now open to the public and there is live video stream, as well as possibility to access and watch all the previously held sessions via the internet. Such openness was not introduced only to serve the justifiable interest of the sovereign citizens, but also to "demystify" the operation of the Council, as well as support the integrity and responsibility of the Council's members.

Furthermore, the inclusion of all the relevant factors in the normative work of the Council (similarly to the way how Constitutional Amendments and the set of judicial laws were written) is continued. All the working groups that prepare the drafts of various bylaws for the Council's operation have repre-

sentatives of professional associations and civil society organizations, either in the capacity of working group's members or at least observers. The High Prosecutorial Council has started its mandate with a series of meetings with different stakeholders, starting from Serbian public prosecutors and professional associations, up to the highest EU Commission and Council of Europe representatives in Serbia. All of this serves as a part of an effort to continue with the maybe most important, but equally difficult process of any constitutional and systemic reform – its proper application in practice, for the sake of public prosecution system in Serbia, as well as all its citizens.

Conclusion

After the adoption of the Serbian Constitution of 2006 it was clear from the start that the parts on judiciary are not regulated in the satisfactory manner[6], neither for the sake of achieving the constitutionally proclaimed goal of adherence to European values, nor more importantly for the sake of judicial function holders, independent court system and autonomous public prosecution office. After almost fifteen years a long awaited constitutional and legislative revision came to life, bearing significant novelties, including the new High Prosecutorial Council with much broader competences in comparison to its predecessor. The shaping of the High Prosecutorial Council is in its final stages from the normative perspective, but the equally or even more important part of implementation still lies ahead. According to the present constitutional and legislative solutions it seems that the solid base for future development in the desired direction is set. If the envisaged solutions are to fully come to life in practice still remains to be seen.

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6 These are not the only parts where the Constitution of 2006 is seriously lacking. "The nomotechnical problems of the Serbian Constitution are numerous and range from flagrant, substantive errors, through numerous examples of bad style and systematics, to individual terminological errors. Several examples of omissions and mistakes are already becoming commonplace in doctrinal analyses, and since this Constitution has never been changed since its adoption, the mentioned weaknesses are either simply ignored, or the Constitutional Court tries to alleviate them in some ways with its interpretations by making decisions that actually prevent harmful the effect that would occur as a result of their literal application" (Đorđević, 2020: 155).

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CRIMINALITY AND ADDICTION

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Purpose

One of the features of modern criminal law is undoubtedly the fact that the perpetrators of various crimes, mostly those against life, body, and property, are persons who are addicted to alcohol or psychoactive substances. The problem of criminality and addiction does not lose its topicality over years; on the contrary, it increasingly attracts the attention of various scientific disciplines aiming to find an adequate solution to eliminate the cause of illegal behavior - addiction. Therefore, the author points to this consistent problem in modern criminal law, with an analysis of criminal law provisions in this area in the law of the Republic of Serbia, as well as judicial practice. Special attention has been given to international standards in this area and the way in which this problem is solved in comparative law, and the practice of the so-called *therapeutic courts* in predominantly Anglo-Saxon criminal justice systems where the solution is found in less formal procedures with the application of non-custodial sanctions and measures and in a multidisciplinary approach. The aim of the paper is to point out the importance of this universal problem in modern criminal law, and that the existing domestic legal solutions and court practice in the case of criminal acts committed due to alcohol or drug addiction can undoubtedly be enriched and improved with a modern judicial concept, which does not prioritize punishment but the application of various alternative measures with the primary goal of rehabilitating the offender.

Design/Methods/Approach

Using the appropriate scientific methods for legal analysis (methods of formal logic, system analysis, the comparative method, as well as the normative method), in the following first chapter the author identifies and interprets the provisions in the domestic law related to the problem of addiction in criminal law and judicial practice in this area. The second chapter deals with international standards and successful comparative practice regarding the addicts who are perpetrators of criminal acts. The section on findings presents *de lege ferenda* solutions for criminal acts committed due to alcohol or drug abuse in accordance with international standards and modern comparative practice in this area. And, in the end, the last part about the originality/value of the paper consists of the review of the contribution to the elaboration of this problem from the criminal law and criminological aspects and of the improvement of the practice of courts, prosecutors, lawyers, and the police in this area.

Domestic Law and Judicial Practice

What does the domestic legislator say when it comes to criminal acts committed as a result of addiction? The first reaction in the Criminal Code of the Republic of Serbia is in the field of security measures, where articles 83 and 84 provide for *mandatory treatment of drug addicts and mandatory treatment of alcoholics* for such cases. Namely, these security measures are imposed on persons who

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have committed a criminal offense due to addiction to the use of narcotic drugs or alcohol, and who have a serious risk that they will continue to commit criminal offenses due to this addiction. Both measures can be imposed with a prison sentence (when they are carried out in an institution for the execution of a sentence or in an appropriate health or other specialized institution), and with other sanctions - a fine, a suspended sentence, a court warning or exemption from punishment, when they are carried out at liberty and cannot last longer than three or two years. If the perpetrator, without justifiable reasons, does not undergo treatment at liberty or voluntarily abandons the treatment, it is stipulated that the court will order the measure to be compulsorily carried out in an appropriate health or other specialized institution.

The very fact of addiction is established by the court on the basis of the findings and opinion of an expert psychiatrist, which is a mandatory element of the procedure for imposing this security measure provided for in Article 533 of the Code of Criminal Procedure, and failure to act according to this provision represents a significant violation of the provisions of the criminal procedure, which has already been stated in the highest judicial instance decisions for a long time (Ćorović, 2009:380). However, in practice, it has been shown that it is precisely the judicial expertise in these security measures that represents a significant problem.

Namely, in order for the court to pronounce the measure, it is necessary: (1) that the person was under the influence of psychoactive substances at the time of committing the illegal act, as well as (2) that there is an addiction disease. Evidence that there is an addiction disease is often missing, mainly because it is not easy to establish and because objective tests are required that are not frequently used in our country. In addition, there is no uniform procedure and methodology of expert testimony followed by all court experts, but there are great variations in the work of experts, and as one of the possible solutions, commission expert opinion is mentioned, but also the possibility of the expert opinion being overturned by another expert (Medjedović, Petrović & Vujičić, 2019: 41).[2]

In addition to the above, when it comes to security measures in question, it is observed in court practice that there are very few specialized institutions in Serbia where they can be implemented (the Special Prison Hospital in Belgrade is the institution where these perpetrators are most often referred[3], and it is an institution that suffers from a chronic lack of accommodation capacity[4]). There is also a small number or even a complete lack, except in the larger city centers, of clinics where the aforementioned safety measures not involving deprivation of liberty could be carried out (the issue of the quality of services due to the lack of medical specialists in that area is a particularly devastating issue, which in rural areas especially gets on importance).

2 In addition, defendants may be particularly motivated to simulate the existence of addiction, because they believe that it will be more favorable for them if the court opts for a security measure. The consequence is that a large number of people with this measure are not motivated for treatment and do not actively participate in the treatment process. In such cases, the expert team can state in its report to the court that the person does not participate in the treatment process and suggest alternatively serving a prison sentence. (Medjedović, Petrović & Vujičić, 2019: 30).

3 In addition to this institution, there are three other special hospitals for psychiatric diseases in Vršac, Kneževac and Gornja Toponica.

4 One of the key limitations of the Special Prison Hospital as an institution where security measures are implemented is the physical organization of the institution itself, because it is not adapted for the implementation of medical and psychiatric-psychological treatment and its organization is more similar to other penitentiary institutions in the Republic of Serbia. Therefore, persons with a security measure in this institution do not have the possibility to move and stay in the open space, go out of the institution, like persons who endure the measure in one of the other institutions in the country where security measures are implemented. These problems are increased even more by the number of people with a measure in the Special Hospital, which exceeds the capacity of the institution, and by the insufficient number of medical and professional staff who carry out the treatment. (Medjedović, Petrović & Vujičić, 2019: 30)

When it comes to other sanctions provided for in the Criminal Code that could be applied to persons who committed criminal acts due to alcohol or drug addiction, one non-custodial sanction should be highlighted in particular - a conditional sentence with protective supervision, which provides for two obligations in Article 73 of the CC, which are related to this problem. The first such obligation is *abstinence from the use of drugs or alcoholic beverages*. However, one should immediately object to the manner in which this obligation is regulated, because in order to achieve effective results, it is necessary that this type of obligation be determined as a ban on the convicted person to use drugs or alcoholic beverages for a certain period of time, and that periodic checks are carried out to ensure compliance with the ban. The way this obligation is currently formulated renders it fundamentally unenforceable, because it is not known how it will actually be determined that the convicted person violates this obligation. Art. 25 of the Rulebook on the method of execution of non-custodial sanctions and measures and the organization and work of the commissioner, stipulates that the commissioner will help the convict refrain from abusing psychoactive substances and understand their harmfulness through counseling and educational work with the convicted and his family or close persons. Apart from the fact that giving advice does not, in any case, create the obligation of the convicted person to follow the advice, the question arises here as to the competence of the commissioner for the aforementioned "advisory and educational work", especially since neither the Law on the Execution of Criminal Sanctions, nor the Law on the Execution of Non-Custodial Sanctions and Measures mention any conditions that are required for a person to work in the Probation Service.[5] Therefore, there are no guarantees that the commissioner in charge is at all competent to carry out educational work with convicts whose use of drugs or alcohol led to the commission of a criminal offense.

All of the above leads to the conclusion that it is necessary to formulate the aforementioned obligation more precisely and reliably as a ban on the use of narcotic drugs and alcohol, with the competent commissioner carrying out periodic checks of compliance with that ban, which would actually be realized through the provision of a blood sample by the convicted person in certain time intervals, which the competent health institution would analyze and determine if there is the presence of narcotic drugs or alcohol in the body (Tešović, 2018: 264-265). As soon as the presence of narcotic drugs or alcohol in the body of the convicted person is determined in this way, it would be clear that the prohibition was violated, and the commissioner would immediately inform the court about the fact, for further decision-making.[6] Therefore, in the aforementioned sense, it is necessary to clarify and supplement the legal provisions, as well as the provisions of the aforementioned rulebook on the manner of execution of this obligation, in order to finally revive the application of this obligation in practice. The advisory role now prescribed for the commissioner is insufficient and absolutely inadequate in terms of this duty of protective supervision.[7]

5 The above is a major omission by the legislator, especially since both the Tokyo rules and the rules of the Council of Europe devote entire sections to these issues: selection criteria, status, recognition... The Croatian Probation Act contains one such provision: *Probation work is performed by probation officers who are educated in the field of social pedagogy, social work, psychology, legal sciences, and exceptionally other social sciences and humanities.* There is no such or a similar provision in our legislation. (Ignjatović, 2014:60)

6 This practice is represented in a large number of countries: USA, Great Britain, France, Germany. In England, the application of electronic devices for monitoring the presence of alcohol in the body of a convicted person (*The Alcohol Abstinence Monitoring Requirement*) was recently started, in order to reduce the percentage of criminal offenses committed due to the use of alcohol (Hodges, 2022:1). The above-mentioned electronic device, which the convict carries, measures the level of alcohol in the convict's body every half an hour, and any violation of the ban on alcohol consumption is electronically detected, and thus provided to the probation officer for inspection. This measure is applied in cases where a person has committed a criminal offense under the influence of alcohol, and it is not suitable for alcohol addicts who need treatment and healing because of this addiction (Tešović, 2020:60).

7 Art. 53 of the Law on the Execution of Non-Custodial Sanctions and Measures provides for abstinence from the use of drugs and alcohol as one of the measures for parole, and if the commissioner reasonably suspects that the convicted person is not complying with this obligation, based on direct observation or information received from the family or other

Two other obligations from protective supervision that are related to this topic are *treatment in an appropriate health institution and visiting certain professional and other counseling centers or institutions and acting according to their instructions* - the eighth and ninth obligations that are prescribed as the content of protective supervision. Articles 26 and 27 of the above-mentioned Rulebook state that the commissioner in direct contact provides support to the convicted person during treatment and monitors the course of his treatment through regular cooperation with the appropriate health facility, and also provides support and encourages the convicted person to engage in treatment at the appropriate counseling center or institution and monitors the course of treatment through regular contact with professional workers. These obligations are directly related to the seventh obligation to abstain from the use of drugs or alcoholic beverages, so the question of their delineation with the safety measures of mandatory treatment of drug addicts and mandatory treatment of alcoholics arises here. Namely, what are the cases when a conditional sentence with protective supervision will be applied in the aforementioned sense, and when will the aforementioned security measures be imposed along with the conditional sentence? From the very conditions provided for in Art. 83 and 84 of the CC, it follows that security measures of compulsory treatment of drug addicts and alcoholics are imposed on the perpetrator who committed the crime due to addiction to the use of narcotic drugs or due to addiction to the use of alcohol. Such a condition is not foreseen for the mentioned obligations within protective supervision, so it is left to the court to assess whether these are also situations when the criminal offense was committed as a result of one of the mentioned addictions.

In theory, the opinion was expressed that a conditional sentence for protective supervision in the form of the obligations described above will be imposed when it comes to minor crimes, i.e. cases in which the conditions for the imposition of these security measures are not met (when the criminal offense was not committed due to addiction to the use of narcotic drugs or alcohol), as well as in cases where there is a need to order the perpetrator to perform some other obligations from protective supervision (Stojanović, 2017: 326). This opinion should be accepted as correct and logical, because in a situation where there is a criminal offense under the influence of alcohol or narcotic drugs, but without medically established addiction, it is appropriate to impose this type of sanction, where protective supervision would achieve its purpose, while in the case of established addiction, the security measures are the most adequate, especially in view of the fact that, if required, the court could order the execution of some other obligations from protective supervision. (Tešović, 2020: 61-62).

International Standards and Comparative Practice

When it comes to international standards in this area, the first thing to point out is that at the international level, there is a clear intention that with regard to addicts - perpetrators of criminal acts, the solution should first be found by acting on the very cause of their illegal behavior - addiction. Namely, the emphasis is on medical treatment and the application of various non-custodial sanctions and measures in order to return the said person to normal life courses and include them in a healthy social environment.

persons close to the convicted person, the commissioner is authorized to perform appropriate testing for the presence of psychoactive substances, so if it is determined that the convicted person does not comply with the mentioned obligation or if the convicted person refuses the test, it will be considered that he has not fulfilled the obligation from the decision on parole. The question arises as to why an identical provision is not provided for obligations in the case of conditional sentence with protective supervision in the mentioned law (Art. 34 - 37), but is only related to conditional release in the mentioned Art. 53, and in Art. 25 of the Rulebook on the manner of execution of non-custodial sanctions and measures, only the already mentioned "advisory and educational work" of the commissioner in the case of probation with protective supervision, without his authority to order testing of the convicted, is specified. There are major omissions and vagueness of the legislator in the enforcement matter, which caused a collision of the norms of the law prescribing the execution of criminal sanctions and the adopted rulebook on their immediate execution.

Therefore, the most important international act of the Council of Europe in the area of non-custodial sanctions and measures - *Recommendation No. R(92)16 on European rules on sanctions and measures implemented in the community* (the so-called *European Rules*) in its amendment in the form of *Recommendation No. R(2000) 22 on improving the application of European rules on sanctions and measures implemented in the community*, in rules 2.-5., suggests to the legislator to enrich the existing criminal law system of sanctions with various non-institutional sanctions and measures, among which a special place is given to the medical treatment of perpetrators who are addicted to alcohol or narcotic drugs, as well as perpetrators with mental disorders, as a result of which the crime was committed.

In a special segment of the aforementioned international document, the establishment of effective assistance and treatment programs that can influence the change in the behavior of the perpetrator of the criminal offense is discussed, so in rules 19 - 23, it is emphasized that programs and treatments for the social reintegration of the convicted should be characterized by the application of various methods, and when determining their content, particular attention should be focused on the following circumstances: basic knowledge that includes, for example, literacy and mastering of basic arithmetic operations, the ability to constructively solve personal and family problems, then education or the possibility of employment, the influence that possible dependence on alcohol, narcotic drugs or medicines may have on the perpetrator, as well as adaptation to the local community. It is recommended that special attention be focused on the development of programs and treatment for perpetrators who are at risk of committing more serious crimes.

When it comes to active international bodies in this area, it is important to highlight the activities of one body within the European Union regarding the application of sanctions and measures that are alternative to institutional treatment, dealing with this specific category of perpetrators of criminal acts. It is *the European Monitoring Center for Drugs and Drug Addiction* (*EMCDDA*), within which alternatives to imprisonment are especially promoted with regard to this special category of offenders.

In the research published by this body in 2015 regarding the application of alternative sanctions and measures for this specific category of perpetrators,[8] it was first pointed out that alternatives to prison sentences are available all over Europe in different forms and it has been undoubtedly assessed that they achieve positive results for drug addicts. The success of these measures depends partly on the degree to which these sanctions and measures are precisely directed at specific targets and specific beneficiaries. A distinction is also made between alternative measures available to the police, public prosecutors and courts (EMCDDA Papers, 2015: 6-7), and it is especially emphasized that specialized courts for drugs can be used in order to best adapt the measures of the aid program to the perpetrator - the addict. It is emphasized that in Europe, specialized courts for drug addicts, under American influence, were first formed in Ireland, Scotland and England, but they also exist in Oslo and Bergen - Norway, as well as in Ghent - Belgium, starting from 2008. Otherwise, these courts are quite different from regular courts in that they include multidisciplinary teams in their work, so the criminal judge closely cooperates with professionals of different profiles - probation, healthcare, social protection, and rather with the aim of rehabilitating the perpetrator, rather than achieving retribution.

When it comes to the mentioned specialized courts, it is stated that in terms of their efficiency there are in some forms contradictory results in various researches,[9] but what is indisputable is that the re-

8 EMCDDA Papers, Publications Office of the European Union, Luxembourg (2015), Alternatives to punishment for drug-using offenders, Downloaded August 27, 2023, https://www.emcdda.europa.eu/publications/emcdda-papers/alternatives-to-punishment_en

9 Thus, according to an American study, conducted on 154 cases (146 of them from the USA), it was concluded that with regard to adult drug addicts, the measures of special drug courts had a significant effect on recidivism of 12%, while on the other hand, again in the American public point out that it is too expensive a measure in response to lighter forms of crime. (EMCDDA Papers, 2015:16)

cidivism of persons who have successfully completed treatment and assistance programs is reduced, so it is crucial that their actions must be focused on the specific person and their specific social and personal circumstances.

When it comes to comparative practice in this area, in addition to the mentioned members of the European Union, it is important to mention the actions of the Anglo-Saxon judiciary in this area. Thus, in *England and Wales*, in addition to community service, there are also therapies and programs for overcoming the problems that led a person to commit a crime. These programs and therapies can help the perpetrator with any addiction (e.g. to alcohol or drugs), then in the case of mental health problems, as well as to acquire new skills and qualifications. Depending on the treatment or program, these may include counseling (where support is provided by medical professionals), drug testing, then attending accredited programs, such as anger management courses that can help the inmate behave better in the future, mental health treatments led by doctors or psychologists, then courses to improve writing and reading, help in writing a job application, learning job interview skills, as well as meeting people who have been affected by the commission of a criminal offense in the program of mediation and achieving restorative justice. All of the above is carried out under the supervision and cooperation of the competent probation officer of the National Probation Service and with the support of non-profit organizations that provide such services, and if the convicted person does not complete a certain treatment or program or if a test detects the presence of drugs, he can be sent back to court where his sentence can be increased or where he may be sentenced to prison.

One of the specificities of Anglo-Saxon justice in the last decade is certainly the creation of specialized courts for perpetrators of criminal acts who are addicted to drugs, the so-called *drug courts*.[10] In fact, we are talking about the so-called *problem solving courts* that arose on the soil of the United States of America and spread across all its federal states in different variants: first, there are the already mentioned courts for the perpetrators of criminal acts committed due to drug addiction, the so-called *drug courts*, then there are *courts for domestic violence* that are focused on ensuring that the victims of domestic violence are safe, and the perpetrators are convicted and supervised, as well as *community courts* that are specifically focused on crime within a smaller community and that are based on working with the police and the local community to reduce minor crime within an area, by providing such convicts with education and treatment for drug or alcohol withdrawal.

As far as England and Wales are concerned, the mentioned American model of specialized judiciary has had a great impact,[11] so it was announced by the Ministry of Justice of the United Kingdom that at the end of 2016, a pilot project would begin in England and Wales with the aforementioned problem solving courts, which would actually represent specialized criminal courts for perpetrators of criminal offenses who are addicted to drugs and alcohol, then for perpetrators of the crime of domestic violence, as well as courts specially designed for perpetrators with mental problems. The purpose is to use non-custodial, alternative criminal sanctions, along with rehabilitation programs, with regular monitoring of progress by the judge (The Global Legal Post, 2016:1).

10 The first court of this kind was established in Miami in 1989, and so far over 300,000 addicts have participated in the assistance programs established by such courts. The average recidivism rate for those who completed the full program is 4-29%, compared to 48% for those who did not participate in the programs, indicating the remarkable success of these courts. Therefore, in some countries, based on the model of these courts, courts for criminal acts committed due to alcohol addiction were established, following a similar model. Also, following this positive American example, these courts have come to life in other Anglo-American legal systems (in Australia, Canada, New Zealand, and also in the United Kingdom) (Tešović, 2018:111)

11 After the visit to England of American judges who judge in courts for drug addicts, and after the trip of British officials to the USA on that occasion, in Britain they were immediately interested in this type of specialized courts and their potential applicability in the United Kingdom (Nolan, 2002: 89).

On the other hand, it would be a mistake to say that there are no such courts in England and Wales, that is, it is true that they do not exist in the criminal law field, but in family matters the same principles exist and are applied as in criminal courts. This is *the London Family Drug and Alcohol Court* (*FDAC*)[12] where an alternative is offered to parents who are addicted to drugs or alcohol or have a problem related to domestic violence, in the form of undergoing a certain rehabilitation program under the supervision of a specialized team of experts, and in order to monitor their progress in terms of getting rid of addiction and returning to regular life courses, all so that their children remain with them and so that they are not deprived of parental rights, and the children are given under guardianship or adoption.

Therefore, it is a family, civil court, but with certain criminal law components, bearing in mind the problems that parents have related to family violence, as well as alcohol or drug abuse. The mentioned persons are, therefore, included in a program of withdrawal from the use of alcohol or drugs for a period of time, and a special multidisciplinary team of experts at the said court runs that program, with regular reports on its success and consultations with both the representatives of the parties and the representatives of the local government. The expert team is made up of social workers, psychologists, psychiatrists, child psychiatrists, as well as experts in the field of domestic violence and drug and alcohol abuse, and depending on the specific case, a special team is formed to deal with a specific program. Otherwise, their task is to solve the case in 26 weeks, and every Monday hearings are held before a specialized judge where the participants in the program, as well as the expert team, talk about the success in implementing the program. There are even hearings where representatives - lawyers are not present and where the parties can talk with the judge in a more informal discussion about their problems, success in abstaining from drugs, and undergo drug or alcohol testing even before that. Therefore, the essence of this court is that children whose parents are addicted to alcohol or drugs and who are neglected or abused are not given to guardianship or adoption, but to try to achieve control of the addiction, and finally the complete weaning of the parents and their return to regular life courses (Tešović, 2018:113). This is why these courts are called therapeutic justice or problem-solving courts, and the latest independent research reports on the results of this court justify the mentioned names.[13]

When it comes to the already mentioned judicial practice in *the United States of America*, for the last two decades serious criticism has been directed at the execution of probation, i.e. the adequate provision of services by probation officers, especially in terms of efficiency and the increasing rate of recidivism and violation of the set conditions, so more and more voices are heard that it is necessary to reform the said probation system.[14] One of the innovative ways is the greater participation of the judges themselves in monitoring the fulfillment of probation conditions, so one type of such additional engagement is the formation of specialized courts for perpetrators of criminal acts who are addicted to drugs or alcohol. These are the already mentioned, so-called *drug courts*, which are part of a wider concept of problem solving courts, where judges actually have a more active role in trying to rehabilitate the perpetrator of a crime committed as a result of drug addiction.[15]

12 Established in 2008; 12 such specialized family courts have been established in England and Wales since then.

13 The results are really impressive in terms of parents' weaning from addiction (40% of mothers stopped using drugs by the end of this program, compared to 20% of mothers who were in the regular court procedure, while the ratio for fathers is 25% versus 5% before regular courts), as well as on the plan of reducing neglect and abuse of children in such families (in the period after more than a year after the end of the process before this specialized court, in 25% of cases, further neglect and abuse of children was recorded, compared to 56% of cases after completion of the regular procedure before the family court) (FDAC The Problem Solving Court, 2023:1).

14 In the American theory, it is emphasized that probation, as well as all types of sanctions that are carried out in the community, can be successful in execution only if they are actively supported by the society itself, and that real long-term solutions are only possible with the support of all segments of the social community in which sanction is executed. (Petersilia, 1998:9)

15 Problem-solving courts are a relatively recent invention of the United States criminal justice system, and these courts

Namely, these are primarily specialized criminal courts for adult offenders who are found to be drug addicts and for whom the following measures are applied instead of imprisonment for at least one year: an intensive drug rehab program is provided in which the perpetrator is obliged to participate for a certain period of time, usually not less than a year, then it is necessary to be tested for drugs at certain time intervals, as well as randomly, in order to determine whether he complies with his obligations, and that he appears at certain time intervals in front of a specially trained judge for such cases so that the judge can directly see the progress of that person, so that, therefore, in the end, he is either rewarded with a waiver of the accusation or a waiver of the imposition of a prison sentence when some non-institutional sanction is imposed on him, or he is sanctioned with a prison sentence, if he did not meet his obligations (United States General Accounting Office Report, 1997: 23-24).[16] Criminal acts that are the subject of these proceedings are related to the use of drugs or driving under the influence of drugs, and criminal acts with elements of violence are excluded. Also, when it comes to criminal acts where there are victims who have been harmed by those acts, the obligations which are imposed on the perpetrators also include the obligation to compensate for damages.

So, this is a special type of probation with regard to a special type of delinquents - drug addicts (as well as alcohol addicts), with the fact that the supervision of the fulfillment of the assumed obligations is partially taken over by a judge specially trained for this area in order to increase efficiency.[17] The aim of the mentioned specialization of the courts is to reduce the use of drugs, and thus the criminal acts committed due to drug addiction, which according to research was achieved to a greater extent in this way than through the regular judiciary.

Under the influence of the United States of America and the practice of alternative sanctions from the courts there, even *Canada* was not bypassed by the specialization of the courts that began with its southern neighbor. Namely, in the Canadian criminal justice system, problem-solving courts began to be formed, so that the first so-called drug treatment court (DTC) was established in Toronto in 1998, and then the federal government supported their establishment in Edmonton (2005), Ottawa (2006) and other major cities. The essence of the operation of these specialized courts is to provide alternative treatments of offenders who are addicted to drugs or alcohol or have mental health problems, combined with their intensive supervision, both by the judge and by the specialized team involved in work with them. In fact, this is an approach that seeks to solve the cause of illegal behavior, and it tries to achieve this through the joint work of a specialized judge, prosecutor, professional defense, probation officers, police officers, social services and experts in addiction diseases, mental disorders, as well as for domestic violence. The focus is on helping and rehabilitating the perpetrator, and not on the retributive component of the sanction, and research into the results of the actions of these courts is more than promising.[18]

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focus on the real problems that cause criminal behavior (for example, drug or alcohol addiction, mental health problems, or homelessness), or address a special category of offenders (such as veterans or members of tribes). By far the largest number of courts that belong to this category are courts for drug addicts (drug courts) and there are a total of 1330 of them in the entire territory of the USA (Strong & Rantala, 2016: 1-2)

16 Therefore, it is an unconventional criminal procedure in which all attention is concentrated on the established drug addiction of the perpetrator and where the perpetrator undergoes treatment led and controlled by an engaged team of experts, in cooperation with a specialized judge. (Strong & Rantala, 2016:2)

17 Judges in the aforementioned courts check the offender's progress in rehab at certain time intervals, and status conferences are even organized in some courts to which all offenders who are subject to rehab treatment are invited, and at these conferences success and positive behavior are publicly rewarded, whereas non-compliance with the established rules is sanctioned (Taxman, Soule & Gelb, 1999: 183).

18 In addition to Canada, the aforementioned courts were also formed in Australia under the influence of US practice, and in 2012 a pilot program was started in Auckland, New Zealand, where one such court (Alcohol and Other Drug Treatment Court) was formed.

Findings

Bearing in mind the international standards in this area and the very successful practice of the so-called *problem-solving courts* in Anglo-Saxon countries, especially drug courts, and comparing it with solutions from our law, where in the field of criminal offenses committed by persons addicted to drugs or alcohol nothing has been changed in accordance with comparative practice for several decades, it is an inevitable conclusion that changes in our law and practice are also necessary in the aforementioned sense. Namely, if we only stick to the conditional sentence with protective supervision, which should otherwise be the basic sanction of our system of non-custodial sanctions and measures as it is in all developed probation systems, especially with regard to the three obligations within the framework of protective supervision provided for in Art. 73, para. 1, points 7), 8) and 9) of the CC, the education and specialization of judges and public prosecutors should be carried out when it comes to the perpetrators of crimes committed under the influence of narcotic drugs or alcohol, of whom there are a significant number in our practice. Also, alternative sanctions and assistance programs for such perpetrators should also be increased.

The emphasis should be placed on more efficient cooperation between the courts, the probation service and health institutions, professional and other counseling centers that provide services with the aim of achieving abstinence for the offender, and in that direction the provisions of the law regulating the execution of non-custodial sanctions should be amended and supplemented by accompanying regulations. The key would be to introduce monitoring of the success of the offender's treatment by the judge, with the immediate and constant cooperation of the probation officer and medical experts from health services and other institutions, so that during the period of protective supervision, the convicted person would be obliged not only to contact the commissioner, as is the case now, but also, following the mentioned successful examples of comparative law, to appear at a hearing before a judge at certain time intervals where both the experts participating in his therapy and the probation officer would be present. This would be significantly more efficient and under more direct control of the court, because in an informal procedure during the execution of the mentioned alternative sanction, the course of drug addiction and treatment of the offender will be monitored.[19] Also in such situations of monitoring the perpetrator's progress in rehab, the application of various types of technology, including certain elements of remote trials[20], would come into consideration.[21]

The mentioned way, which includes the judge in the very process of the offender's rehab or, in a milder form, the course of compliance with the pronounced ban on the use of drugs or alcohol within the framework of protective supervision, would be significantly more successful, because it would constitute not only the obligation of the convicted person to appear in certain time intervals before the judge. Undoubtedly the obligation of close and constant cooperation between the judge, commissioner (probation officer) and professional workers participating in the treatment and assistance program would be created, which now, according to the existing regulations, does not exist at all. What exists

19 Such specialization of the judiciary when it comes to crimes committed under the influence of drugs or alcohol is not only an invention of Anglo-Saxon law, but also represents a standard that is now being set in the countries of the European Union, where the activities of the already mentioned European Monitoring Center for Drugs and Drug Addiction - EMCDDA particularly promote the application of different types of alternative sanctions and assistance programs for this special category of offenders, and the specialization of judges and other procedural participants in this regard is encouraged.

20 The successful practice of Anglo-Saxon courts (England, USA) shows that electronic communication and certain types of remote trials have been common for decades, and this has become especially relevant with the Covid-19 pandemic. (Tešović, Krstić, Milovanović & Dakić, 2021:26-27).

21 This would imply an increase in the number of courts with technical means for image and sound transmission, equipping rooms, and modernizing technology, followed by the inevitable improvement of the legal framework and appropriate training of judges and court staff. (Tešović & Milovanović, 2022:182)

are only the prescribed safety measures for the mandatory treatment of drug addicts and alcoholics, which in themselves, whether they involve deprivation of liberty or not, have the already mentioned significant deficiencies in practice, and which raise the question as to what happens after their termination, because there is no institutional response in the form of post-penal acceptance or activities of the existing commissioner service, as in the developed probation systems, which would ensure that the persons in question should remain in normal life courses and resist addiction.

Therefore, the systematic strengthening of the existing commissioner service and its development towards a real probation service capable of acting in different ways and at different stages of the procedure with the aim of rehabilitating the offender, as well as closely cooperating with the judiciary and the police and experts who implement therapeutic programs, would certainly be a solution to this significant problem. In this way, we would harmonize our practice with international standards in this area, which would certainly be accompanied by success in terms of less recidivism and successful reintegration of addicts into society.

Originality/Value

What certainly emerges from the previous conclusions is that a certain social phenomenon cannot be observed in isolation, from the point of view of only one institution or only one scientific discipline. In order to start solving a complex problem such as that of addicts who are perpetrators of criminal acts, it is necessary to establish a multidisciplinary approach right from the beginning, both when finding legal solutions and in their implementation in practice. What is indisputable is that our criminal law was not developed in accordance with international standards in this area, as well as in the area of application of non-custodial sanctions and measures, which has resulted in an inert system that cannot respond to existing needs, so it also raises the question of achieving any significant success in terms of rehabilitation of the perpetrators.

Certainly, this paper will contribute to elaborating this problem from the criminal law and criminological aspects and hopefully improve the practice of courts, prosecutors, lawyers, and the police in this area.

On the other hand, the purpose of this paper was to add to the existing knowledge in this area, which would contribute to the theoretical generalization and clarification of the existing doubts, as well as to the perception of existing problems in practice when it comes to perpetrators of criminal acts who have a problem of addiction due to which they behave illegally. Specific solutions have been offered, but these solutions are certainly not necessarily the only possible and sufficient ones. Namely, the answers offered to the questions raised and the arguments presented in support of the given solutions in this paper are also intended to open a more serious professional discussion on this subject and ultimately lead to the necessary legislative changes in this area, in order for legislation and practice in criminal justice system in Serbia to become much closer to international standards and advanced comparative legal solutions pertaining to this issue.

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JUVENILE PERPETRATORS AND THEIR (IN)ABILITY TO BE AWARE OF THEIR OWN RESPONSIBILITY[1]

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Purpose

After the commission of serious criminal acts by children, questions concerning the adequacy of preventive measures, the tightening of sanctions for their actions, and the lowering of the age of criminal responsibility are often considered. The above-mentioned issues became topical at the national level after the mass murder of nine students and security worker at a Belgrade elementary school in May 2023 by a minor perpetrator who was 13 years old at the time of the commission of the crime, and therefore cannot be held criminally responsible. Brutality of crimes committed by minors is increasingly present. Such a case was recorded in 2014 when children aged 10 and 11 in Belgrade beat an old man who died after their attack. Although minors could and had to be aware of the consequences of such a procedure at the time of undertaking the action, criminal sanctions could not be applied to them, bearing in mind the provisions of the national legislation. The same minors, even before committing the aforementioned crime, committed various crimes, among which the largest number of crimes against property. Although protective measures were applied to them by the competent center for social work, it did not produce the expected results. Not only did they continue to commit criminal acts, but their actions became more and more brutal over time (Đorđević, 2014). That is why the question of the effectiveness of the measures applied to children who commit a crime, as well as the fairness of juvenile criminal law towards the victims of their crimes often arises. In addition, it should be emphasized that such acts and the brutality of children when they are committed often greatly disturb the public. As an example, the case of the murder of two-year old James Bulger by two ten-year-old boys can be cited. That served as a justification for advocates of maintaining a very low age of criminal responsibility for minors in England (Bateman, 2012: 12). Criminal acts by minors are becoming more and more brutal, while the age of perpetrators of such acts is getting lower. In addition, minors today spend most of their time in a digital environment, but their actions in such an environment are increasingly brutal and it seems that they can cause various negative consequences in a real (physical) environment as well (Kostić, 2021).

Design/Methods/Approach

Although the possibility of lowering the age of criminal liability at the national level was considered during the transitional period, it seems that such a procedure would be met with numerous criticisms at the international level. Therefore, in this paper, we start from the assumption that it will not be possible without changing the approach at the international level, although we do not reject the position that the age of criminal responsibility of minors should be lower, but not below 12 years of age when

1 This paper is a result of the research conducted by the Institute of Comparative Law financed by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia under the Contract on realization and financing of scientific research of SRO in 2023 registered under no. 451-03-47/2023-01/200049.

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it comes to some particularly serious crimes such as e.g. murder or grievous bodily harm. In the first part of the paper, we point out the solutions prescribed by the national legislation of the Republic of Serbia, with reference to the views of the relevant authors regarding the criminal (ir)responsibility of children. The second part contains a brief review of the treatment of juvenile offenders in different historical periods, as well as an analysis of international standards regarding the lower age of criminal responsibility. In the third part of the paper, solutions from comparative legislation are presented with reference to the recommendations of the UN Committee of the Rights of the Child, as well as the Manual for the Implementation of the United Nations Convention of the Rights of the Child, in which its provisions and the views of the said Committee are further explained. That is why three methods were used during the analysis: dogmatic-legal, comparative law and content analysis. The goal of our research was to consider the possibility of changing the criminal legislation in terms of lowering the age limit of criminal responsibilitiy in relation to international standards and giving recommendations for the further development of standards in the area of juvenile delinquency prevention.

Age of Criminal Responsibility in Serbian Legislation

In the Republic of Serbia, in accordance with international standards, it is prescribed that criminal sanctions cannot be imposed on a person who at the time of the commission of a criminal offense has not reached the age of fourteen, while educational measures and other criminal sanctions can be imposed on a minor under the conditions prescribed by the Law on juvenile offenders and criminal protection of minors (Article 4, paragraph 3 of the Criminal Code). According to the provisions of the second mentioned law, application of criminal sanctions and other measures against persons who were under the age of fourteen at the time of the commission of the criminal offense is excluded, and in that case other measures prescribed by the Law cannot be applied either (Article 2). Bearing in mind the above, the audience become quite concerned about the prevention of serious crimes committed by persons against whom sanctions or educational measures prescribed by law cannot be applied.

In comparative legislation, under the influence of international standards and the postition of the United Nations Committee on the Rights of the Child, there is a trend of considering or raising the age of criminal responsiblity. However, in most countries this age is still not at a satisfactory level. According to the adopted position, which is present in international standards and at the national level, the criminal responsibility of crhildren does not exist due to their inability to understand the significance of the committed criminal act. Such an approach can be justified, but not in all cases, such as e.g. the crime of murder, grievous bodily harm or some other serious crime committed by children who, for example, turned 12 years old at the time of commission of the crime. According to the Criminal Code, there is no criminal offense if illegality or culpability is excluded, even though there are all the features of a criminal offense determined by law (Article 14, paragraph 2).

As the authors state, the aforementioned Code does not prescribe the age of the perpetrator as a basis that would prevent him from understanding the significance of his act or directing his actions, nor could it be subsumed under the concept of "other serious mental disorders" and therefore it cannot be considered that the fault lies with children excluded on that basis. According to the same author, if the opposite is adopted, in that case the upper age of criminal liability could be introduced, given that the psycho-physical abilities of an individual decline after certain years, and because of this, even elderly people cannot understand the significance of their actions and manage by their actions (Bajović, 2017: 222). Bajović rightly points out that the grounds for excluding children from guilt cannot be found in the existing grounds that apply to adult offenders, so there is an irrefutable presumption of criminal

irresponsibility of a child up to a certain age, which primarily depends on the attitide of the legislator. This author refers to the fact that the limit of criminal responsibility is set differently in different countries, as well as that there were proposals for its abolition, i.e. the adoption of a system according to which the child's (in)ability to understand the significance of his/her actions would be assessed in each individual case, so it is difficult to justify years or irresponsibility with findings from child psychology, because they depend solely on the will of the legislator (Bajović, 2017: 223). In this regard, we can agree with the author's position, bearing in mind that there are really different solutions at the national level. In some countries, the lower age of criminal responsibility for minors is 16, in some 14, in some 12, and in some 10 years of age. In North Carolina, until the 2021 amendments to the law, criminal liability was excluded only for children who were under 6 years of age at the time of the crime.

Bearing in mind the increasing brutality of children and their ever-younger age when committing criminal acts, the question arises whether the lower limit of age responsibiity in international standards should be considered in the future. The authors believe that such an approach would be justified not only by individual cases that occasionally intrigue the public, but also by the fact that this limit was set at a differerent time when minors had a different way of life and growing up conditions. However, the authors believe that the criminal law reaction should be adapted to the severity, i.e. the gravity of the act and the seriousness of the perpetrator (Ignjatović, 2015: 30). Therefore, the legislation should have a different approach if a child of a certain age, who could be younger than 14, has committed the crime, which can often be committed under the influence of older minors or even adults. However, although the authors also believe that the maturity of a child is individual, so the fairest soulution would be to assess the maturity of a child who is between 10 and 14 years old in each specific case, such a solution would be unacceptable. The first objection that could be made is the possibility of abuses, and the second obstacle would be from the aspect of international standards, i.e. request from the Convention on the Rights of the Child regarding the exact determination of the minimum age of criminal responsibility at the national legislation (Živković, 2020: 161).

International Standards

The Convention on the Rights of the Child considers any person under the age of 18 to be a child, unless the applicable national legislation stipulates otherwise, in which case majority would be attained earlier (e.g. emancipation) (Article 1 of the Convention; Kostić, 2017: 416). According to the mentioned Convention, the contracting states should provide by the national legislation to every child who is found to have been accused or violated the criminal law the right to a procedure copmatibile with the promotion of the child's sense of dignity and worth, which encourages him to respect the human rights and fundamental freedoms of others and which takes into account the child's age and the fact that it's desirable to advocate for his/her reintegration and assuming a constructive role in society (Article 40 of the Convention on the Rights of the Child). In addition, the Convention stipulates that the contracting parties should adopt special laws, establish special procedures, establish special bodies and institutitons that would relate to children and deal with children who are found to have been accused or found to have violaded the criminal law. The Convention imposes the obligation to determine the minimum age limit below which children cannot be considered capable of violating the criminal law, as well as adopting measures when possible and desirable for dealing with such children, without resorting to court proceedings, with full respect for human rights and providing legal protection. It is therefore recommended that countries implement a wide range of measures, such as care, guidance, supervision, legal aid, probation, reception, education and vocational training programs and other alternatives to institutional care to ensure that children are treated in a way that correspond to their

well-being and that this is proportionate both to the circumstances and to the act committed (Article 40, paragraph 3). However, excessive protectionism today still requires reconsidreration. The authors justifiably believe that in children of a certain age, certain moral norms and experience make it possible to distinguish good from bad and forbidden from permitted. Bearing in mind that the exclusion of guilt in children could first be ruled out by referring to a legal error, i.e. the lack of awareness of the prohibition of the act, it is unlikely that school-age children do not know about the existence of some criminal acts that are in themselves minor, such as murder, robbery, serious bodily injury, so criminal liability should be excluded in the case of very young children, while this would be incomprehensible when it comes to school-age children (Bajović, 222). However, according to our opinion, it would be enough to lower the lower age of criminal responsibility for certain criminal acts, such as, for example, murder, grievous bodily harm, rape, etc., but it should not be less than 12 years of age. International standards could be an obstacle to that, so their content should be taken into account.

The Beijing Rules regarding the criminal responsibility of minors contain a recommendation according to which in legal systems that accept the concept of criminal responsibility of minors, the lower limit of responsibility should not be too low, taking into account the level of their emotional, mental and intellectual maturity. That limit depended mainly on historical and cultural circumstances. However, according to the modern approach, it should also be taken into account whether the child can fulfil the moral and psychological components of criminal responsibility, that is whether the child can be held responsible for antisocial behaviour based on his own ability of individual reasoning and understanding. If the age limit of criminal responsibility were set too low or if it did not exist at all, the very concept of responsibility would be meaningless. Therefore, it is considered that there is a close connection between the concept of responsibility for delinquent or criminal behaviour and other social rights and responsibilities, such as martial status, civil majority, etc. Therefore, the minimum age limit applied at the international level should be determined when it comes to juvenile offenders (point 4.1. of the Bejing Rules).

According to the United Nations Guidelines for the Prevention of Juvenile Delinquency (Riyadh Guidelines), the emphasis should be on the policy of prevention in order to enable the successful socialization and integration of children and young people, especially through family, community, peer groups, school, professional training, work, as well as through voluntary organizations. Therefore, special attention should be paid to the proper personal development of children and young people, who should be accepted as participants in the process of their own socialization and integration (paragraph 10). At the national level, it is necessary to pass and implement laws that prevent victimization, abuse, exploitation, and the use of children and young people for criminal activities (paragraph 53), while for the purpose of prevention, it is necessary to work on the adoption and implementation of regulations aimed at limiting and controlling the availability of weapons for all species to children and young people (paragraph 55). Exploiting children to commit criminal activity could be an argument that could justify lowering the limits of criminal responsibility to some extent, but it could also be an argument that would be an obstacle to considering such a possibility. Adults can use criminally irresponsible minors to commit crimes (most often property crimes) in order to avoid criminal sanctions. If the limit of criminal responsibility were to be lowered, it is possible that a certain number of minors would refrain from such activities. However, this could also increase the possibility of using even younger people to commit certain criminal acts at the expense of older people (primarily of a property nature) while taking advantage of their poor family, material and social situation. Despite this, for more serious crimes committed by minors, consideration of the possibility of lowering the limit of criminal responsibility could still come into consideration.

Bearing in mind that international standards in the field of juvenile delinquency prevention were adopted based on the results of research conducted in a certain period of time, it should be borne in mind that it may be necessary to revise some of them, and based on the results of some new research in the field of juvenile delinquency prevention conducted by experts from various fields (psychologists, pedagogues, sociologists, anthropologists, etc.). Paragraph 61 of the Riyadh guidelines emphasises the importance of the exchange of information, experiences and professional knowledge achieved through projects, programs, practices and initiatives related to youth crime, delinquency prevention and juvenile justice, at the national, regional and international levels, which includes both experts from theory and practice, as well as decision makers. Therefore, it seems that this guideline left room for possible changes and improvements in the prevention of juvenile delinquency. Paragraph 64 also points to that, and in which it is stated that a scientific study of effective modalities for the prevention of youth crime and juvenile delinquency is necessary, and the findings of which should be widely available for further evaluation. The Riyadh guidelines leave the room for further improvement in the prevention of juvenile delinquency, but other valid international standards must also be taken into account.

In its Recommendation R (86) 20, the Committee of Ministers of the Council of Europe, taking into account the fact that young people are developing, proposes that at the national level measures of an educational nature should be applied to juvenile delinquents, as well as that the punishment of prison for minors should be abolished to the greatest extent possible. Bearing in mind the above, it can be concluded that there is an attitude at the European level about the need to narrow the application of prison sentences for minors, so lowering the lower limit of criminal responsibility would not be supported by the European Community, which would be particulary negative for the process of European integration in the area of the rule of law.

Review of the Criminal (Ir)Responsibility of Minors Through History and Comparative Legislation

A different treatment of minors was also present in the Law of the XII Tables. For certain property offences for which the death penalty could be imposed on adults, minors were published by flogging or compensation in double amount (Radulović, 2010: 35; cited according to Avdić, 2017: 51) by the decision of the praetor.

During the period of the Roman Empire, there was a classification of minors into three categories, considering the degree of their criminal responsibility. The first category consisted of minors aged up to seven years – children (*infants*) and they were completely irresponsible, the second category consisted of minors aged seven to ten years (*infanti proximi*) who were extremely criminally responsible provided they could understand the meaning and significance of the committed criminal act, and the third minors between the age of ten and fourteen (*punertati proximi*) who were responsible for the committed act, but their younger age was a circumstance for mitigating the punishment (Radulović, 1999: 177).

These authors state that Arisotle also believed that children can voluntarily commit a certain criminal act, but that they are not capable of planning their behaviour in advance, so like unaccountable persons and animals, they cannot be morally responsible, while responsibility is based more on the knowledge that something we do is negative, but on a voluntary basis (Živković, 2020: 152).

With the development of society and the formation of a modern state, the first attempts by the state to protect children appear (Čović, 2017: 9). The literature mentions the Youthful Offenders Act, which was passed in 1854 in England, as a positive development in the regulation governing the position

of juvenile offenders. He affirmed a preventive instead of a repressive system of responding to the antisocial behaviour of children aged seven to fourteen through educational measures, establishing industrial and similar schools (Radulović, 1999: 175).

In Italy, a significant step towards the development of juvenile criminal law was the enactment of the Codice Zandarelli from 1890, which stipulated that the criminal sanction would not be applied to a minor who has reached the age of fourteen, and who acted recklessly, when committing a criminal act. Otherwise, the minor was criminally responsible. However, no clear criteria were prescribed for its determination. If it were determined that a person who has reached the age of fourteen did not act with discretion, he could be punished by his parents or by doing work in the public interest. Persons under the age of nine were not criminally responsible, but it was stipulated that education and upbringing measures could be applied to them. Minors between the ages of nine and fourteen could only be punished if they acted with discretion when committing the crime. Juveniles who have reached the age of fourteen, but have not yet reached the age of eighteen, could be punished if it was established that they were guilty at the time of committing the crime. Persons who at that time had turned eighteen, but had not yet turned twenty-one (minors) were punished like other adult perpetrators of criminal offenses (Compendio di diritto minorile, 2008: 8-9). With the adoption of the new Penal code in 1930, the age limit for criminal responsibility of minors was raised from nine to fourteen. Therefore, minors between the ages of fourteen and eighteen could be criminally responsible if they had the knowledge and will to commit a criminal offense, but they could be sentenced to a sentence that was lighter than the sentence for adults, and the term discretion was replaced by the term accountability (*Ibid.*).

Modern juvenile criminal legislation was influenced by criminological, social-psychological and antrhoplogical teachings on biological, psychological and social development of the personality, so the aim was to gradually raise the age limit of criminal responsibility (Škulić, 2010: 206).

The authors state that the criteria for determining the limits of minors used by criminal legislation today are different. Most often, it is a formal criterion – calendar age, which is manifests in the number of years reached, as well as the achieved biopsychological development and social maturity. One group of legislations provides for a fixed lower or upper age limit, so that minors below that limit are not criminaly responsible, and those above that limit are criminally responsible. Some legislations determine the criminal liablity of minors depending on their level of maturity (e.g. Yemen and Saudi Arabia). There are criminal legislations that foresee three categories of juvenile offenders: criminally irresponsible, limitedly criminally responsible and fully criminally responsible juveniles (Konstantinović Vilić, Nikolić Ristanović and Kostić, 2012: 221).

The Italian criminal legislation prescribes the limit of criminal responsibility in the same way as the criminal legislation of the Republic of Serbia. According to Article 97 of the Italian Criminal Code, persons who were under the age of fourteen at the time of the commission of the crime are not criminally responsible. Article 98 of the Code stipulates that criminally responsible persons (*imputabili*) are persons who have reached the age of fourteen at the time of the commission of the act, but have not yet reached the age of eighteen, provided that at the time of the commission they were sane and capable of understanding the meaning and significance of their actions and to manage their actions (Codice penale 2023, Testo aggrado al DL 10 agosto 2023, n. 105).[3]

In England and Wales, the minimum criminal liability is 10 years. Children under the age of sixteen cannot be arrested or charged with crimes, but criminal sanctions can be imposed on them if they

3 Text of Italian Penal Code in Italian language is available at: https://www.altalex.com/documents/codici-altalex/2014/10/30/codice-penale, 30.8.2023.

break the law. Such offenders are sent to special centers for young people, not to prisons for adults.[4] The authors believe that taking into account the lower limit of criminal responsibility in England and Wales, the physiological and psychological development of children is not taken into account in order to make the division between childhood and adulthood. Such determination is acting contrary to the results of research on the capacities of young people, bearing in mind that they are still in the maturation phase at that age and cannot understand the consequences of their own mistakes. Exactly what the authors call "cognitive difficulties" reflect on the ability of young people to be criminally responsible and accused in criminal proceedings (Arthur, 2016: 269).

Considering the fact that young people are in the stage of cognitive and emotional development, they are often more implusive than adults. Because of this, children who have committed criminal acts are less ready to take responsibility, so they mostly need the help and care of adults. According to some research regarding the mental abilities of pre-adolescents, it has been concluded that there are developmental differences in the biochemistry and anatomy of the brain that can limit the ability of adolescents to perceive risks, control impulses, understand consequences and control emotions (*Ibid.* 275-276).

Under section 41A of the Criminal Justice and Licensing Act, children under the age of 12 cannot be prosecuted for a criminal offence. Persons aged 12 of over cannot be prosecuted for offenses committed when they were under 12 according to the Criminal Justice and Licensing Act 2010 (Scotland).[5]

The results of a longitudinal study of pathways into and out of a cohort of approximately 4,300 young people who started secondary education in Edinburgh in 1998 indicated the need to raise the limits of criminal responsibility to international minimum standards and support diversionary policies that keep young people away from formal criminal justice measures and deprivation of liberty and encourage educational inclusion and social justice intervention models. The age of criminal responsibility of eight years that existed in Scotland was considered inconsistent with the results of empirical research.[6] The authors advocate raising the limits of criminal responsibility, pointing out that children's ability to reason develops over time and that such ability develops in children only in the period between 10 and 15 years of age. According to them, the more abstract reasoning capacity that enables adaptation to the expectations of society and other people in the child's environment is reached only later. Research in the field of neurology shows that the neural circuits with a significant influence on behaviour continue to develop after puberty, while the parts of the brain responsible for emotional processing develop during early adolescence, so younger teenagers have a relatively limited capacity for empathy towards others (Bateman, 2012: 6-7). However, for the most serious crimes, it could still be an open question whether very brutal crimes committed by pre-adolescents could be justified by such conclusions.

In Australia, the legal minimum age of criminal responsibility in all jurisdictions is 10 years. However, there is an assumption that children between 10 and 14 years of age are considered incapable of committing a crime. However, the authors state that in the event that the prosecution can refute such an assumption with proof that the accused child was capable of adequately distinguishing between right and wrong at the time of the commission of the crime, a criminal verdict can be issued. In the period from 14 to 17 or 18 years (depending on the specific jurisdiction), perpetrators of criminal acts who have reached that age at the time of committing the criminal act can be considered fully responsible

4 See:https://www.gov.uk/age-of-criminal-responsibility#:~:text=The%20age%20of%20criminal%20responsibility,or%20charged%20with%20a%20crime, 30.8.2023.

5 Text of the Criminal Justice and Licensing Act in English is available at: https://www.legislation.gov.uk/asp/2010/13/section/52, 30.8.2023.

6 Raising the age of criminal responsibility in Scotland and reducing youth offending, The University of Edinburgh, Edinburgh Law School, https://www.law.ed.ac.uk/research/impact-and-engagement/impact-stories/raising-the-age-of-criminal-responsibility, 30.8.2023.

for their acts, but different criminal penalties apply to them as sanctions in relation to adult perpetrators (Urbas, 2000: 1). It can be concluded that in Australia minors between the ages of 10 and 14 are not considered to be criminally responsible, but that different measures are applied in relation to persons who have reached the age of 14 at the time of the commission of the criminal offense and have less than 17 or 18 years of age.

Under North Carolina law, a minor is anyone under the age of 18 who is not married, emancipated, or in active military service. A special court for juveniles is responsible exclusively for juveniles who are found to be delinquent or undisciplined.[7] After the changes to the Law in 2021, the age that represents the limit of responsibility for all undisciplined behaviour is 10 years.[8]

According to the new decision, children between the ages of 6 and 7 are not criminally responsible for delinquency, while the procedure is slightly different when it comes to persons between the ages of 8 and 9. In these cases, children, parents and guardians receive a court counsellor for minors, while this category of minors is called "vulnerable minors" in the law (Article 7B-1501 (27b). Such persons are not considered juvenile delinquents. In the case of a complaint against a person under the age of ten, the court counselor for minors will first assess whether that minor meets the condition for obtaining the status of a "vulnerable minor" according to the provisions of Session Law 2021-123-123 § 5. (c). In that case, the so-called process is approached consultation for minors. Consultations are defined by Law GS 7B-1706 and include screening, assessment and implementation of special programs for minors and their parents or guardians. It should be noted that otherwise court advisors conduct consultations with the minor, his parent or legal guardian outside of any court proceedings (Greene, 2021).[9]

Finland has a very different approach regarding the determination of the lower limit of criminal responsibility of minors compared to the legislation of other countries. In Finland, the Juvenile Offenders Act of 1940 defines that children under the age of fifteen (children) cannot be held criminally responsible, taking into account the level of their intellectual, emotional and social development at that age. In addition, there is also an attitude that a child can be considered mature enough to assume criminal responsibility when he/she completes his/her compulsory education and is capable of establishing a working relationship and can be considered mature enough to assume criminal responsibility. Any child who commits a crime under that age enters the social protection system. Therefore, the authors state that Finland perceives children as "victims" of their own social circumstances who need help, and not as criminals or immoral persons. In Finland, persons who commit crimes between the ages of 15 and 17 are considered young offenders. Such young people are subject to the care and application of the measures of the Finnish social protection system and the court system (Mhuirneacháin, 2020).[10]

Bearing in mind the above, it seems that in comparative legislation there is a trend of raising the lower limit of criminal responsibility and that there is an increasing tendency to apply protectionist measures towards minors. Such an approach was influenced by the recommendations of the Committee on the Rights of the Child, as well as the views contained in various reports and manuals.

According to the General Comment of the Committee on the Rights of the Child No. 7, under no circumstances should young children (persons under the age of 8) be included in any legal definitions concerning the minimum age of criminal responsibility. Young children who misbehave or break

7 Available at: https://www.nccourts.gov/help-topics/family-and-children/juvenile-delinquency, 30.8.2023.

8 A new age limit for undisciplined minors was established by passing the SL 2021-123 which entered into force on December 1, 2021.

9 Available at: https://nccriminallaw.sog.unc.edu/from-6-to-10-new-minimum-age-for-juvenile-delinquency-and-undisciplined-jurisdiction/, 30.8.2023.

10 Available at: https://lawreview.elsa.org/the-young-offenders-a-comparison-of-the-criminal-justice-system-for-juveniles-under-finnish-and-irish-law, 30.8.2023.

the law according to the above comment require compassion, help and understanding, in order to improve their capacities for personal control, social empathy and conflict resolution. Therefore, at the national level, adequate support and training for parents should be provided in order to fulfil their obligations, as well as for young children to have access to quality education and care in early childhood and, when necessary, to adequate therapy (paragraph 36, item i)). In its General Comment No. 10 on children's rights in juvenile justice, the Committee on the Rights of the Child appeals to states not to set too low a threshold for criminal responsibility and to raise the minimum threshold for criminal responsibility to an internationally acceptable level (paragraph 32).

Of great importance for the implementation of the Convention on the Rights of the Child is the Handbook on its implementation published by the United Nations Children's Fund in 2007, which is also supported by the Committee on the Rights of the Child. According to the views expressed in the aforementioned manual, the limit of criminal responsibility below 12 years of age is not acceptable at the international level, and therefore states are invited to increase this limit to the age of over 12 and not lower it. It is also pointed out that there should be no exeptions to the recommended minimum limit of criminal responsibility, even in the case of more serious crimes (Implementation Handbook for the Convention on the Rights of the Child, 2007: 605). In addition, no state that has ratified the Convention should reduce criminal responsibility to 12 years. According to the Handbook, states should not make exceptions in order to determine a lower age, and in addition, by acting in accordance with the provisions of the Convention on the Rights of the Child, the existence of exceptions in national legislation when determining the lower minimum limit of criminal responsibility in the case of committing serious crimes would be considered. Instead, the modern approach should consider whether the child can fulfil the moral and psychological components of criminal responsibility, that is, whether the child can be held responsible for antisocial behaviour based on his or her individual reasoning and understanding. The Handbook criticizes the solution that exists in England and Wales due to the very lower limit of criminal responsibility, and therefore recommends raising it (*Ibid.* 617).[11]

Findings

Thanks to media reporting, one gets the impression that an increasing number of children are perpetrators of very serious crimes. Bearing in mind certain cases, certain social protection measures were taken against some of them, but they did not yield adequate results, given that minors continued to commit even more serious and brutal crimes.

In modern criminal law, the principle of individual subjective criminal responsibility has been adopted, according to which each person, with the absence of conditions for the exclusion of criminal responsibility, is solely responsible for his actions. Parents can be held responsible for the actions of their children only if it is established that there was neglect of the child. Otherwise, persons who were under the age of majority at the time of the commission of the crime will not be responsible for its commission.

Bearing in mind the brutality of criminal acts committed by children, the question of fairness is raised considering the fact that no one is held accountable for these criminal acts. Therefore, it is impossible to compensate the victims for the lack of a legal basis, i.e. of the lack of judgement establishing tort liability. Therefore, a certain number of authors advocate the position of the need to lower limit of criminal responsibility of minors. In order to have enough arguments to support such an idea, at least when it comes to serious crimes (e.g. murder or grievous bodily harm), we applied in this paper the

11 The text of the Handbok in English is available at: https://www.unicef.org/lac/media/22071/file/Implementation%20Handbook%20for%20the%20CRC.pdf, 30.8.2023.

dogmatic-legal, comparative legal method and the method of content analysis. Neverheless, we started from the assumption that international standards could represent an obstacle for lowering the criminal responsibility of minors in national legislation.

The national legislation of the Republic of Serbia regarding the limits of criminal responsibility of minors is fully harmonized with international standards. However, the mentioned borders are defined differently in different countries. The lowest limit of criminal responsibility exists in England and Wales (10 years), in Finland an approach was introduced according to which society is responsible for juvenile delinquency, as well as the attitude that children who attend primary school cannot yet be aware of the consequences of their actions, so, therefore, 15 years of age is prescribed as the lower limit of criminal responsibility.

Based on the conducted comparative legal analysis, the conclusion is reached that there is a tendency to raise the lower limit of criminal liability. In Scotland, after some research, it was concluded that the age limit of 10 years was too low, so it was increased to 12 years, while in North Carolina it was increased from 8 for 10 years of age. However, based on the analysis of the measures that can be applied to young minors in North Carolina, it can be concluded that these are mainly educational and non-judical measures.

The Convention on the Rights of the Child does not provide for a fixed lower limit of criminal responsibility for minors. It is not defined by either the Beijing Rules or the Riyadh Guidelines. However, the Manual for the Implementation of the Convention on the Rights of the Child, whose publication is also supported by the Committee on the Rights of the Child, suggests that limit should not be below 12 years of age, and that the already established limit should not be subsequently lowered. In addition, the Manual states that a lower age than that already established in the national legislation should not be established even for juvenile perpetrators of some serious crimes. Bearing in mind the above, any lowering of the limits of criminal responsibility at the national level, even for serious crimes, could be considered a violation of the provisions of the Convention on the Rights of the Child. We believe that this could have a negative impact on the process of European integration, given that the European Commission's special focus is on the rule of law.

Originality/Value

Instead of lowering the limit of criminal responsibility, a number of preventive measures should be applied at the national level towards minors. Such an approach would require increased attention and continuous monitoring of children's antisocial behaviour both at the level of the family and at the level of the educational institution, and of course, in accordance with the needs, to intervene with adequate measures. However, it should be borne in mind that not all antisocial behaviour may point to the possibility of committing serious crimes by minors, so attention should be paid to any changes or deviations in their behaviour.

Lowering the limits of criminal responsibility for some particularly serious criminal acts committed by minors is not possible from the perspective of international standards. It is only possible to improve the existing international standards based on the results of scientific research.

Although we do not think that the author's position on the need to consider lowering the limits of criminal responsibility for serious crimes is unjustified and we completely agree that such an approach would be fairer to the victim of the crime, one could ask whether lowering the limits of criminal responsibility could achieve general preventive effect of criminal sanction. Bearing in mind the fact

that international standards in the field of juvenile delinquency prevention were really established in another era, we believe that multidisciplinary research should be encouraged at the international level, which could offer adequate solutions for combating modern forms of juvenile delinquency.

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LEGAL ASPECTS OF POLICE SUPERVISION OF PRIVATE PHYSICAL SECURITY IN SERBIA

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Purpose

The police, as a public (executive) authority, are in charge of enforcing the law. Its role in Serbian society is determined by positive legal regulations. By abstracting the provisions of the regulations, scholars came to the conclusion that, according to the material point of view, there is an administrative, criminal, misdemeanor and normative function of the police (Miletić, Jugović, 2019:54). The same authors emphasize that this division is 'conditional' and that in certain situations a clear boundary cannot be drawn.

Observed from the aspect of police supervision, the authors single out administrative and misdemeanor functions. The administrative function of the police is realized by performing activities (performing a group of tasks) which consists of issuing administrative acts, i.e. individual authoritative acts passed in 'administrative matters', and performing 'administrative actions', i.e. actions of applying coercion and restrictions in individual situations (Miletić, Jugović, 2019:60). The misdemeanor function of the police consists in detecting and resolving misdemeanors, discovering and apprehending their perpetrators, collecting items, traces and determining other circumstances that can serve as evidence in misdemeanor proceedings, initiating misdemeanor proceedings, representing requests for the initiation of misdemeanor proceedings, applying legal remedies to court's decisions, issuing a misdemeanor warrant, etc.

With the adoption of the Private Security Law – PSL, Official Gazette RS, 2013 and the Private Detectives Law, Official Gazette RS, 2013 in November 2013, the work on improving the private security system and rounding off the legal framework has only just begun (Lestanin, Nikac, 2022:183-184). The work on the adoption of by-laws that more closely regulate certain issues in the field of private security was completed only at the end of 2016, i.e. three years after the publication of the PSL (Lestanin, 2021:242). Throughout this period the topic of police supervision of private security has not been examined in the scientific and professional literature. The authors believe that this is a very important issue that needs to be researched primarily from the legal and operational aspects in order to remove certain doubts and provide guidelines for solving certain problems in the 'practical' policing.

The right to supervise private security belongs to the Ministry of Interior (hereinafter: MoI) and the inspection authorities, each within their scope of competence issued by laws. More specifically, the MoI, through the General Police Directorate (Uniformed Police Directorate and regional police departments), is responsible for supervising the fulfillment of conditions and methods of performing activities, the application of authorizations and record keeping in accordance with PSL, and the implementation of regulations on the possession and carrying of private security weapons. Other inspection

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bodies carry out supervision in the field of safety and health at work, compliance with tax regulations, labor regulations, planning and construction regulations, etc.

The PSL makes a distinction between a regular police officer and an authorized police officer. Regular (uniformed) police officers can control private security officers (PSO) and stewards in terms of wearing uniforms, equipment, weapons and ammunition, possession of ID and the manner of applying authority, on which they make a report. An authorized police officer (who can be uniformed or non-uniformed) has the right and duty to check the conditions and manner of performing the activity, the application of authority, keeping records, the manner of keeping and carrying firearms, as well as, if necessary, to carry out other actions that are carried out immediate and unannounced supervision into the performance of private security services (Nikač, Leštanin, 2023:178).

Design/Methods/Approach

The normative method was used in the research of legal norms regulating police supervision of private security. In certain places in the paper, in order to achieve certain definitions of a general character, the method of abstraction was used. Mostly, the method of observation with the participation of one of the coauthors and observation without participation, but also the descriptive method, were used.

Supervision's Notion

Supervision (control) represents the relationship between two subjects in which one of the so-called the active subject (the one who supervises) controls the work of another so-called passive subject (the one over whom supervision is performed). An essential characteristic of supervision is the systematic observation and evaluation of the work of another subject, based on predetermined criteria, with the possibility that the active subject influences the future work of the passive subject (Lilić, 2014:317). According to Džinić, Lopižić (2022:173-174) supervision (control) represents the direction of one's work in such a way as to limit the actions of the supervised entity in advance (e.g. by determining the financial resources that the entity will have at its disposal) or during its work (e.g. giving instructions for work during the work process), as well as subsequent checking are whether the action and results are in accordance with previously set criteria (e.g. checking whether the act is in accordance with the law).

On the other hand, administrative supervision can be determined in a formal and material sense. Administrative supervision in the formal sense originates from the person performing administrative supervision. Based on that, administrative supervision in the formal sense is the supervision carried out by the administration. On the other hand, administrative supervision in the material sense does not start from the person performing administrative supervision, but from the supervisory powers with which the supervision is carried out. Proceeding from that, administrative supervision in the material sense is that supervision which is carried out by administrative powers, regardless of which subject, needs to carry it out (Milkov, 2017:264; see also Dimitrijević, 2019:359).

The question arises whether supervision of private security is inspection supervision or some special type of supervision (*sui generis* supervision). It is mentioned in the theory that inspection supervision is 'a special type of administrative supervision that is achieved by direct insight into the corresponding legal and factual situations'. The purpose of inspection supervision is both the control of the application of the law by citizens and legal entities and the control of the application of the law by the administrative bodies themselves. Through inspections, state administration bodies examine the implemen-

tation of laws and other regulations by direct insight into the operations and actions of persons and legal entities and, depending on the results of the inspection, impose the measures they are authorized to take (Lilić, Toskić, 2021:124). Inspection supervision is carried out by inspectors according to a previously issued warrant, who have powers under the Inspection Supervision Law – ISL, Official Gazette RS, 2015 and other (departmental) laws that regulate the supervision of the enforcement of certain laws (Labor Law, Official Gazette RS, 2005; Games of Chance Law, Official Gazette RS, 2020; Planning and Construction Law, Official Gazette RS, 2009 etc.). An important feature of inspection supervision is that, according to the explicit provision of the ISL, before the supervision begins, the supervised entity must be notified, a risk assessment is carried out and it can have a preventive character. Also, if irregularities that have elements of a misdemeanor are observed in the inspection supervision, the end result of the inspection supervision does not have to be the initiation of a misdemeanor procedure. Finally, according to the explicit provision of the Article 4 ISL, the provisions of this law do not apply to the police. On the one hand, this is a good solution because inspection supervision is not applied to specific (security) areas. However, if we analyze supervision in the field of private security, we see that it is not precisely regulated either by PSL or by secondary legislation, as is the case with inspection supervision.

Same as the inspection and private security supervision is carried out by direct insight into the operations and actions of legal entities, entrepreneurs and persons and, depending on the results of the supervision, measures are imposed with the aim of eliminating irregularities. The private security supervision is carried out by authorized police officers (hereinafter: APO) and may be unannounced, who, in addition to the powers granted by the PSL, also have all the powers under the Police Law, the Official Gazette of the Republic of Serbia, 2016[2] (this means the use of coercive means if the conditions issued by law are met[3]). This is where powers like verification and identity determination, collection of information, temporary seizure of items, etc. come into play. The supervision of private security does not have a preventive but exclusively a repressive character, because if the irregularities observed in the supervision have elements of a misdemeanor, then a misdemeanor procedure must be initiated.[4] In addition, if there are grounds for suspicion that an economic offense or felony has been committed, APO is obliged to take measures in accordance with the regulations[5] (charge for economic offense or criminal charge). No warrant is issued or risk assessment (in the formal sense) is carried out for private security supervision. The supervised entity is obliged to submit to supervision and control, i.e. to enable APO to carry out supervision, make appropriate documentation available and provide all necessary data and notifications.

The basic principles in conducting supervision under the PSL are: the principle of legality, proportionality, publicity, protection of public interest, truth, subsidiarity (right to legal remedy).

According to the supervised entity, private security supervision can be directed at service providers, users of private security and training centers. According to the type of services, private security supervision can be focused on physical security and technical protection. According to PSL there are two legal regimes in which private security services can be performed (in-house or self-protection activities and private security services provided by business entities licensed for that), and then, accordingly, whether it is a question of the same supervision. This paper brings only procedures of supervision of physical security primarily in the area of licensed business entities but also in the area of services users.

2 Further readings Lestanin, Nikac, 2016

3 Further readings Nikac, Lestanin, 2017:191-209

4 Further readings Lestanin, Nikac, 2022:570-593

5 The Criminal Procedure Code - CPC, the Official Gazette of the Republic of Serbia, 2011 and the Economic Offence Law, the Official Gazette of SFRY, 1977

Supervision Procedure of Physical Security Services

Preparatory Actions and Planning of Specific Surveillance Measures

Like any other police activity, supervision requires good planning and preparation for the work task. Preparation and planning are carried out by the APO together with the police officer who participates in the supervision (whenever possible, the supervision should not be carried out with only one officer although, according to the PSL, only the APO has the right to supervise). The preparation involves collecting data from the records kept by the police, from the records to which the police have the right of access, data from previous supervision, data from other regional police departments (hereinafter: PD) and reviewing the case file of the license issued for the service provider. Specifically, preparatory actions may include:

1. Checking in the case files whether supervision was carried out at the supervised subject in the earlier period, what it was aimed at, whether there were any deficiencies and irregularities and what measures were proposed (ordered);
2. Review of the case file of the issued license for the supervised entity and review of the Act on Uniforms and Logo (whether it is in compliance with applicable regulations), review of the Act on Jobs Classification (name and description of workplaces, authorizations, etc.), records of compliance determination spatial and technical conditions, etc.;
3. Insight into the data kept in the Serbian Agency Business Registers (SABR), such as the code of the predominant activity, the address of the legal entity, the responsible person in the legal entity, the opening of bankruptcy or liquidation proceedings and comparing the data with the data kept in the MoI's databases;
4. Insight into the data kept in the Republic Geodetic Authority (address, lot number, number and size of the building, ownership of the lot and building, etc.);
5. Checking in the MoI's database 'Records of licenses and IDs' the number of PSO who have ID and checking the status of ID of all PSO on the list, and then checking all PSO through the Central Register of Compulsory Social Insurance (hereinafter: CRCSI), in order to determine whether they are still employed, or there was no termination of the employment, which is the basis for (returning) the revocation of ID;
6. Search of records of reports on the use of force by PSOs, where all reports with opinions submitted to the police department are singled out. Then follows a search of the event records to determine which person reported the event to the police, in order to determine in the supervision, through the records of the control center, whether the event was recorded in the control center as well as whether the applicants are operators in the control center;
7. Search of the MoI's records of notifications on concluded contracts, where a list of all users of services with whom a contract has been concluded can be compiled;
8. Extraction of a report on the performed control of PSO by uniformed police officers;
9. Insight into the records of weapons in legal possession if it is a supervised entity that deals with weapons in order to obtain information on the type and number of weapons and compare it with the number of persons in the supervised entity who possess a license with weapons for persons;
10. Searching the records of registered vehicles and extracting data on the number, trade mark, model and registration number of vehicles registered to the supervised entity;

11. Search of MoI's misdemeanor records for the supervised subject, and check of previous police actions towards them (legal basis of the misdemeanor procedure, description from the misdemeanor request, observed irregularities, etc.);
12. It is possible to obtain information from the Tax Administration on all persons employed by the supervised entity, or on all persons engaged on other grounds (temporary-occasional jobs or supplementary work).

On the basis of the collected data, APO can already plan and direct supervision because there is a possibility of noticing certain discrepancies and irregularities by comparing the collected data. As a rule, supervision is carried out at the headquarters of the supervised entity in the business premises, which need not but may be announced to the business entity being controlled. Before the start of the supervision, APO warns the responsible person that he/she is obliged to facilitate the supervision, make the appropriate documentation available and provide all the necessary data and notifications, and that acting contrary to this is a misdemeanor under the PSL.[6] The first action in the supervision must be the identification of the business entity and the responsible person (entrepreneur) by reviewing the decisions of the SABR and the MoI, reviewing the IDs, reviewing the data from the real estate cadastre, etc.

Supervision of Physical Security Service Providers

The following parameters are checked in the process of supervision of a business entity that provides physical security services:

1. Fulfilling the conditions for issuing a license (business premises, control center, responsible person in a legal entity, possession of storage of weapons and ammunition, possession of an equipped vehicle for transporting valuables, required number of employees with issued licenses, etc.);
2. Beginning of physical security services within six months from the issuance of the license or whether liquidation or bankruptcy proceedings have been opened;
3. Provision of physical security services based on the contract and the contents of the contract (elements issued by Art. 20 PSL);
4. Risk assessment in the protection of persons, property and business before concluding the contract in cases where risk assessment is mandatory;
5. Having a written Security Plan or Risk Management Plan;
6. Delivery of notification to the competent regional PD about the conclusion, annexation or termination of the contract;
7. Possession of weapons, where and how weapons are stored, whether PSO are issued with Order to carry weapons;
8. Possession of a vehicle for transporting valuables that meets the issued conditions in terms of equipment;
9. Possession of a suitcase for transferring money on foot;
10. Functioning of the control center and intervention team (on-call service, security plan, written procedures and records);
11. Wearing of uniform and ID by PSO;
12. Conclusion of an employment contract or another employment contract with PSO, whether they are registered for mandatory social insurance if there is an obligation, i.e. other tax obligations have

6 This applies only to licensed business entities. More precisely, it does not apply to users of private security services.

been paid and whether temporary employees have been recorded in the necessary records according to PSL;

13. Possession of marks on vehicles that are used in accordance with the PSL and the Traffic Safety Law, the Official Gazette of the Republic of Serbia, 2009;
14. Up-to-date record keeping according to PSL;
15. Going out to a protected facility or several of them and controlling the way PSO work at protected facilities (wearing a uniform and ID, having and knowing the Security Plan and written procedures, keeping records at the protected facility, etc.).

Essentially, everything that is issued as a misdemeanor in the PSL can be checked in supervision, more precisely, whether the supervised subject acted according to the dispositive legal norm. Also, what is issued in secondary legislation and standards must be checked in supervision.

Supervision of Physical Security Services Users

As issued by the PSL, supervision can also be carried out over users of private security services. First of all, it must be determined whether the user uses the services of only physical security, only technical protection or combined physical and technical protection, and based on that, plan and direct supervision measures. Before the supervision, the data kept in the Republic Geodetic Authority according to the address of the service user should be reviewed and the lot number, number and size of the building, ownership of the lot and building and other data should be determined. In addition, determine the status of the service user (individual, legal entity or entrepreneur) and its size if it is a legal entity (due to the obligation to have the Risk Assessment Act).

If it is a user of physical security services, upon arriving at the address, one should immediately spot a PSO who should be checked in terms of wearing a uniform and ID, having a Security Plan and written procedures, work schedule and having a work contract with the employer. Ask service users to view the Risk Assessment Act (hereinafter: Act), where the protection measures from the Act should be compared with the measures in the Security Plan and compare the dates of creation because the Act must be drawn up before the plan. Also request the contract on the provision of physical security services concluded between the provider and the service user. Compare the dates of the creation of the Act and the contract, because as a rule, the Act must be drawn up before the conclusion of the contract. Compare the security measures with those specified in the Act and the Security Plan and determine the level of service, which must not be lower than the estimated one.

Supervision's Record and Decision with Measures Order

The APO in the official MoI premises prepares a record on the conducted supervision no later than three days after the day of the completed supervision. The content of the record is issued by Article 63 of the General Administrative Procedure Law – GAPL, Official Gazette RS, 2016 and these are the mandatory elements of the record: name of the authority, action taken (indicate the type of supervision - regular, extraordinary, supplementary, etc.), place, day and time when the action is taken, administrative matter that is the subject of the procedure (on which the supervision is directed, e.g. on technical protection devices, the method of performing physical security, etc.), the personal names of APO, the parties present, their representatives and other persons and a description of the course and content of the action taken and the statements given as the information on the documents that were used (documentation that was exempted or temporarily seizure during the supervision). In addition,

the authors believe that the mandatory elements of the record are the business number in accordance with the regulations on office operations, the preamble and the legal basis for drawing up the record, instructions on the legal remedy with the deadline for submission (written objections), the signature of the representative of the supervised entity and APO and the date of notification of the supervised entity on the record. Optional elements of the record are the measures that the supervised entity is required to take in order to eliminate work irregularities, deadlines for taking measures, the method of notifying APO about the elimination of irregularities, APO warnings and suggestions given to the supervised entity, etc.

If it notices irregularities and deficiencies in the work, APO orders measures to eliminate them in record and sets a deadline by which the irregularities must be eliminated. The record is handed over to the responsible person in the supervised entity, who has the right to make objections in writing, on the record on the performed supervision within three days from the delivery of the record (Art. 71 PSL). Although it is not explicitly issued, the authors believe that the deadline for handing over the record must not be longer than eight days from the date of making the record. If the responsible person refuses to sign and receive the record, APO states this in the record and states the reasons for it. If the responsible person makes objections, it is the duty of APO to consider the objections on the record of the performed supervision and, if it deems it necessary, to repeat the actions to which the objections refer, i.e. to change or abandon the proposed measures (Art. 72 PSL).

According to the author's research, although the licensing process began in 2016, supervision began only in 2017, when only every other licensed business entity was subject to supervision (Nikač, Leštanin, 2023:254). Authors also analyzed the detection of misdemeanors by the police, where it was determined that in the beginning the detection activity of the police was aimed at the users of private security services, and in later years it was directed at licensed business entities. This activity, after the 2018 amendments and the introduction of stewards, should have been aimed at organizers of public gatherings and especially at sports events, which is not the case (Lestanin, Nikac, 2022:590).

If the supervised entity does not remove the irregularities and deficiencies determined by the supervision and noted in the record within the time limit, the APO will set a deadline for their removal with decision order measures. If a business entity carries out private security activities without a license, the APO may by decision prohibit the performance of private security activities for a period of up to 60 days (Art. 72 PSL). As can be seen, the legislator has provided the possibility for the police officer to make decisions himself and prohibit further work. Such a solution represents a significant deviation from the principles of state administration that apply in the case of 'ordinary' inspection supervision. A supervised entity that is temporarily prohibited from performing its activities may continue to perform them if it is established in the control supervision that it has eliminated irregularities and deficiencies (Art. 72 PSL).

What is characteristic of the actions of APO is the constant collection of intelligence about the state and movement in the area of private security. If it is reasonably suspected that some person with a license to perform private security services no longer meets the psychophysical (medical) conditions for performing the services, APO may refer him/her to a medical examination (Art. 73 PSL). The APO issues a decision ordering the person to undergo a medical examination at an authorized institution. Many things remain unclear regarding these medical examinations. For example, how to decide exactly in which institution the medical examinations should be performed, who pays for those medical examinations if it turns out that the person is healthy, why would a person who already has a license finance it, data on a person's health condition are considered particularly sensitive and their disclosure

is not allowed processing, so it remains debatable whether a APO is even allowed to collect intelligence on this topic, etc.

Against the decision, the supervised entity can file an appeal within 15 days from the notification of the decision with the payment of the issued fee (Art. 74 PSL). The fact whether deficiencies and irregularities have been eliminated is determined in the control supervision.

According to the GAPL (Art. 190-206), APO has the right but also the duty to indirectly compel the supervised subject to implement the ordered measures, through the institution of 'indirect coercion' in the administrative procedure, i.e. through the procedure of forced execution of administrative acts by imposing fines. The basic condition is the enforceability of the decision. The fact of the enforceability of the decision depends on the possibility of further refutation of the decision with legal remedies, as well as on informing the party about the adopted decision. According to Art. 190 par. 2 of the GAPL, the decision of the first-instance authority, in this case the regional PD, becomes enforceable: 1) upon expiry of the appeal deadline, if the appeal has not been filed; 2) by notifying the party, if the appeal is not allowed; 3) by notifying the party, if the appeal does not delay the execution of the decision; 4) when all parties waive their right to appeal; and 5) by notifying the party of the decision, which discard or rejects the appeal. On the other hand, the decision of the second instance authority, in this case the Uniformed Police Directorate becomes enforceable when the party is informed about it.

In the decision by which the supervised entity is ordered to take certain measures, i.e., it sets an obligation to act or not to act, as a rule, a certain deadline is left to act on the decision, the so-called 'enforcement deadline' (Tomić, Milovanović, Cucić, 2017:208). If such a deadline is not left, then the general legal deadline of 15 days is applied (Art. 190, par. 4 GAPL). Two situations can arise here: 1) that the party voluntarily undertakes the action ordered by the decision or 2) that the party did not undertake the ordered action, when the forced execution procedure is initiated.

The regional PD, as the first-instance authority that issued the decision with the order of measures, when the decision becomes enforceable, puts a certificate of enforceability (the decision states the date when the decision became enforceable, the signature of the chief of PD and the stamp), and after that within eight days from the date of placing on the decision the certificate of enforceability of the decision on the imposition of a fine (Art. 198 GAPL). Fines are determined separately for individuals and legal entities. Fines are not determined in absolute amounts, but based on the average monthly earnings in Serbia. This prevents their devaluation over time, which would lead to their meaninglessness. Also, this makes the job of the legislator easier, who would otherwise have to adjust the amount of the fine with the growth of retail prices and other economic parameters (Tomić, Milovanović, Cucić, 2017:213). According to Article 198 par. 2 GAPL, a person (entrepreneur) is fined in the range of half to two average monthly wages per employee, including taxes and contributions, earned in Serbia in the previous month, according to the data of the Statistical Office of Republic of Serbia. For a legal entity, when determining the fine, the monthly income of the legal entity itself is taken into account, so that a fine can be imposed ranging from half of the monthly income to 10% of its annual income earned in Serbia in the previous year. Monthly income is determined on the basis of accounting documentation and annual reports submitted to SABR.

As a rule, when determining the fine, one should start from the issued minimum. If the supervised subject does not act according to the ordered measures despite the fine, the GAPL allows the re-imposition of the fine until the decision is implemented (Art. 198 par. 3 GAPL). In the next assessment, a fine should be imposed that is stricter than the previously imposed one, but not up to the legal maximum, but the fine should be measured according to the circumstances of each specific case. However, before passing another decision on the imposition of a fine, the regional PD should pass a new deci-

sion on execution, which sets a new deadline for the execution of the obligation and threatens with a new, as a rule, stricter fine. If the supervised subject does not act according to that decision either, and which is determined by the control supervision, the regional PD passes a new decision imposing a fine, which is forced implement.

Against the decision on the execution of the ordered measures, the supervised entity has the right to appeal within eight days, but only in relation to the time, place and manner of execution, and it is submitted to the Uniformed Police Directorate (Art. 202 GAPL). The appeal, if he/she believes that the execution would cause irreparable damage, provided that postponement the execution is not prohibited by law, nor against the public interest, can he/she propose postponement the execution (Art. 202 par. 4 GAPL). The proposal for postponement of execution is not decided by the Uniformed Police Directorate, but by the authority that made the decision that is executed (regional PD), and that in an urgent procedure.

When the decision on the imposition of a fine becomes final and enforceable, this administrative act with the mark of enforceability and finality is submitted to the territorially competent Misdemeanor Court that enforces the fine together with Treasury Administration. As a rule, the Treasury Administration immediately informs the Misdemeanor Court about the payment of a fine, by submitting a payment report along with a statement of daily changes in the respective accounts, and the Misdemeanor Court reports to the regional PD.

Findings

Supervision of private security can be defined as a set of measures and actions undertaken by an authorized police officer, which provide direct insight into the conduct and operations of legal entities, entrepreneurs and persons in the sense of the Private Security Law, the aim of which is to determine (il)legality or (ir)regularities in work, possible removal of harmful consequences of such behavior for protected goods, rights and interests and ordering measures to harmonize operations with the law, by-laws and standards in the field of private security. It can also be defined as a legal relationship between an active subject (authorized police officer) who, using special (police) methods, monitors, evaluates and influences the activities of a passive subject (supervised subject) by taking measures and actions in order to ensure the legal application of laws, by-laws and standards in area of private security. Supervision of private security by the police is a special type of supervision (*sui generis* supervision).

In essence, everything that is issued by the PSL as a misdemeanor is determined during supervision, but also by other regulations and standards. Supervision is carried out by inspecting the documents, the way PSO act and comparing the data with the factual situation. What is specific about the supervision of private security is the possibility of applying police powers and extending supervision to other misdemeanors and economic offenses under the jurisdiction of the police. Also, supervision can be extended to the detection and resolving of a felony, the collection of evidence and the undertaking of other actions in accordance with the CPC.

The supervision's record is a document that states the established factual situation and orders measures to eliminate possible irregularities. The record is a public document which, along with other documentation, can serve as evidence in the proceedings before the competent court.

In the supervision procedure, as an *ultima ratio*, two types of coercion can be used. The first is administrative-legal coercion, by which the supervised entity can be forced to implement the ordered mea-

sures through fines. Another type is police coercion or classical use of force that can be used in cases issued by Police Law (e.g. active and passive resistance, attack on a police officer, etc.).

The main criticism can be a more precise regulation of the private security supervision procedure by Private Security Law and, if necessary, a closer regulation by secondary legislation. This is especially related to the content, types and forms of supervision, then the procedure of private security supervision, principles of supervision (legality, responsibility, efficiency, independence, etc.), powers of police officers (undercover or simulated operations, crime scene investigations, searching business premises, etc.), entrusting supervision to other police officers, cooperation between the police and other inspection authorities, as well as specifying the competencies of other inspection authorities in the field of private security. Special attention must be paid to the realization of human and citizen rights, efficient provision of public authority services to the economy, equality in law enforcement, constant investigation of problems in the field of private security and directing supervision in that direction, etc.

Originality/Value

The value of this paper is reflected in the fact that it examines in a comprehensive and precise way the issue of police supervision of private security, which is important both from the aspect of realizing the freedoms and rights of citizens and from the aspect of the socio-economic progress of the state. Apart from the fact that in the scientific and professional literature there is no paper on police supervision of private security, the originality of the paper is indicated by the methods used and the conclusions reached by the authors. The paper can serve as a guideline in the future policing, but also for further doctrinal research in the social sciences and humanities.

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BANKS – THE GATEKEEPERS IN THE FIGHT AGAINST MONEY LAUNDERING IN THE REPUBLIC OF NORTH MACEDONIA

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Introduction

Money laundering as a criminal activity is subsequent to previous (predicative) crimes and is manifested by the legalization of criminally acquired money and other proceeds in the legal financial system. In order to hide the origin of criminal money and enjoy the "wealth" acquired by crime, the perpetrators find a variety of schemes and techniques to hide the origin of the money, and most often they present that money as turnover from a legal business, but they also use other methods and techniques to first bring in, and then transfer and integrate, criminal money into the legal financial system (Nikoloska, 2015).

Money laundering is the process by which proceeds reasonably believed to be derived from criminal activity are transported, transferred, converted or incorporated into legal funds in order to conceal their origin, source, movement or ownership (Vitlarov, 2008).

In theory and practice, money laundering is defined as a procedure for concealing the existence, illegality of sources and use of income that is the result of criminal activity. According to Trajkovski, fraud is the most frequently applied tactic of criminals in the process of legalizing proceeds from crime (Trajkovski, 2011). It involves a series of financial operations (deposits, withdrawals, transfers, etc.) that eventually result in dirty money from crime becoming clean money, which can be used for legitimate business activities (Thony, 2000).

Money laundering is a process that takes place through three stages:

The first stage of placement, in which money launderers create schemes and techniques for introducing illegal money through financial institutions into the legal financial system, and smurfing[2] is often practiced as a technique, which includes breaking up or dispersing large amounts of cash into smaller amounts and depositing them in a bank account but there is also corruption and involvement in banks by bank officials (Naumovski, 2011).

The second phase of transfer, concealment or "layering" includes a series of activities of dislocation of the funds from their illegal source. These are the actions of movement of funds on the accounts of legal entities of individuals and legal entities in the country and abroad with the aim of concealing their source. The greater the fragmentation of the invested funds, the more difficult it is to discover

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2 **Smurfing** refers to a money laundering tactic by which individuals break up large sums of money into smaller, less noticeable amounts. These smaller amounts are then laundered separately, with the intention of avoiding detection.

the original source. The banking experts involved in this phase transform the money originating from criminal sources through multiple transactions to stratify the large amount of money invested in national and international frameworks. The electronic transfer of money enables the transfer process in a fast way and deployment of "safe places" in several countries, and mostly in off shore destinations (Čudan & Nikoloska, 2018).

The third stage of integration is the final stage of the money laundering process and it represents the return of the funds to the owner, but now as "clean", ("washed") funds from legitimate sources. It is the result of the successfully completed process of concealing the criminal origin of the funds through a series of activities and mechanisms that usually involve the involvement of several persons, trading companies and financial institutions, so that they can be returned to their owner as legitimate. The last phase is the most visible especially for the law enforcement authorities who, through operational procedures and the method of clues, undertake measures and activities to detect crimes with elements of money laundering.

Inefficient national AML/CFT system enables laundering of proceeds of crime. But as this system of control turns out to be insufficiently organized and efficient, a new form of criminality appears – "laundering" of money by opening a legal path for the movement of money. In this way, a new area of criminal activity is opened in banking and financial institutions. However, money laundering is not an end in itself, but the placement of the money acquired through criminal activity in other economic areas, the conquest of new markets and the establishment of control in areas in which organized crime was not present until that moment, and they provide opportunities for the acquisition of high profits and the avoidance of control in the payment of taxes and other obligations to the state (Arnaudovski, 1997).

The role of banks as the gatekeeper of the financial system in the fight against money laundering is not limited and it does not end only with checking, identification and verification of the client. With its positioning in money laundering schemes, the bank is exposed to continuous pressure and vigilance during the business relationship with its customers, while performing a series of numerous activities:

- Knowing your customer with "Know Your Customer" policy.
- Recognition and monitoring through applicatnion of "Know Your Transaction" policy.
- Verification of the origin of funds.
- Risk-based approach.
- Compliance with financial embargoes.
- Limiting the use of cash.
- Obligation to report suspicious activities and suspicious money laundering transactions to the Financial Intelligence Unit (FIU)
- Implementation of financial measures consisting in refusing to establish a business relationship and freezing assets of a client who is marked on a sanction list (national, UN or EU).
- Risk assessment (client, geographical location, product, distribution channel)
- Freezing of assets and refusal to carry out a transaction following an order issued by a competent court.

Financial institutions in the process of money laundering are most affected in the phases of placement and concealment. Money laundering increases the likelihood that customers or the bank will be defrauded by corrupt officials in the financial institution, thereby increasing the likelihood that the entire institution will become corrupt and controlled by criminal structures and increasing the institu-

tion reputational risk. It follows from the above that money laundering increases the operational risk for the financial institution, which inevitably leads to an increase in reputational risk (Bartlett, 2000).

The Preventive Role of Banks Against Money Laundering in the Republic of North Macedonia

Since 2001 the Republic of North Macedonia has been working on building the systemic functioning of the overall process of prevention and repression of money laundering, both by harmonizing laws with important international documents and reports of international bodies, as well as in building institutions and establishing an institutional system of coordination and cooperation.

In the Mutual Evaluation Report for the Republic of North Macedonia, adopted at the 65th plenary session of the Moneyval Committee – Council of Europe, the high awareness and efficiency of commercial banks in the fight against money laundering was positively evaluated. Taking into account the significant participation of banks in the financial sector of Macedonia, the positive assessment of their operation affects the assessment of the country's system as a whole. This rating is the result of long-term, constant and comprehensive efforts to improve the regulatory framework and implement measures to prevent money laundering. The report notes that, although some results have been achieved in terms of money laundering investigations and prosecutions, law enforcement and prosecutors should systematically conduct parallel financial investigations and target more complex cases of money laundering involving organized crime, especially drug trafficking, human trafficking as well as tax evasion and corruption. The report also notes the need for systematic application of the "follow the money - follow the goods" principle in order to improve the level of confiscation.

In the Republic of North Macedonia, banks perform several activities in accordance with the Law on Banks (Official Gazette of the Republic of Macedonia No. 31/93), the most important of which are the collection of deposits and other refundable sources of funds, lending in the country and abroad, payment transactions in the country and abroad, fast money transfer, etc. Banks have a dominant role in maintaining the stability of the entire financial system and other financial institutions. The size of the banks and the offer of products and services attract a large number of clients - legal and natural persons. They are the only bearers of payment turnover in the country. The danger of abuse of banks in the function of money laundering can lead to serious repercussions on the stability of banks, as well as the integrity of the banking system and the national economy as a whole. For those reasons, regulatory bodies have adopted appropriate legal solutions that follow international norms and standards.

According to national AML/CFT Law, the banks are obliged entities witch are responsible to undertake measures and actions in prevention of money laundering and terrorism financing, which includes identification of the client, the authorizer and the real owner, determination of his activity, financial condition, analysis of his activities and transactions, assessment of the risk of money laundering, data storage, submission of reports to the competent state authorities, etc. (Law on Prevention of Money Laundering and Financing of Terrorism, Official Gazette of the Republic of Macedonia, No. 151/22).

Banks classify customers depending on the degree of exposure to the risk of money laundering. In practice, clients with low, medium and high risk are met. The state of customers at the banks as of 31 December 2018 includes 70,793 high-risk customers, which represents 1.7 % of the total number of customers with whom the banks have established a business relationship. Profiling of customers in terms of the degree of risk is carried out according to the following criteria: country of origin risk, customer risk, transaction risk and product or service risk. In addition to these standard criteria, the most

frequent are the following criteria: appearance of the client on prohibited lists, complexity of transactions, volume, size and type of business transactions, deviation from the economic profile of the client, public office holder, activity, etc. Depending on the degree of risk of the client, banks perform a normal, simplified or enhanced analysis of the client. For most of the clients, the banks perform the usual analysis, the extent of which depends on the risk assessment of the client, the business relationship, the product or the transaction (Financial Intelligence Unit; 2018). Based on that, submitting a report to the Financial Intelligence Unit for further action and full clarification of suspicions is necessary.

If it is known that the first stage of money laundering is the placement usually done through banks, it becomes clear how much it is necessary to have adequate procedures and policies for the identification of clients and examination of their creditworthiness and integrity. In accordance to the international standards adopted by both The Basel Committee on Banking Supervision and by the FATF, each country must provide conditions for the application of appropriate procedures for the identification and examination of the creditworthiness of clients by its financial institutions (including banks). These procedures apply to both legal and natural persons who appear as potential or existing clients of a financial institution. The purpose of this procedure is to provide banks with reasonable assurance that they know their clients and their business activities. At the same time, the procedure for identifying the clients is also known as the policy of knowing your clients (know your customer), a term used by the Basel Committee (Trajkovski, 2011).

Banks have the role of detecting criminal money and proceeds, but also the implementation of legal repressive measures that refer to the "freezing" of bank accounts for suspicious individuals and legal entities based on a court decision. The efficiency in the actions of the banks can be seen by researching their activities resulting from the laws and submitted reports on suspected cases of money laundering, but also on other criminal acts, as well as measures taken to block bank accounts and retain financial transactions.

Criminal Liability of Banks in Cases of Involvement in Money Laundering

Based on the recommendations of the Vienna Convention (1988), the Strasbourg Convention (1990) and the Palermo Convention (2000), as well as the FATF Recommendations and the Basel Declaration for the Prevention of Abuse of the Banking System, for the Purposes of Money Laundering (1988) in the Republic of North Macedonia, with the adoption of the first criminal code after its independence, the crime "Money Laundering and Other Proceeds of Crime" is criminalized in Article 273 of the Criminal Code of the Republic of Macedonia (Official Gazette of the Republic of Macedonia No. 37/96.....248/18). The criminal offense has been amended and supplemented several times in order to include as many criminal activities as possible with elements of money laundering, but also to determine special criminal liability in financial institutions as legal entities and officials who are in direct contact with customers and with the realization of activities aimed at financial transactions.

With the crime of "Money Laundering and Other Proceeds of Crime", the Macedonian legislator foresees criminal liability for banks and bank officials who are directly involved in the process of receiving, taking, exchanging or dispersing money or other property that they know to have been obtained by a criminal offense, or by converting, changing, transferring or otherwise concealing that they come from such a source or concealing their location, movement or ownership; receive and give credit to the falsification of documents, do not report suspicious money intake or suspicious transactions in banking operations or avoid by dividing the transaction the duty to report in the cases determined by law, and that they will be punished with imprisonment of at least three years. The commission of

criminal acts in the banking business is a qualifying element and therefore a higher penalty is foreseen in relation to the basic crime for money laundering for which a prison sentence of one to ten years is foreseen. As a more serious form of the crime, if it is committed by an organized criminal group engaged in money laundering or with the help of foreign banks, financial institutions or individuals, the prison sentence is at least five years. A prison sentence of at least five years is also provided for officials and responsible persons in a bank who enable or allow a transaction or business relationship, contrary to their legal duty, or will carry out a transaction contrary to the prohibition imposed by a competent authority or a temporary measure determined by a court, or will not report the laundering of money, property or property benefit, which they learned about in the performance of their function or duty. Sanctioning with a prison sentence of three months to five years is provided for an official or responsible person in a bank who is, according to the law, an authorized entity for the application of measures and actions to prevent money laundering and other proceeds from a criminal offense, who will unauthorizedly disclose to a client, or a third person, data related to the procedure of examining suspicious transactions or the application of other measures and actions to prevent money laundering. If it is determined that the said actions were done due to favoritism, the prison sentence is at least one year, but the legislator also provides for a mitigating circumstance if the actions were committed due to negligence, for which a fine and a prison sentence of up to three years are foreseen. Criminal liability with a fine is provided for the legal entity in whose name and on whose account the criminal act was committed.

According to the criminalization of money laundering in banking operations, the Macedonian legislator foresees serious prison sentences for bank officials who have the status of officials or responsible persons. As a qualifying element it is considered if the crime was committed in banking operations. Acts committed with intent, but also due to negligence, are taken into account, which indicates the importance of respecting the laws in the banking sector that refer to money laundering.

The criminalization of money laundering protects the economic system and its functioning, protects the market economy, that is, the free market and trust in the economic system as a whole. Within the framework of the protection of the economic and financial system, the right to equal business conditions is protected for those economic entities that work legally in compliance with the laws and their right may be threatened or violated by those who work with money that was acquired from crime (Đorđević, 2016).

The criminal liability in banks can be analyzed from two aspects: when criminal liability is foreseen for banks and bank officials for actions with elements of money laundering and when banks have to implement the measures and actions related to "freezing" of financial assets on bank accounts through their bank officials.

The Paragraph 1 in Article 200 of the The Law on Criminal Procedure (Official Gazette of the Republic of Macedonia, No. 150/10, 100/12 and 198/18) provides "*Handling of data that is a bank secret, property in a bank safe, monitoring of payment transactions and account transactions and temporary suspension of execution of certain financial transactions*". If there is a well-founded suspicion that a certain person receives, keeps, transfers or otherwise disposes of the proceeds of a criminal offense in his bank accounts, and that proceeds is important for the investigation procedure of that criminal offense or is subject to compulsory confiscation according to the law, upon a reasoned request from the public prosecutor, the court may issue a decision ordering the bank or other financial institutions to provide him with documentation and data on the bank accounts and other financial transactions and affairs of that person, as well as for the persons for whom are reasonably believed to be involved in those financial transactions or affairs of the suspect if such data could be evidence in criminal proceedings.

Paragraph 6 provides that if the circumstances of paragraph 1 exist, upon a reasoned proposal of the public prosecutor, the judge of the preliminary procedure may by decision order the bank or other financial institution to monitor the payment transactions, account transactions or other affairs of a certain person and to regularly notify the public prosecutor for the time determined in the decision, and in paragraph 7, upon a reasoned proposal of the public prosecutor, the court may by decision order a financial institution or a legal entity to temporarily stop the execution of a specific financial transaction or work, and the property is temporarily confiscated.

Analysis of the Situation in the Republic of North Macedonia on the Role of Banks in Preventing Money Laundering

According to the law, banks have to identify suspicious customers, monitor and detect suspicious and related transactions through the banking services, and in their work they have appropriate direction through the specified list of indicators for banks prepared and revised by the Financial Intelligence Unit.

When analyzing their customers, bank officers must understand which activity, i.e. which transaction is normal, and which deviates from the customer's regular operations. When considering making a suspicious transaction report, reporting banks should consider all the circumstances of the transaction and their customer's activity. Relevant factors include knowledge of the business, financial history, background and behavior of the customer. Any deviation, if it is supported by an indicator for recognizing a suspicious transaction, the bank is obliged to fill out a suspicious transaction report and submit it to the Financial Intelligence Unit for their further analysis, collection of additional documentation to support or reject the suspicion of the crime of money laundering.

At the beginning of any investigation, knowledge of money laundering is based on suspicions that need to be proven on the basis of evidentiary material. Suspicion involves personal and subjective judgment, and bank officials should assess whether there are reasonable grounds to suspect that the transaction is related to money laundering. In this regard, attention should be paid to: business transactions with individuals, corporate entities and financial institutions in or from other countries that do not or insufficiently meet the recommendations of the Financial Action Task Force (FATF), a transaction that is complex, unusual or large, whether completed or not, unusual patterns of transactions and insignificant but periodic transactions that have no obvious or visible legal purpose.

The banks are obliged to submit the collected data, information and documents to the Financial Intelligence Unit (FIU) within three working days of the completed transaction in the form of a report for suspicious transaction or suspicious activity. Based on the reports and its own analysis, when there is a suspicion of a criminal offense of money laundering, the FIU can submit a written order to the bank for a temporary hold and/or ban on carrying out transactions or a temporary freezing of assets, with a deadline of 72 hours, and if holidays and weekends are included, the freezing can be longer than 129 hours from the issuance of the order. For that, the Administration submits a request for the determination of temporary measures to the competent public prosecutor, who reviews the request and submits a proposal for the determination of temporary measures to the competent court for making a decision. The decision is submitted to the appropriate bank with full data on the natural and legal person and the transaction account number and the type and amount of financial assets.

Table 1 *Volume and dynamics of submitted reports on suspicious transactions - from banks and type and amount of frozen financial assets in the Republic of North Macedonia*

Year	Number of banks	STR sent	Submitted reports		Frozen financial assets		
			Money laundering	Others criminal offences	denars	euros	USA dollars
2017	15	177	22	201	44,293.945.00	/	/
2018	15	152	39	183	19,235.585.00	3,607.738.00	126,910.00
2019	15	226	45	172	38,026.899.00	324,822.00	3,152.00
2020	14	237	32	171	17,774.076.00	1,413.148.00	/
2021	13	227	81	305	73,641.220.00	1,676.315.69 3,361.509.94	/
Total	15	1 019	219	1032	192,971.725.00	10,383.532	130,062.00

According to the data shown in the Annual Reports of the Financial Intelligence Unit for the period 2017-2022, a total number of 1019 STRs were submitted to the Financial Intelligence Unit by the banks, the largest number in 2020 being 237, and the fewest in 2018 being 152. Based on the analyses, the FIU prepared a total of 219 reports on the existence of suspicion of money laundering, the most in 2021 being 81 reports. A total of 1032 reports were submitted for other crimes, the most for 2021, 305 reports, and the least for other crimes, the highest number of reports were in 2021, 81, and the fewest in 2020, 171 reports.

Based on court decisions, a total of MKD 192,971.725.00, EUR 10,383.532 and USD 130,062.00 have been frozen. In 2021, that amount was the largest of 73,641.220.00 and 1,676.315.69. On the basis of international cooperation, requests from foreign institutions to freeze financial assets in Macedonian banks have been submitted to the Republic of North Macedonia. They amount to 3,361.509.94 and are shown separately because they have to be returned to the requesting States based on national and international legislation.

Conclusions and Recommendations

For the past two decades, the Republic of North Macedonia has been continuously working on building a system to prevent money laundering. The system was established in accordance with the Law on prevention of money laundering and financing of terrorism, (Law on Prevention of Money Laundering and Financing of Terrorism, Official Gazette of the Republic of Macedonia, No. 151/22) and it has been changed and supplemented several times based on the recommendations of international documents and the observed practices of all those involved in that system. For the functioning of the system where, in the first pillar, banks as important financial entities should fully implement the legal solutions that are fully defined, which is also confirmed by the latest Mutual Rvaluation Report issued by Moneyval Committee.

The legal framework is good, but what needs to be worked on is the improvement of institutional cooperation and greater involvement of the law enforcement authorities to detect, shed light and pro-

vide evidence for cases of organized crime and increase financial investigations and connections with money laundering, thereby improving the efficiency of processing criminal cases and effectiveness in terms of freezing financial accounts and enabling future confiscation. Complete rounding of criminal cases is a good "answer" to organized crime groups and money launderers originating from crime.

As far as banks are concerned, the degree of control and prevention of corruption should be increased for bank officials who "may" be involved in criminal structures only with a criminal advisory role to "facilitate" the process of money laundering. Therefore, it is necessary to raise the level of institutional cooperation and a team and coordinated approach, which is an essential prerequisite for the suppression of organized crime and corruption. Time is an important factor, especially when deciding on the freezing of financial assets, but also on the adoption of durable solutions with substantiated suspicions and relevant evidence, which are most significant for the comprehensive completion of criminal cases with elements of money laundering that should end with effective confiscation.

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SOME CONSIDERATIONS REGARDING THE USE OF ARTIFICIAL INTELLIGENCE IN LAW ENFORCEMENT

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The Context

In the late 20th century, AI technologies were primarily focused on academic research and had limited application in the legal domain. Early AI systems, such as expert systems and rule-based systems, were explored for legal applications, including legal reasoning and legal knowledge representation. The 2000s saw the emergence of data-driven approaches in AI, such as machine learning, which provided new possibilities for analysing legal data and supporting decision-making. AI technologies were gradually employed in various legal tasks, such as document review, contract analysis, and legal research, to improve efficiency and accuracy.

Predictive Analytics and Risk Assessment. Around the 2010s, predictive analytics gained attention in criminal law. Machine learning algorithms were used to analyse historical crime data and make predictions about crime patterns, recidivism rates, or the likelihood of an individual reoffending. Risk assessment tools based on AI were developed to assist judges and parole boards in making decisions about pretrial release, sentencing, or parole. However, concerns about bias, fairness, and the transparency of these algorithms started to arise, leading to debates about their reliability and potential negative impact.

Biometrics and Surveillance. AI-based biometric technologies, such as facial recognition and fingerprint analysis, have been adopted by law enforcement agencies for identification and surveillance purposes. The use of AI in video surveillance systems enables automated analysis of large volumes of video footage to detect and track potential criminal activities. These applications raise privacy concerns and challenges related to accuracy, bias, and the potential for discriminatory outcomes.

Artificial Intelligence – A Problem of Conceptualization

In the context of AI-driven crime analytics, AI can be used to organize, categorize, analyse, and interpret suspicious activity reports and evidence and, in particular, electronic evidence (such as online shopping, financial transactions, emails, chat logs, social media posts, and the corresponding subscriber and traffic data) with the aim of consolidating the prosecution files.

The concept of artificial intelligence has changed over time. The legal definition of AI is not yet uniform. However, some countries are in the first stages of developing appropriate legal frameworks. The general spirit characterizing these laws is to define the relationship between the law and the limits of the application of artificial intelligence. The main legal, current and future challenges seem to consist in the analysis of ideas on the legal personality of the AI and the determination of civil and criminal liability in cases of damages caused by intelligent machinery in a way autonomous or by third parties, or their users.

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The phrase "legal personality" means the ability of a subject of law to exercise rights and assume obligations, in a given legal system. When we mention legal personality in the context of the law, what comes to mind are natural persons and legal persons as holders of this personality. In order to talk about the legal personality of Artificial Intelligence, the latter must meet certain criteria and go through several evaluation filters. The aspect of legal personality will be evaluated in relation to rights, obligations and legal responsibility. As for the ability of Artificial Intelligence to carry rights and take on obligations, we also addressed it in the preceding issue. If the AI were to be recognized as having full legal personality, then it could exercise ownership, enter into contracts, hold bank accounts, conduct legal proceedings or create, possess, purchase and sell intellectual property (Mecaj, 2022).

Artificial Intelligence cannot be categorized as a person within the meaning of the law. It is true that the creations of Artificial Intelligence are something that our legal system has never encountered before, they are neither property nor people (Imran, 2020). Many authors compare the legal situation of Artificial Intelligence today with those of the "quasi-person"[3] that law once encountered. Many authors compare the legal situation of Artificial Intelligence today with those of the "quasi-person" that law once encountered. Referring to the legal personality of Artificial Intelligence, other jurists are of the opinion that as long as the discussion about the moral and ethical conduct of the AI makes sense, then the legal discussion on the recognition of the legal personality of Artificial Intelligence would also make sense (Chopra & White, 2021: 4). Legal personality is an important step on the path to the full achievement of constitutional rights, because the moment the AI is recognized as a person, in the sense of the law, then the constitutional protection comes into play (Willick, 2021: 2).

In April 2021, the European Commission proposed the first EU regulatory framework for AI. It says that AI systems that can be used in different applications are analysed and classified according to the risk they pose to users. The different risk levels will mean more or less regulation. Once approved, these will be the world's first rules on AI. Parliament's priority is to make sure that AI systems used in the EU are safe, transparent, traceable, non-discriminatory and environmentally friendly. AI systems should be overseen by people, rather than by automation, to prevent harmful outcomes. Parliament also wants to establish a technology-neutral, uniform definition for AI that could be applied to future AI systems.

AI systems fall into eight specific areas that will have to be registered in an EU database:

- Biometric identification and categorization of natural persons
- Management and operation of critical infrastructure
- Education and vocational training
- Employment, worker management and access to self-employment
- Access to and enjoyment of essential private services and public services and benefits
- Law enforcement
- Migration, asylum and border control management
- Assistance in legal interpretation and application of the law.

On 14 June 2023, MEPs adopted Parliaments negotiating position on the AI Act. The talks will now begin with the EU countries in the Council on the final form of the law. The aim is to reach an agreement by the end of this year.

Policing and Law Enforcement Affected by Artificial Intelligence

Technology based on artificial intelligence is influencing every part of our personal and professional lives. The same is true with policing. Police personnel have been employing software for crime prevention, crowd control, and facial recognition for a number of years.

Artificial intelligence technology was mostly the focus of science fiction films and books a few decades ago. Today, this kind of technology is being used in law enforcement as well as other facets of our life. Robots are assisting in policing both high security and risky places like power plants and building sites, as well as low security areas like malls.

Algorithms are used in AI technology to quickly examine vast volumes of data. As the software picks up on human activities, it eventually has the capacity to imitate and predict future behaviour. The adoption of AI in law enforcement is projected to increase as the technology's capabilities and accuracy advance.

One of the most widely used applications of AI technology is facial recognition. Police personnel can positively identify someone thanks to facial recognition technology. They are no longer required to manually cross-reference IDs between several databases. Most of these software programs not only capture an actual image but also biometric information. More precise identification is made possible by biometric data.

Face recognition technology is used by law enforcement agencies all around the world to:

- more easily find people they are looking for;
- reduce the likelihood of false positives when identifying persons in photos;
- determine the identities of the hurt or unconscious victims of accidents;
- retroactively verify a person's identity and compare it to databases already in existence.

Concerns about bias in facial recognition are undoubtedly extremely significant, and they are caused by the skewed data sets we provide for it to learn from. These machines will become smarter as we expand the data sets we use, and provide them with more varied material to learn from.

Software with artificial intelligence can evaluate enormous amounts of data, including CCTV feeds. The machine, in addition to looking for faces, can spot trends, patterns of behaviour, and other correlations considerably more quickly than people could. Humans are far behind technology in terms of the amount of data that can be evaluated.

While analysis is the cornerstone of all AI applications, it is machine learning that allows the software to come to decisions that resemble those of a human. AI can forecast the future using those findings. Even though it seems simple, machine learning requires time and multiple iterations before an algorithm can reach a meaningful conclusion. Human conduct is complicated and is motivated by a multitude of factors. In the future, it is theoretically feasible for software to pick them all up and use them. However, AI is currently supporting police officers and law enforcement in a supportive capacity. As of right now, technology cannot replace human police.

The amount of documentation that officers must complete after attending incidents has been criticized by police departments around the world. Making and maintaining case files takes police off the streets and jeopardizes public safety.

Adding that reducing case reports would also be problematic because they frequently serve as the cornerstone of a successful criminal prosecution. AI can assist by automatically collecting the necessary

data, reducing the time police spend reporting. Officers may need to analyse and comment the data that have been gathered, but they will probably spend a lot less time doing so than it would have taken them to do everything manually.

By patrolling shopping malls, electricity networks, etc., robots are enhancing, monitoring, and securing low-risk and high-risk locations. These robots are employed to access places where patrolling or monitoring by humans is difficult or impractical.

Drones can perform essential remote monitoring and inspections on the region being monitored or patrolled without the need for human interaction. Due to its aerial capabilities, the drone can investigate structures that are challenging to access from the ground.

The landscape of law enforcement has undergone a profound change as a result of the rise of artificial intelligence (AI), notably in the area of predictive policing. Data analytics are used in predictive policing to foresee and stop criminal behaviour before it happens. Law enforcement organizations may now use AI technologies to analyse huge datasets in real-time and find patterns and trends that can be used to predict future criminal activity or pinpoint high-risk regions. By more effectively allocating resources and acting in situations before they escalate into serious crimes, these predictive capabilities enable law enforcement to be more proactive.

Predictive policing relies heavily on machine learning algorithms, an essential part of artificial intelligence. Taking into account elements like crime type, location, date and time, these algorithms learn from past crime data. The program improves its predictions over time by iteratively learning new information. More complex models can take into account outside information including socioeconomic indicators, environmental factors, and regional events that can affect crime rates. As a result, a dynamic, intelligent system provides law enforcement with a high-resolution view of probable crime patterns and hotspots, supporting them in making data-driven judgments.

Predictive policing has many benefits, but it is not without controversies and difficulties. Critics claim that if the past data used are biased or racist, the practice could result in invasions of privacy, over policing of particular districts, and the perpetuation of racism. The accuracy of AI depends on the quality of the training data. In order to avoid bias or misuse, it is crucial that AI-driven predictive policing be implemented in a transparent, strictly regulated manner that includes safeguards. AI and predictive policing have the potential to improve crime prevention and increase community safety and security in the right hands and with the right ethical concerns.

Redefining Forensics in Law Enforcement with Deep Learning and AI

Deep learning, a branch of artificial intelligence (AI), has the potential to revolutionize forensics in law enforcement by providing tools and methods that will speed up and improve the recognition and analysis of physical evidence. Deep learning models are useful for tasks like voice pattern analysis, facial recognition, and fingerprint or DNA analysis because they can be trained to spot patterns and abnormalities in large, complicated data sets. These programs can more quickly and accurately conduct forensic investigations by sorting through thousands of pieces of evidence than a human analyst could.

Neural networks are a fundamental component of artificial intelligence and have been applied to various fields with remarkable success. Implementing neural networks and artificial intelligence in law enforcement has become increasingly common, offering potential benefits in terms of improving efficiency, solving crimes, and enhancing public safety. Facial recognition, license plate recognition, predictive

policing, crime pattern analysis, text analysis and natural language processing (NLP), cyber security, digital forensics, risk assessment and pretrial decision-making, body-worn camera analysis, emergency response optimization are some ways neural networks are being utilized in the field of law enforcement.

AI-driven facial recognition technology analyses facial traits and compares them to a database of recognized faces using deep learning algorithms. This technology is crucial to investigations and security operations since it may help identify suspects or victims from surveillance footage or social media. Voice pattern analysis, a field of forensics that can be extremely helpful in solving crimes, can use deep learning algorithms to match audio samples from crime scenes or phone calls to specific individuals.

The analysis of images and recordings from crime scenes is another area where deep learning is being used. These systems can emphasize minute things that a human eye might miss, such as covert weaponry or undetectable indicators of conflict, by utilizing neural networks. These forensics technical developments not only speed up the gathering and analysis of evidence, but also significantly lower the possibility of human error. Law enforcement will advance significantly with the use of AI to forensics, receiving cutting-edge tools to improve their capacity for investigating crimes.

AI models can aid in evaluating the risk posed by individuals in the criminal justice system, helping judges make more informed decisions regarding bail, parole, and sentencing. AI algorithms, including neural networks, are used to optimize emergency response systems by predicting the location and severity of incidents. This enables faster and more effective deployment of resources in critical situations.

There are significant concerns regarding the impact of artificial intelligence on civil liberties and human rights. Even though AI tools like face recognition have the potential to increase the effectiveness of law enforcement personnel, these tools may unintentionally reinforce and amplify current racial prejudices and inequality in policing. Particularly, facial recognition algorithms have drawn criticism because they tend to mistakenly identify people of colour more frequently than their white counterparts, which can result in false accusations and unwarranted scrutiny. This racial profiling is harmful to society as a whole as well as to the targeted people and groups. We have a moral responsibility to address these biases. It is important to be concerned about how faith in law enforcement is eroding because it creates societal divisions and makes it harder to keep the public safe and orderly. Legal repercussions may be significant if civil rights are compromised as a result of unfair person identification.

The biased data that AI systems are educated on frequently show up in their outputs. We can develop more egalitarian AI tools by making sure the data are representative of all racial, ethnic, and demographic groups. Similar to this, improving the algorithms' ability to detect and control bias can help improve how fair AI applications in law enforcement are. But these actions on their own are insufficient. The ethical implications of AI use in law enforcement must be taken into account. Principles that place a high priority on respect for human rights, justice, transparency, and accountability should be used to guide the deployment of AI. Continuous monitoring and routine auditing of these systems for potential biases or anomalies are crucial in this regard. Only then can we guarantee that AI benefits law enforcement officers rather than serving as a basis for prejudice and injustice.

The Future of AI in Law Enforcement

The adoption of cutting-edge technologies by the law enforcement community, particularly AI and VR (Virtual Reality), has created new opportunities for enhancing police training methods. These tools provide students with a safe, immersive, and realistic learning environment where they may practice, develop, and polish their skills. They aid in preparing officers for the unexpected by model-

ling a variety of intricate, real-world circumstances. This improves their ability to make decisions and react to many events, including potentially dangerous ones.

The ability of VR technology, in particular, to effectively simulate human interactions and reactions, is of great interest. It gives law enforcement officials a chance to practice managing tense situations with finesse and empathy, lowering the likelihood of pointless altercations or overuse of force. Contrarily, AI can be used to customize training modules according to unique strengths and limitations, resulting in a personalized learning environment. AI algorithms can provide useful insights into the trainee's performance by collecting and analysing data from VR training sessions and suggesting areas that require additional work.

A collaborative conversation with law enforcement authorities and other stakeholders should come after the incorporation of new technologies into law enforcement and is led by public consensus. It is crucial to make sure that the use of these technologies does not violate the values of accountability, transparency, and privacy. In this manner, the incorporation of AI and VR into police training may lead to a more effective, moral, and neighbourhood-focused police force, thereby fostering public trust and collaboration.

With the rise of cybercrimes including money laundering, fraud, and identity theft, law enforcement has had to adjust to a changing landscape of criminal activity. AI and machine learning technologies have played a significant part in this transition by offering cutting-edge tools that can detect, evaluate, and forecast criminal behaviour in the digital sphere. Law enforcement officials and crime analysts may now spot suspicious activity more quickly and accurately than ever before thanks to sophisticated algorithmic systems that are outfitted with features like pattern recognition and anomaly identification.

Particularly, AI has changed efforts to combat money laundering. Although it is a complex crime that frequently goes undiscovered in the financial industry, artificial intelligence (AI) may spot small patterns and anomalies that might point to illegal transactions. Software companies are creating AI-driven tools that analyse enormous volumes of financial data for signs of questionable activity, significantly cutting the time and resources required for manual investigations. In addition to aiding in the capture of offenders, this proactive approach to financial crime detection also serves as a potent deterrence.

Collaboration with the private sector, including software businesses, financial institutions, and cyber security organizations, is required for the adoption of AI in law enforcement, particularly in cyber security. Given the scope and complexity of cybercrimes, an integrated strategy that makes use of shared resources and intelligence can produce better results. In order to tackle the sophisticated cyber threats of the digital era and ensure a safer and more secure online environment for all users, law enforcement and the commercial sector must work together effectively.

Real-time crime reporting and neighbourhood policing have benefited greatly from the use of drone and wearable technologies. Body cams and other wearable equipment can give police officers on the scene real-time video technology, boosting police investigations and increasing accountability. On the other hand, drone technology can be useful for aerial surveillance in public locations, especially during large-scale events or in difficult-to-reach places, by offering a bird's-eye view that can help with situation assessment and tactical planning. Using AI and surveillance technology, real robots are even being used in some places to patrol public locations and detect suspicious activity.

These technologies do, however, also present legitimate social and privacy concerns in addition to the societal benefits. For instance, the increased use of monitoring for identification could result in abuse or overreach. The relationship between the police and the communities they serve may become less trustworthy as a result of privacy invasion and potential bias in predictive policing algorithms. The

employment of cutting-edge policing tools and the protection of civil liberties must therefore be balanced. In order to protect privacy while utilizing the advantages of AI in community policing, norms that respect privacy must be established. This can be done through transparency, regulatory oversight, collaborative conversation with law enforcement, and public consensus.

Conclusions

Smart, cutting-edge police services cannot fulfil their promise in the community without a certain degree of acceptance and trust. Citizens will not see the benefits of AI technology for police where they feel like they are constantly being watched without being able to feel safer.

Community trust must increase as the possibilities of artificial intelligence technology expand and predictive policing becomes more feasible. When trust and technology are completely combined, AI's potential in policing will only be fully realized.

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S.N. TREGUBOV – AN OUTSTANDING RUSSIAN-SERBIAN CRIMINALIST

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Introduction

Criminal investigation/criminalistics[2] is not only just a "pure" criminalistic knowledge and the process of obtaining it, but it is also a huge number of various criminalistic institutions and people (criminalists). There is always a particular person, who has created every major achievement for the development of criminalistics. The criminalists' life-path information allows us to better understand and evaluate criminalists' contribution to the development of the science in question.

Russia and Serbia share the field of inquiry originating from their rich criminalistics legacy. A special place in this "field" is occupied by the work of S.N. Tregubov, who was born in Russia, worked in the Russian justice authorities and emigrated to Serbia. After his emigration in 1920 he continued his research in criminalistics up to the end of 1944.

S.N. Tregubov made a significant impact on the development of criminalistics of the twentieth century both in Russia and Serbia. His outstanding contribution to the development of criminalistics science, education and its real practice has become a property of the two countries. S.N. Tregubov's contribution has not lost its significance. Unfortunately, there is still lack of knowledge about S.N. Tregubov's scientific achievements both in modern Russia and in Serbia. His extensive criminalistics heritage remains understudied.

The Special Aspects of Russian Criminalistic Historiography About S.N. Tregubov

The conducted analysis of the historiography of Russian criminalistics allows us to conclude that the impact of S.N. Tregubov on the development of criminalistic scientific thought in Russia "suffers" from significant incompleteness and fragmentation.

Russian professor V.I. Kolomatsky rightly noted that many Russian criminalists preferred to keep quiet about S.N. Tregubov (Kolomatsky, 2007: 126).

One of the reasons for this condition was the fact that S.N. Tregubov was an active opponent of the Soviet regime, serving in the White Army (1918-1920), and after emigrating to Belgrade in 1920, participating in the activities of some white-emigrant organizations, which were aimed at overthrowing the Soviet power. In particular, S.N. Tregubov was a member of the Union of United Officers' Societies, the ROVS, and he was a permanent head of the Society of Military Lawyers in Serbia for more than twenty-two years (1922-1945), against which the Soviet intelligence and counterintelligence agencies

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2 We use terms "criminal investigation" and "criminalistics" synonymously for the science of criminal investigation (as in the German use of the term 'Kriminalistik' or in the Russian use of the term 'Kriminalistika'. We support D. Maver's position (for details refer - D. Maver, 2009).

were fighting. Thus, in his "Appeal to Russian Judiciary" S.N. Tregubov made a call for "the desired liberation of Russia from Bolshevik slavery and deprivation of human rights" (Tregubov, 1929: 2).

S.N. Tregubov had been mentioned in the criminalistic literature of the USSR up to the 1930s, i.e. before the period of mass repressions in the country. Thus, in the "Weekly of Soviet Justice" № 44 issued on November 10, (1923), there was information about the sale of S.N. Tregubov's book "Fundamentals of Criminal Technique" (1915) for 1 ruble 50 kopecks. Separate brief references to S.N. Tregubov were available in a number of manuals and guides for practitioners (criminal investigators) (for example, Tepin, 1926: 198; Tepin, 1928; Gromov, 1932 etc.).

However, in the subsequent years the references to S. N. Tregubov almost completely disappeared from the Soviet criminalistic literature. Thus, in the First Soviet textbook on criminalistics (1935) we did not find references to S.N. Tregubov (Criminalistics, 1935).

For the Soviet authorities S. N. Tregubov was a "class enemy", so it was forbidden to point at his criminalistics merits, especially during the years of Stalin repressions (Sokol, 2017).

In 1948, A. I. Vinberg wrote an article "On the History of Criminalistic Institutions" (Vinberg, 1948). In this work, the author proposed to render the history of criminalistic institutions from a "class position approach", without "harmful academic objectivism", with irreconcilable criticism and exposure of detrimental effect of bourgeois criminalistic science (Vinberg, 1948: 77-78). Considering the history of criminalistic examination in pre-revolutionary Russia, A. I. Vinberg mentioned S. N. Tregubov only once in connection with the latter's participation in the engrossment for establishing the first Russian "Cabinet" of Scientific Criminalistic Examination in St. Petersburg (Vinberg, 1948: 77-78).

From 1960s, some Soviet criminal investigators began mentioning S. N. Tregubov more frequently in their papers. However, the information was usually brief, incomplete and limited to indicate the period of S. N. Tregubov's activity before 1917 (R. S. Belkin, A. I. Vinberg, I.A. Vozgrin, I. F. Krylov, N. P. Yablokov, etc.).

In 1982, R. S. Belkin and A. I. Vinberg published their work "The History of Soviet Criminalistics. The Emergence and Formation of the Science (1917-1930s)", in which they avoided analyzing and comprehensively evaluating the work of S. N. Tregubov in criminalistics, as well as his impact on the genesis of criminalistics in Russia. R. S. Belkin and A. I. Vinberg inconsistently regarded Tregubov's work as low-level. They considered S. N. Tregubov a "Russian popularizer" of the ideas of G. Gross, and also noted that the works of S. N. Tregubov (1912, 1915) bore the influence of the works of Gross, Bertillon, Niceforo, Reiss and other Western European criminal investigators, and in some papers were just simple paraphrases of their concepts and recommendations (Belkin & Vinberg, 1982: 12). At the same time, A. I. Vinberg and R. S. Belkin admitted that S. N. Tregubov's book "Fundamentals of Criminal Technique" (1915) was the first Russian practical guide for criminal investigators (Belkin & Vinberg, 1982: 12).

It can be stated that the works of Soviet criminalists were dependent on politicized (class) assessments of S. N. Tregubov's criminalistics work or they simply ignored his existence.

The ideologization of historical and criminalistic research in the Soviet period had a negative impact on the results of the criminalistics history study, characterized by a generally negative attitude to both "bourgeois" criminalistics and pre-revolutionary Russian criminalistics (Sokol, 2021). It was precisely at this period of time that "concepts" like "Soviet criminalistics" and "socialist criminalistics" (Titova & Sokol, 2022) were developed and proclaimed to be the only scientific, only right and standard (for example, Stelzer, 1978: 10).

After 1991, criminalistics in Russia ceased being referred to as "Soviet" or "socialist".

However, the former ideological assessments of the "bourgeois" and "pre-revolutionary" Russian criminalistics are still occasionally presented in modern criminalistic narrative (Sokol, 2021). Soviet ideological clichés are still applicable although slightly transformed. At present pre-revolutionary criminalistic literature as well as the criminalistic heritage of Russian emigrants has been studied fragmentarily.

While in his introduction to "Encyclopedia of Criminalistics" (2000) R. S. Belkin regarded S.N. Tregubov as one of pioneers of the nascent Russian criminalistic science (Belkin, 2000: 6), there was no biographical section on S. N. Tregubov in the encyclopedia.

This encyclopedia contained only a brief mention of S. N. Tregubov's practical guide for the judiciary called "Fundamentals of Criminal Technique. Scientific and Technical Methods of Crime Investigation" (1915). In his book by S. N. Tregubov (as compared to the edition of 1912) there are four additional sections: investigation of railroad derailments; application of ultraviolet rays; identification of the criminal; methods of material evidence keeping and delivering it to examination site. However, R. S. Belkin unreasonably questions S. N. Tregubov's authorship (Belkin, 2000: 299).

Unfortunately, previous assessments of S. N. Tregubov's work are still occasionally estimated as dictated by an ideological bias which misrepresents his real contribution to the development history of Russian and Serbian criminalistics.

In recent years, more and more Russian criminalists tend to mention information about S.N. Tregubov in their criminalistic works (A. I. Bastrykin, S. A. Velichkin, N. A. Kornienko, A.A. Koisin, Sh. N. Khaziev, A. A. Exarkhopulo, etc.).

A considerable work was carried out by the staff of the Department of Criminalistics at the Military Law Faculty of the Ministry of Defense of Russia (A. Y. Vinokurov, V. G. Kolomatsky, S. V. Malikov, etc.) in 2005-2011. They researched the archives of the Ministry of Justice of the Russian Empire and the Alexander's Military Law Academy, which made it possible to obtain previously unknown information about Tregubov's life and career in criminalistics in Russia. The employees of the above mentioned Department of Criminalistics organized and held a scientific conference "The First Inter-university Tregubov Reading" (2007) followed up by the issue of collected scientific papers.

In 2011, the International Criminalistic Conference, dedicated to the 100th anniversary of teaching criminalistic science in higher educational institutions of Russia, was held. It was noted that the beginning of teaching criminalistics in the Russian Empire is inextricably linked with the name of S. N. Tregubov (Criminalistics: 100 years of teaching in higher educational institutions of Russia, 2011).

At the same time, modern Russian criminalistic publications often contain incorrect and contradictory information about S. N. Tregubov. Thus, in one of the textbooks on criminalistics (2014) S. N. Tregubov was correctly referred to as one of "prominent scientists of criminalistics", but this textbook (Criminalistics, 2014: 35) incorrectly indicates the years of his life and places a photograph of another person (not S. N. Tregubov).

In 2019 professor N. P. Yablokov recognized S. N. Tregubov's work "Fundamentals of Criminal Technique" (1915) as "a serious work on criminalistics" and also pointed out that this work was of great importance for the development of criminalistic knowledge in Russia (Criminalistics, 2019: 154, 180). At the same time, N. P. Yablokov argued that the history of the emergence of Russian criminalistics began only after the October Revolution, i.e. after 1917 (Criminalistics, 2019: 154). The paradoxical

nature of such conclusion is obvious: the existence of criminalistic works of pre-revolutionary Russian criminalists, S. N. Tregubov in particular, is recognized, but the existence of criminalistics in the country of that period is denied. It turns out that the existence of textbooks on criminalistics is not considered as evidence of the existence of criminalistics in pre-revolutionary Russia. The foregoing confirms the presence of old "class" (ideologized) estimates of the matter in modern Russian literature on criminalistics.

Unfortunately, studies of S. N. Tregubov's criminalistics heritage have almost practically ceased in Russia. For various reasons, it was not possible to execute the plans of Russian criminalists to study the criminalistics works of S. N. Tregubov in Serbia.

The analysis of historiographical literature, as well as various historical documents, allows us to determine the main stages of S. N. Tregubov's life-path and his merits in pre-Soviet Russia.

The Main Criminalistic Merits of S. N. Tregubov in Pre-Revolutionary Russia (Before his Emigration to Serbia)

Sergey Nikolayevich Tregubov was born in St. Petersburg on October 24, 1866, in the family of a Russian army general.

S. N. Tregubov studied at a "closed" privileged (elite) educational institution - the Imperial School of Law, which was founded in 1835 by Tsar Nicholas I. Only boys (males) from the nobility were admitted to study at the school. The School of Jurisprudence trained legal personnel for the judicial system (for the Ministry of Justice) in seven year-period of studying.

S. N. Tregubov finished his studies in 1888 at the age of 21 with a "silver medal" and he was attached as a trainee to the judicial investigator in the St. Petersburg District Court. In his further service S. N. Tregubov took various judicial positions in the Ministry of Justice as well. Thus, S. N. Tregubov had a great practical experience of investigative and judicial activity in the types of criminal cases.

In the 1910-1913 period, S. N. Tregubov was on official trips to Berlin, Dresden, Lausanne, Paris, Rome and other European cities, where he studied European criminal investigation procedures. In 1910 S. N. Tregubov met Professor R.-A. Reiss in Lausanne, with whom he maintained close relations for years.

In 1911, a group of Russian judicial officers, headed by S. N. Tregubov, visited the R.-A. Reiss Institute of Scientific Police. In two months and a half R.-A. Reiss got this group familiarized with the program of a full course-study on "scientific police (*police scientifique*)". Prof. Reiss delivered lectures (40 in all) in French every day (except Saturdays) from 9:30 to 11:30 a.m. (Tregubov, 1913: 240). During the rest of the day, including Saturdays, the trainees had an access to the laboratory, where the laboratory assistant François Gauthier gave them the necessary explanations and assisted the trainees in practical (experimental) exercises (Tregubov, 1913: 241). After the completion of the training program, Professor Reiss took his Russian students to Paris, where they got acquainted with various areas of the Paris police service and visited Bertillon's office, his laboratories, museum, archive and photographic department (Tregubov, 1913: 242).

On his return from the trip S. N. Tregubov reported the results in the building of the St. Petersburg District Court to official employees of the judicial department, as well as in the Alexander's Military Law Academy and the Imperial School of Jurisprudence (Tregubov, 1913: 243).

Since autumn of 1911, S. N. Tregubov, started teaching criminalistics as a subject named "criminal investigation technique" as a teacher at the Imperial School of Jurisprudence and professor of criminal law at the Alexander Military Law Academy, for the first time in Russia. During the existence of the Alexander's Military Law Academy, officers of the Serbian army were also taught there.

In the winter of 1911, S. N. Tregubov established the "Judicial-technical cabinet" (Forensic-technical room), first of its kind in Russia, at the Imperial School of Law, where practical classes in criminal technique were held for senior students (Tregubov, 1913: 243). In August 1912, a similar cabinet (room) was established at the Alexander's Military Law Academy, and in the autumn of 1912 practical classes were organized there (Tregubov, 1913: 243; Malikov, 2012).

In 1912 the content of the lecture-course by R.-A. Reiss was published by S. N. Tregubov in Russia with the title "Scientific Technique of Crime Investigation" (Reiss, 1912). The book aroused great interest among the Russian public, first of all among criminalists-practitioners.

In May 1912, R.-A. Reiss came to Russia and delivered a lecture course on "scientific police (scientific technique of crime investigation)" at the Alexander's Military Law Academy and the Imperial School of Jurisprudence.

On May 22, 1912, R.-A. Reiss visited the places of imprisonment for criminals in St. Petersburg. He was accompanied by S. N. Tregubov. R.-A. Reiss tasted the prisoners' food, including black bread and kvass. In the book for honorary visitors of the St. Petersburg House of Preliminary Detention, Professor Reiss wrote: "Fascinated by my first visit to a Russian prison" (Prison Gazette, 1912, 6-7).

S. N. Tregubov did not limit himself to popularization of scientific knowledge on criminalistics in Russia, and took an active part in the creation of government expert criminalistic institutions. Such institutions had as their purpose to produce all technical expertise, except for medico-legal (medico-forensic) and chemical, which were under the jurisdiction of medical departments of provincial boards' authority (Tregubov, 1932c: 881-882).

In 1912, S. N. Tregubov prepared a draft law on the organization of the first Cabinet of Scientific and Forensic Examination in Russia in St. Petersburg. Then, as a representative of the Ministry of Justice, S. N. Tregubov attended the meeting of the Commission on Judicial Reforms of the State Duma on 23.02.1912 (Report on the bill on the establishment of the Cabinet of Scientific and Forensic Expertise, 1913). Approved by the State Council and the State Duma, the Law on the establishment of the office of scientific and criminalistics expertise was approved by the Russian Emperor on 28.06.1912.

A sum of 10,000 rubles was allocated for the initial furnishing of the "cabinet", which allowed to equip it with the most modern technical means purchased in European countries. According to S. N. Tregubov, the Cabinet had the best forensic technical laboratory in Europe. This Cabinet was exemplary and was up to the level of a genuine scientific institution (Tregubov, 1913; Tregubov, 1932c: 881).

The grand opening of the cabinet of scientific forensic expertise took place on December 9, 1912 in the presence of the Minister of Justice - I. G. Scheglovitov and direct participation of S. N. Tregubov. The Minister of Justice in his speech proposed a toast to S. N. Tregubov, because he initiated the idea of establishing such a "Cabinet" and worked on its arrangement (Tregubov, 1913: 252).

On the occasion of the opening of the Cabinet of scientific forensic expertise in St. Petersburg, A. Andonović, the assistant to the head of the Belgrade Anthropometric Department, sent a congratulatory telegram (Tregubov, 1913: 257).

Ottolenghi (Rome), Minovici (Bucharest), G. Gross (Graz), Bertillon (Paris), Reiss (Lausanne) and many others were among those who sent telegrams and letters wishing success to this Russian Crminalistic institution.

On July 4, 1913, the State Council and the State Duma of the Russian Empire approved the Law on establishing Cabinets of Scientific and Forensic examination in Moscow, Kiev and Odessa.

Instructions regulating activities of the Cabinet employees, as well as the formalization of the process and results of expert examinations were prepared. Advanced (expert) examination was to be conducted consistently and described in a special act in detail.

In 1915, S. N. Tregubov published a work substantially revised and supplemented with new sections under the title "Fundamentals of Criminal Technique. Scientific and Technical Methods of Crime Investigation: A Practical Guide for Judicial Officers" (Tregubov, 1915). This manual is recognized as the first national textbook on criminalistics. As the result of scientific systematization of scientific knowledge accumulated, this manual introduced a wide range of criminalistic means, techniques and recommendations for the investigation of crime to its readers. The available reviews testify to its positive evaluation by contemporaries.

On July 1-9, 1916, the I Congress of experts-criminalists was held in Petrograd. It was headed by Professor S. N. Tregubov. At this congress, the reports about modern criminalistic methods of investigation and evidence were delivered. In addition, the congress summarized the results of the work of Cabinets of Scientific Criminalistic Examination as well as their practice of applying the scientific criminalistics knowledge.

These are the main, but far from complete, results of S. N. Tregubov's criminalistic activities in pre-revolutionary Russia, which have been reconstructed by now.

The First World War, the February Revolution of 1917 in Russia, and then the October (Socialist) Revolution and the Civil War radically changed the life-path of S. N. Tregubov, as well as that of millions of his compatriots.

Special Aspects of Serbian Criminalistic Historiography of S. N. Tregubov

The attitude to S. N. Tregubov and his criminalistic activities did not remain unchanged in Serbia, and significantly varied depending on the features of the foreign and domestic policy of the Serbian state, which was influenced by both global events (World War I, the October Revolution, the collapse of four empires, the creation of the USSR, the Second World War, the creation of the SFRY, the collapse of the socialist camp, the disappearance of the USSR and the SFRY, etc.), as well as historical circumstances even of a smaller, local scale.

The most productive stage of the criminalistic activity of S. N. Tregubov in Serbia was the period from 1923 to 1941, in the Kingdom of Serbs, Croats and Slovenes and later the Kingdom of Yugoslavia.

S. N. Tregubov and his family arrived in the Kingdom of Serbs, Croats and Slovenes at the end of 1920, settled in Belgrade, where he got a job at the office of a Russian military agent in the Kingdom of the Serbs, Croats and Slovenes. At the same time S. N. Tregubov took active part in the foundation of a number of White Guard emigrant organizations.

In Belgrade S. N. Tregubov often met with his old acquaintance (since 1910), one of the founders of Western European criminalistics, Professor R.-A. Reiss (1876-1928), who permanently resided in Belgrade after the end of the First World War.

The centralized funding of the Union of United Officers' Societies ceased in 1923, so S. N. Tregubov found himself in a difficult financial position and was forced to look for a job for livelihood. S. N. Tregubov got a job in the Technical Police Department in Belgrade in 1923 (Tregubov, 1932c: 884).

According to S. N. Tregubov, he found very modest equipment in this department, consisting of reproduction and magnifying photographic apparatus, two microscopes with damaged optics, and several broken hand-held photographic apparatuses. It took a lot of work to produce serious, evidence-based researches at this department and to stand in line with similar institutions in major European centers (Tregubov, 1932c: 884).

S. N. Tregubov became a contract professor at the Institute of Criminalistics at the Faculty of Law of the University of Belgrade in 1929 (New member staff of the Faculty of Law, 1929: 154). He combined the activities at the Faculty of Law with the work in Technical Police.

In 1930 S. N. Tregubov published a small 50-page textbook on criminal technique, which was based on his lectures delivered to students at the Institute of Criminalistics since 1929 (Tregubov, 1930a). In a short note from the "Archives of Legal and Social Sciences" (1930: 404) it was reported that "Criminal Technique" was published by Professor Sergei Tregubov at the Criminalistics Institute of the Faculty of Law of the University of Belgrade.

Along with that, S. N. Tregubov published a number of articles in Russian. The article "Forensic Expertise of Documents (its current standing)" was published in 1930 (Tregubov, 1930b). It is noteworthy that in this article S. N. Tregubov considers criminal technique as a special branch of criminology. According to S. N. Tregubov, the subject of criminal technique is the study and application of scientific and technical research methods to investigation of crimes (Tregubov, 1930b: 507-508). The doctrine of the techniques and methods of forensic examination of documents is a wide and diverse range of photographic, photometric, chemical, graphic, graphometric, microscopic and other technical methods for studying written acts of private circulation of government documents, banknotes, securities, seals, coin dies and stamps. Their authenticity is disputed or in doubt and subject, for the purposes of justice, to scientific and judicial verification, as well as the study of research areas related to the handwriting of anonymous letters, the decipherment of all kinds of ciphers, the manifestation of blackened text or written in sympathetic (invisible) ink, and in general the reconstruction of written acts and all kinds documents (Tregubov, 1930b: 507).

In 1932 S. N. Tregubov published an article entitled "Forensic technical expertise (historical background)" (Tregubov, 1932a; Tregubov, 1932b; Tregubov, 1932c).

In 1935 S. N. Tregubov together with the head of the technical police of Serbia A. Andonović, published the first textbook on criminal technique (criminalistics) in the Serbian language (Tregubov & Andonović, 1935).

S. N. Tregubov was one of G. Bauer's advisers. G. Bauer was a laboratory assistant at the Institute of Criminalistics and defended his dissertation on the topic "Examination of written documents: material for compiling written documents and chemical examination of household ink" in 1940 (Knežević-Lukić, 2019: 247).

Until 1941 there was mostly positive assessment of S. N. Tregubov by his contemporaries. So, in the preface of the book "Criminal technique" (1935), T. Zhivanovich wrote about the value of S. N. Tregubov as a criminal-technical expert, scientist and lecturer (Tregubov & Andonović, 1935: V). According to T. Zhivanovich, S. N. Tregubov was a prominent scientist who had pedagogical abilities and taught criminal technique to students of the Faculty of Law of the University of Belgrade for five years successfully (Tregubov & Andonović, 1935: V). Students attend his lectures with pleasure.

T. Zhivanovich noted that in their work S. N. Tregubov and A. Andonović mixed rich theoretical knowledge and scientific methods, which were used in various and complex studies of their personal practice (Tregubov & Andonović, 1935: V).

B. Brazol, in his review of the book "Criminal technique" (1935), noted that S. N. Tregubov was a highly trained practitioner who had studied the methods of criminal investigation by Bertillon and Reiss, and was then one of the distinguished successors of the Hans Gross's school (Brazol, 1936: 799). B. Brazol described the book "Criminal technique" (1935) as a "splendid treatise" (Brazol, 1936: 802).

In 1935 H. Bauer also wrote that "Criminal technique" (1935) by S. N. Tregubov and A. Andonovich enriched the very meager criminal literature with one carefully worked out paper, which should be attributed to the best achievements of the national non-legal criminal investigation science (Bauer , 1935: 315).

In 1935 S. N. Tregubov together with his colleague Professor N.V. Krajinsky recognized the Institute of Criminalistics of the Faculty of Law of the University of Belgrade as a modern, scientific and skillfully organized institution (Janković, 2015: 333).

In September 1944 the Soviet troops entered the territory of Yugoslavia. S. N. Tregubov left Belgrade and moved to Germany. S. N. Tregubov had a well-founded fear of reprisal from the state security agencies of the USSR.

However, S. N. Tregubov refused to leave for the West when the Red Army approached Berlin because of his advancing age. In the spring of 1945, after the liberation of Germany, 79-year-old S. N. Tregubov was taken to the NKVD three times, but no further actions were taken.

S. N. Tregubov passed away on July 29, 1945 in Birkenwerder, Germany (25 km away from Berlin). After his death the NKVD (The People's Commissariat for Internal Affairs) again came to his widow with a proposal to give her husband's medals and orders in order to hand them over to the state museum (Novoye russkoye slovo, 1974, October 19).

The People's Liberation War in Yugoslavia (1941-1945) ended with the abolition of the monarchy in the country, the establishment of a pro-Soviet socialist regime.

Despite the complexity of the relationship between the SFRY and the USSR, the Soviet influences on all spheres of life in Yugoslavia were clearly noted and they did not completely disappear until the end of Yugoslavia's existence (Miloradović, 2012: 15-16). In January 1945 the Society for Cultural Cooperation between Yugoslavia and the USSR was founded. The ruling party in Yugoslavia was organized according to the Soviet model and implemented the Soviet model of building socialism (1945-1950). The first Constitution of the Federal People's Republic of Yugoslavia (1946) was also modeled after the 1936 Constitution of the Soviet Union (Dabetić, 2020: 166). The Yugoslav secret agencies were under strong Soviet influence. In particular, the Department for People's Protection (OZNA) was involved in the search for "enemies of the people" since May 1944 (Dimitrijević, 2019).

The influence of the USSR extended to the field of Yugoslav science, including criminalistics. In 1947 a Soviet textbook on criminalistics by B. M. Shaver and A. I. Vinberg was published in Belgrade (Šaver & Vinberg, 1947).

Before World War II criminalistics in Serbia was developed mainly as a practical science. Later, because of the influence of Soviet criminalistics Serbian criminalistics adopted research in the field of general theory and methodology of criminalistics. Soviet ideas about the reactionary essence of Russian pre-revolutionary and bourgeois criminalistics, as well as ideas about Russian emigrants as "anti-national elements", were also spread.

The unfair accusation of collaborationism could not be avoided by S. N. Tregubov (Janković, 2016: 91).

The Court of Honor established in December 1944 at the University of Belgrade passed the verdict in absentia to expel S. N. Tregubov from the university for his escape to Germany (Mitrović, 2011: 182-183).

I. Janković points out that pre-war Criminalistic Institute had a bad reputation with the communist authorities (Janković, 2015: 343; Janković, 2016: 91).

Obviously, it is no longer possible to expect unbiased evaluation of criminalistics merits of S. N. Tregubov in Serbia in such circumstances.

It is noteworthy that a famous Yugoslav criminalists V. Vodinelić noted that in 1946 there was no criminalistics in Yugoslavia. He distinguished (delimited) criminalistics from criminal technique, which had been brought to Serbia after the First World War by Reiss and Tregubov (Vodinelić, 1994).

M. Šikman also believes that Yugoslav criminalistics was created only after World War II. In his opinion, before this period criminalistics was very poorly developed in the Kingdom of Yugoslavia, and the available literature was even more than scarce (Šikman, 2012). It is obvious that the contribution of Reiss, Tregubov and other pre-war criminalists to the formation of Serbian criminalistics is underestimated.

A significant part of modern criminalists, although briefly, but positively evaluates the activities of S. N. Tregubov in the development of forensic expertise and founding Serbian criminalistics.

So, G. Malich paid attention to the fact that professors S. N. Tregubov and N. Krainsky significantly improved the methods of forensic examination (expertise) through the use of photography (Malić, 2002).

D. Maver rightly notes that most of the criminalistic publications at the stage of formation of criminalistics were written by practitioners. According to Darko Maver, A. Munda, the author of the first Slovenian criminalistics textbook, was inspired by German and Russian authors, among whom was S. N. Tregubov (Maver, 2009: 496).

N. Stanković wrote that S. N. Tregubov, R.-A. Reiss and A. Andonovich are acknowledged experts of their time, who made a significant contribution to the development of criminalistics in Serbia (Stanković, 2016: 34).

S. Vasilijević and I. Krstić-Mistridželović (2022: 32) draw attention to the continuity in the development of criminalistics in Serbia and also refer to the Serbian textbook by S. Tregubov and A. Andonović "Criminal technique" (1935).

Extensive material on the activities of S. N. Tregubov is presented in the doctoral thesis of N. D. Knežević-Lukić, dedicated to "Emergence and development of scientific and technical police in Serbia (1904-1941)" (Knežević-Lukić, 2019: 247). N. D. Knežević-Lukić reasonably recognizes S. N. Tregubov as one of the "pioneers of the scientific and technical police" in Serbia. N. D. Knežević-Lukić also refers to the number of "significant works" in the Kingdom of Yugoslavia the lectures of S.N. Tregubov "Criminal technique", which were published in 1930, and the first Serbian textbook on criminal technique (criminalistics), published by S.N. Tregubov together with A. Andonović in 1935 (Knežević-Lukić, 2019: 271, 288-290).

However, it should be noted that some authors in modern Serbia are making attempts to unreasonably underestimate the criminalistic merits of the pre-war Institute of Criminalistics, including the personal merits of S. N. Tregubov (Janković, 2015; Janković, 2016). For example, I. Janković unreasonably recognizes as a disadvantage that in the textbook of 1935 all examples and results of criminal investigations were taken from foreign literature and practice (Janković, 2015: 335). We should agree with the opinion of I. Janković that the contribution of the Institute of Criminalistics has not yet been comprehensively studied (Janković, 2015: 344).

The foregoing confirms the need for further research related to the critical rethinking of previous assessments of the results and significance of S. N. Tregubov.

Conclusions

Professor S. N. Tregubov, a supporter of A. Reiss's ideas, stood at the origins of criminalistics (criminal technique) in Russia since 1910. He taught at the Alexander Military Law Academy and the Imperial School of Law as well. After his emigration to the Kingdom of Serbs, Croats, and Slovenes in 1920, S. N. Tregubov worked as a professor of criminal technique at the Criminalistics Institute of the Faculty of Law in Belgrade, taught criminal technique to Serbian law enforcement personnel, and took part in international forensic congresses.

The analysis of the historiographic literature in Russia and Serbia allows us to conclude that Russian criminalists know little about S. N. Tregubov's Serbian stage of his life, and Serbian criminalists do not know enough about the Russian period of his life.

Practical Guide to Criminal Technique by S. N. Tregubov (1915) has not been translated into Serbian and his joint work with A. Andonović "Criminal investigation technique" (1935) has not been translated into Russian. Continuity in the content of the Russian (1915) and Serbian (1935) editions of manuals on criminal technique was established.

There is no holistic scientifically based reconstruction of the continuity of the indicated stages of the life and work of S. N. Tregubov, which urgently requires further historical and criminalistic research in Russia and Serbia. The activity of a criminalist, like his whole life, is unique, integral.

The study of the life and criminalistics activity of S. N. Tregubov testifies that he was aware of the most advanced methods, techniques and tools, showed a constant interest in the state of criminalistics in different countries.

Criminalistics is a global science with a rich history, full of scientific achievements, struggle of ideas, confrontation of different approaches, mistakes, misconceptions, as well as their overcoming. World criminalistics manifests itself as a set of national criminalistics.

Criminalistics as a science was originated in Western Europe at the turn of the 19th-20th centuries and was developed in different countries under the influence of both global and national conditions and traditions. As a result, the ideas about the concept, subject, system, content, nature, and even the name of criminalistics (criminal investigation, Kriminalistik, forensic science, police scientifique, polizia scientifica, police sciences, police technique, etc.) were diverse and subject to revision throughout the history of criminalistics up to the present. Currently, there are several relatively independent criminalistic schools (directions, fields), which most often include Austro-German (German), Romanesque, Anglo-Saxon, Soviet (or socialist), etc. criminalistics. In turn, D. Maver conditionally distinguishes Russian, Eastern European, Central European (central) and "Western" criminalistics, which comprises Anglo-American criminalistics.

Different models of criminalistics offered not only different theoretical concepts, but also different perspectives for its further development. Currently, a transition from the isolation of individual criminalistic schools to their dialogue (integration) using the experience of all national criminalistics schools is required.

D. Maver rightly drew attention to the fact that the exchange of information and knowledge about criminalistics is not sufficiently established between European countries. However, this conclusion is valid not only for the states of Europe, but also for the whole world.

There is still no comprehensive study of the history of world criminalistics and the history of European criminalistics. Since many countries within former Yugoslavia and the USSR became independent it has become popular to write history of criminalistics of in each of the countries separately.

The sheer side of "socialist criminalistics" united representatives of the criminalistics of the socialist countries and ensured "local socialist globalization". In 1962 the First international symposium on criminalists of the socialist countries was held in Berlin (GDR), and the last one (the 17th, XVII) was held in 1989 in Pyongyang (DPRK). However, with the collapse of the "socialist camp" and the collapse of the SFRY and the USSR, the interaction of Russian criminalistic specialists with their colleagues turned into irregular and episodic one based mainly on personal contacts between the scientists.

The lack of international historical and criminalistic studies, including those devoted to the study of the historical features of the relationship between Russian and Serbian criminalistics, hinders the understanding of their current state and the choice of directions for further development.

The problems of conducting such kind of research lie not only in the presence of language barriers, but also in politics. Many of the criminalists of the former socialist countries, under the influence of globalization and other reasons, including opportunistic ones, began to declare the closeness of their criminalistic doctrine with the models of Western European countries (Kurapka & Malevski, 2005: 47). At the same time, national-historical features and traditions are often ignored.

Further study of the criminalistics work of S. N. Tregubov will contribute to the process of self-identification of Russian and Serbian criminalistics, the knowledge of the patterns (laws) and national peculiarities of their formation and development, the establishment of continuity in the development of many scientific ideas as well as to clarification of the nature of relationships with various areas of foreign criminalistics. The results of such studies will provide valuable information not only for an adequate assessment of the current state of criminalistics, but also for possible rethinking of the traditional content of criminalistics and a critical revision of outdated provisions.

In this regard, the course "History of Criminalistics" (Course Code: 15.40) taught at the University of Criminal Investigation and Police Studies is noteworthy (*https://eng.kpu.edu.rs/studies/graduate/*

courses/mas-criminalistics/art-c-15.40.html). It is remarkable that the joint work on criminalistics by S. Tregubov and A. Andonović (1935) is included in the list of recommended literature of the course.

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THE LEGAL FRAMEWORK FOR THE ESTABLISHMENT AND FUNCTIONING OF A JOINT INVESTIGATION TEAM

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Introduction

the crucial factor in building up a democracy, whether it is on a national or international level, is also a state and efficiency in keeping organised crime controlled. If control fails, organised crime blossoms and then disrupts the basic pillars of democracy and nation's values. It destabilizes state authorities by its direct or indirect involvement in state's policies through corruption. Through all of this, it tries to cement its influence or secure its position above the law.

The term organised crime has also been connected to illegal migration, with regards to human trafficking across borders. This poses the biggest security threat to the EU from the outside borders. Illegal migration has a potential to be accompanied by terrorism (Jakabovič, 2017: 29). There can be only one response, which is cooperation, on the national level, cross border level and transnational level, including the international police and judicial cooperation in the criminal matters.

The subject of this paper is the analysis of the current national legislation which regulates the way of establishment and functioning of the Joint Investigation Team (JIT), both at the international and national level (legislation of the Slovak Republic).

In a decentralized system of international law, which lacks a fixed hierarchical and institutional structure, identifying its sources is more difficult because there is no central legislative body empowered to adopt legal norms binding on the subjects of international law, nor is there a compulsory jurisdiction of international judicial organs to find violations of those norms (Klučka, 2017: 101).

International treaties are the primary source of public international law that touches on the issue of JIT. International treaties became the main means of regulating new areas (branches) of international law during the 20th century.

As the legal framework for the establishment and functioning of the JIT necessarily derives from international or European efforts translated into the norms of public international law and EU law (EU criminal law) as fundamental sources of law, in this scientific article I have primarily focused on those norms.

The basic legal framework for the establishment and functioning of the JIT is expressed in *de lege lata* terms in:

1. Norms of public international law;
2. Council of Europe legal instruments;
3. EU law (EU criminal law), and
4. National laws.

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Theoretical and Legal Definition of the JIT from the Perspective of Public International Law

International judicial cooperation in the criminal matters is defined by the following international legislation:

- UN Convention against Transnational Organized Crime of 2000 (the so-called Palermo Convention) (Ministry of Foreign Affairs Notice No. 621/2003 Coll.);
- United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (Federal Ministry of Foreign Affairs Notification no. 462/1991 Coll.), and
- United Nations Convention against Corruption of 2003 (UNCAC) (Communication of the Ministry of Foreign Affairs of the Slovak Republic no. 434/2006 Coll. on the adoption of the United Nations Convention against Corruption).

Further in the text, we analysed three important documents focused on the joint efforts of the contracting parties (countries) on the most serious forms and manifestations of criminal activity with a large impact on society:

1. Transnational organised crime;
2. Illicit trafficking in narcotic drugs and psychotropic substances, and
3. Corruption.

The more globalised the world becomes, the more intense and closer the cooperation between transnational organised crime and the more pressure there is to implement international cooperation, whether in the police or the judiciary. In my opinion, this international pressure and the creation of a basic legal framework is in order. From a formal point of view, the establishment of JIT in Europe is being used in precisely these cases, many, if not most, of which are aimed at investigating the activities of transnational organised crime, which is also becoming active in relation to drug trafficking, the laundering of the criminal proceeds, but also in relation to corruption. It is the JIT that is the instrument through which trust between judicial and law enforcement authorities (LEA) can be gained and deepened, because trust is a matter of gaining practical, i.e. empirical and not theoretical, experience.

UN Convention Against Transnational Organised Crime

The control of transnational organised crime is an individual and challenging issue. The activities or manifestations of transnational organised crime are manifested in the commission of a variety of serious and organised criminal activities, including the money laundering. Therefore, the prosecution of this most serious form of manifestation of the commission of crime is implicitly listed as a separate offence (for example, in the Slovak legal system, § 296 Establishment, organization and support of a criminal group of Act No. 300/2005 Coll. Criminal law; the organized group is, in turn, qualified as a special qualifying term listed in § 138 letter i) Act no. 300/2005 Coll. Criminal law). However, this does not preclude the prosecution of members of transnational organised crime for the commission of other offences.

Of the Convention in question, the most significant is Article 19 Joint Investigation:

> "States Parties shall consider the conclusion of bilateral or multilateral agreements or arrangements whereby, in relation to cases under investigation, prosecution or trial in one or more States, the competent authorities concerned may establish joint investigative bodies.

> In the absence of such agreements or arrangements, joint investigations may be carried out on the basis of an agreement concluded specifically for the individual case. The States Parties involved shall ensure that the sovereignty of the State Party in whose territory the investigation is carried out is fully respected".

The legal analysis carried out on the article in question clearly emphasises national sovereignty. However, the provision in question does not apply to all crimes, but only to certain types of crimes that are the subject of a convention between state parties. This limitation is guided by Article 3(1) of the Convention. On the JIT legislation itself, just one remark. It is a very general and framework legislation. Of course, the very title of the article, labelled "Joint Investigation", is different in terminological meaning from the term JIT. Joint investigation is a broader term than JIT, which I consider to be a more narrowly defined term.

LEA are expected to take a very proactive (but ideally proactive) and team-based approach to their work.

UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988

Transnational organised crime has long been involved in both the commission and trafficking of narcotic drugs and psychotropic substances. This is why there has been an upward international effort against drugs since 1961. These international efforts have resulted in the adoption of 3 international conventions and the subsequent adoption of protocols or annexes regulating drug issues at the global level:

1. 1961 United Nations Single Convention on Narcotic Drugs (Decree of the Minister of Foreign Affairs no. 47/1965 Coll., as amended by Federal Ministry of Foreign Affairs Notification No. 458/1991 Coll.);
2. United Nations Convention on Psychotropic Substances 1971 (Decree of the Minister of Foreign Affairs no. 62/1989 Coll.), and
3. United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (Federal Ministry of Foreign Affairs Notification no. 462/1991 Coll.).

These international conventions have brought about international unification and established a basic international legal framework for drug issues, which the contracting parties - countries have undertaken to implement in their national legislation, thus creating the basic legislative and institutional conditions for effective drug control.

Drug trafficking is characterised by its cross-border or international dimension (Jakabovič, 2016: 85). International cooperation is therefore an essential tool in the fight against drugs or can be considered as an element in the control of transnational organised crime targeting drug trafficking.

There is a provision in Article 9(1)(c) of the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances that affects JIT:

> "Where appropriate, and in so far as this does not conflict with national laws, they shall form joint teams, taking into account the need to protect persons and operations carried out and conducted in accordance with the provisions of this paragraph. The representatives of any Party in such teams shall act as agents of the competent authorities of the Party in whose territory the operation is to take place; in all such cases the Parties concerned

shall ensure full respect for the sovereignty of the Party in whose territory the operation is to take place".

The 2003 United Nations Convention Against Corruption (UNCAC)

It is not only in the case of transnational organised crime and drug trafficking that international efforts to combat these socially unacceptable forms of criminality exist and take shape.

Corruption may or may not involve transnational organised crime and drug trafficking. It can also be perpetrated independently. Knowledge to date suggests that corruption is one of the elements (DNA) of the functioning of transnational organised crime and drug trafficking. In both cases, the aim is to make a profit or secure an advantage, which may also consist of securing the acquiescence of law enforcement or other state authorities. This advantage is intended to ensure the group's establishment, the carrying out of illegal activities, its eventual growth or its transformation into a legal business.

Corruption acts not only as the DNA of transnational organised crime, but also as an insurance policy in the event that serious and organised crime is detected. This means using corruption to ensure that investigations have as little impact as possible on the perpetrators of crime, their profits, members of the group, etc. Of course, it is also important not to expose and identify other illegal activities, to establish the members of the group, to establish their hierarchy, or to identify the bosses of the group.

It is therefore not surprising that an international convention against corruption was also adopted in 2003.

Article 49 of the 2003 UN Convention against Corruption makes provision for joint investigations:

> "States Parties shall consider the conclusion of bilateral or multilateral agreements or arrangements whereby, in relation to cases under investigation, prosecution or trial in one or more States, the competent authorities concerned may establish joint investigative bodies. In the absence of such agreements or arrangements, joint investigations may be carried out on the basis of an agreement concluded specifically for the individual case. The States Parties involved shall ensure that the sovereignty of the State Party in whose territory the investigation is carried out is fully respected".

Theoretical and Legal Definition of the JIT from the Point of View of Legal Acts of the European Union and Legal Documents of the Council of Europe

Two international organisations have had the most significant and fundamental influence on the field of criminal law as national law. The first is the European Union (EU) and the second is the Council of Europe. The Council of Europe is a separate, distinct international organisation from the EU. At the same time, however, all EU member states are also members of the Council of Europe. Therefore, the legal documents adopted by the Council of Europe have an impact on the criminal law of the EU member states and, at the same time, the contracting states of the Council of Europe. Many EU sources refer to a legal interconnection or starting point precisely with legal documents adopted by the Council of Europe.

In this legal space of the EU and the Council of Europe, I have established the most fundamental and important international norms that influence the theoretical-legal definition of JIT, its substantive and procedural implementation by national law enforcement bodies.

The basic sources of EU criminal law are:

1. Article 69g(2)(b) of the Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community (OJ L 306, 17.12.2007);
2. Convention on Mutual Assistance in Criminal Matters between the Member States of the European Union (Convention 2000) (OJ C 197, 12.07.2000);
3. Council Framework Decision of 13 June 2002 on joint investigation teams (2002/465/JHA) (OJ L 162, 20.06.2002);
4. Agreement between the European Union and the Republic of Iceland and the Kingdom of Norway on the application of certain provisions of the Convention of 29 May 2000 on Mutual Assistance in Criminal Matters between the Member States of the European Union and the 2001 Protocol thereto (OJ L 26, 29.1.2004);
5. Convention on mutual assistance and cooperation between customs administrations (Naples II) (OJ C 24, 23.1.1998), and
6. Agreement on Mutual Legal Assistance between the European Union and the United States of America (OJ L 181, 19.7.2003).

The Council of Europe primary sources are:

1. European Convention on Mutual Assistance in Criminal Matters of 1959 (Notification of the Federal Ministry of Foreign Affairs no. 550/1992 Coll.), and
2. Second Additional Protocol to the European Convention on Mutual Assistance in Criminal Matters of 08.11.2001 (The Slovak Republic has applied a reservation to the non-implementation of Article 20 of the Second Additional Protocol to the European Convention on Mutual Assistance in Criminal Matters dated November 8, 2001. The General Prosecutor's Office has been trying for a long time to initiate the withdrawal of reservations, but as of June 1, 2023, this has been unsuccessful).

Another instrument for establishing a JIT outside EU and Council of Europe criminal law is:

- Convention on Police Cooperation in South-Eastern Europe (PCC-SEE) (The issue of JIT is regulated in Article 27 of the Convention on Police Cooperation in South-Eastern Europe, which is applied between several EU member states (Austria, Bulgaria, Hungary, Romania, Slovenia) and the Balkan countries (Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia).

Convention on Mutual Assistance in Criminal Matters Between the EU Member States (the 2000 Convention)

In 2000, the Convention on Mutual Assistance in Criminal Matters between the EU Member States (the 2000 Convention, hereafter referred to as the 2000 Convention) was adopted by the Council in accordance with Article 34 of the EU Treaty. The 2000 Convention was transposed into the national legal order of the Slovak Republic by the Communication of the Ministry of Foreign Affairs of the Slovak Republic No. 570/2006 Coll.

The explanatory memorandum (Explanatory report on the Convention of 29 May 2000 on Mutual Assistance in Criminal Matters between the Member States of the European Union (Text approved by

the Council on 30 November 2000) (OJ C 379, 29.12.2000) states that one of the main reasons for the adoption of the Convention was that the establishment of a basic legal framework for the establishment and functioning of the JIT should facilitate the investigation of cross-border crime, particularly as regards its organised elements or manifestations.

Convention 2000 is classified as public international law, and this area of law is characterised by a model of horizontal cooperation based on cooperation between the law enforcement units of two or more Member States. The horizontal cooperation, which is based on three basic models, is the request model. This model is characterised by the fact that it leaves to the discretion of the Member State whether or not to comply with the request (Ivor, 2017: 395).

The most important article of the Convention 2000 is Article 13.

The first paragraph states that "by common agreement, the competent authorities of two or more Member States may set up a joint investigation team for specific purposes and for a limited period of time, which may be extended by common agreement, to investigate criminal offences in the territory of one or more of the Member States which have set up the team. The composition of the team shall be specified in the agreement[2]".

Further, Article 13 of the Convention in question sets out the mandatory conditions for the creation of a JIT:

- Two or more EU countries;
- Specific Purpose;
- Limited time, and
- Agreement (for the Slovak Republic, this entity is exclusively the General Prosecutor´s Office).

The reasons for the composition of the JIT are:

- Conducting an investigation in one EU country is difficult and requires action in another or in other EU countries; and
- Several Member States investigate crimes whose circumstances require coordinated action.

The 2000 Convention is complementary to another international source, which in this case is an international convention adopted by the Council of Europe - the European Convention on Mutual Assistance in Criminal Matters of 1959 (Notification of the Federal Ministry of Foreign Affairs No. 550/1992 Coll.). The 2000 Convention is based on the principles of the 1959 European Convention on Mutual Assistance in Criminal Matters. This is the case with regard to the particulars of what the application for the establishment of an JIT should contain. In this case, the application must necessarily contain the elements set out in Article 14 of the European Convention on Mutual Assistance in Criminal Matters of 1959.

The application for the establishment of a JIT therefore includes:

- Identification of the authority making the request;
- Subject and reason for the request;
- If possible, details of the person to whom the application relates and his or her nationality;
- If necessary, the name and address of the person to whom something is to be served.

The application for the establishment of the JIT shall include a proposal for the composition of the team.

2 The agreement is the result of the negotiations between at least two parties/countries on the establishment and functioning of a joint investigation team.

JIT Activities

The team leader shall be a representative of the competent authority involved in the criminal investigation of the Member State in whose territory the team is operating. The team leader shall act within the scope of his/her powers under national law.

The members of the team shall act in accordance with the laws of the member country in whose territory they operate. Team members shall act under the direction of the person designated in the agreement establishing the JIT as the "Team Leader", taking into account the terms and conditions determined by their own authorities in the agreement establishing the JIT. It shall be the responsibility of the Member State in which the JIT operates to make the organisational arrangements necessary for its proper functioning.

Investigations conducted under an agreement on an established JIT shall be governed by the rules in the territory of the Member State in which the procedural acts are carried out. The procedural aspect of the investigation is therefore governed by the law of the State in whose territory the members of the JIT are operating. Simply put, it is the application of a territorial principle of law, derived from state power and state sovereignty. It follows from the above that the members of the JIT must therefore also be subject to the jurisdiction of the Member State in whose territory they operate.

The 2000 Convention is primarily aimed at judicial cooperation in criminal matters between the EU Member States. However, in practice, it is common for help to be needed from outside the EU, i.e. from a so-called third country. If legal assistance is needed from a non-EU state, the Convention provides for this possibility, as other international conventions that regulate or allow judicial cooperation in criminal matters are applicable.

Article 13(10) of the 2000 Convention also deals with the possibilities of obtaining and using information admissible as evidence in criminal proceedings under the following conditions:

- Solely for the purposes for which the JIT was established;
- With the prior consent of the Member State that was part of the JIT;
- To prevent an imminent and serious threat to public safety;
- For other purposes only if agreed by the Member States that created the JIT.

In terms of the fundamental sources of law relating to JIT, the 2000 Convention is one of the most fundamental in the establishment of JIT.

Council Framework Decision of 13 June 2002 on Joint Investigation Teams (2002/465/JHA)

The historical aspects of the creation of the Council Framework Decision of 13 June 2002 on Joint Investigation Teams (2002/465/JHA) (hereinafter referred to as "the Council Framework Decision on JIT") are linked to the terrorist attacks of 11 September 2001 in the United States of America (Ivor, 2013: 646). Therefore, in the immediate aftermath of the terrorist attacks, an initiative - the Proposal for a Council Framework Decision on JITs - came from Belgium, France, Spain and the United Kingdom (Initiative of the Kingdom of Belgium, the French Republic, the Kingdom of Spain and the United Kingdom with a view to adopting a Council Framework Decision on joint investigation teams (OJ C 295, 20.10.2001). Another reason for the adoption of a different and more effective legal instrument in the EU was the slow ratification of the 2000 Convention (Ivor, 2013: 647). As it happens in the EU, instead of building solid legal foundations, an ad hoc, non-systematic solution is reached, resulting in legal dualism or legal anarchy in the long term.

The Council Framework Decision on JITs is one of the two basic sources of law for the establishment of JITs between the EU Member States. The first is the 2000 Convention. The Council Framework Decision on JITs has not yet been implemented by several EU Member States: Denmark and Germany.[3] For this reason, too, Convention 2000 is used as the legal basis in practice.

Article 1(1) provides that "the competent authorities of two or more Member States may, by mutual agreement, set up a joint investigation team for a specific purpose and for a limited period, which may be extended by mutual agreement, to carry out criminal investigations in one or more of the Member States setting up the team. The composition of the team shall be laid down in the agreement".

Based on the analysis of the content of the two documents – Convention 2000 and the Council Framework Decision on JIT, it can be concluded that there is a high degree of matching in terms of the way of defining the purpose of establishment, conditions of establishment and the way of functioning of JIT.

Article 5 of the Council Framework Decision on JIT states that "this Framework Decision shall enter into force on the day of its publication in the Official Journal. It shall expire when the Convention on Mutual Assistance in Criminal Matters enters into force in all Member States of the European Union".

Convention on Mutual Assistance and Cooperation Between Customs Administrations (Naples II)

Another international source in which I have identified the JIT is the Convention on Mutual Assistance and Cooperation between Customs Administrations (Naples II), specifically in Article 24. Title IV of the Convention, which regulates specific forms of cooperation, is important, and Article 19 deals with principles. Naples II was transposed into the national legal order of the Slovak Republic by the notification of the Ministry of Foreign Affairs of the Slovak Republic no 245/2009 Coll.

Naples II differs from other sources regulating the JIT issue precisely by the subject, which in that case is the customs administration. Naples II thus regulates international cooperation between customs administrations in the EU. However, Naples II certainly does not replace international judicial cooperation in the criminal matters (negative definition). The adoption of the Convention in question was primarily aimed at strengthening international customs cooperation.

Article 24 of the Convention provides for "Joint Special Investigation Teams". So already here I see the first fundamental difference between the classic JITs, namely in the name itself.

The very text referred to in Article 24(1) of Naples II is as follows:

> "By mutual agreement, the authorities of several Member States may set up a joint special investigation team, based in one Member State and composed of officials with the appropriate specialisation".

The following outlines the tasks that such a special investigation team should perform:

- Carrying out complex and challenging investigations into specific infringements that require simultaneous and coordinated action in the Member States concerned;
- Coordination of joint activities to prevent and detect specific breaches of the law and to obtain information on the persons involved and their associates and the methods used.

Operation of joint special investigation teams

• Specific purpose and limited duration.

3 https://eur-lex.europa.eu/legal-content/SK/NIM/?uri=CELEX:32002F0465&qid=1688461327083. 04.07.2023

- The team shall be led by an official from the Member State in whose territory the activities of the team are carried out.
- Officials shall be bound by the national law of the territory in which the team's activities are carried out.
- The Member State in whose territory the team's activities are carried out shall make the organisational arrangements for the team's operation.

There is a certain analogy between JIT and Joint Special Investigation Teams. The fundamental difference between the two concepts is that Naples II does not regulate international judicial cooperation in the criminal matters and thus does not replace traditional forms of judicial cooperation. On the contrary, the purpose of the Convention was to fill the space and create a basic framework for closer and more intensive cooperation between the EU customs administrations, not in criminal proceedings.

Mutual Legal Assistance Agreement Between the European Union and the United States of America

The purpose of concluding a bilateral agreement between the EU and the United States of America (US) is to facilitate cooperation between the EU Member States and the US in the criminal matters. Article 5(1) of the Agreement deals with the issue of JIT:

> "The Contracting Parties shall, if they have not already done so, take such measures as may be necessary to enable the establishment and operation of joint investigative teams in their own territory of each Member State and the United States of America for the purpose of facilitating police investigations and prosecutions involving one or more Member States and the United States of America, as deemed appropriate by the Member State concerned and by the United States of America".

The purpose of establishing a JIT is to facilitate investigations or prosecutions involving the US and at least one or more EU Member States, and simultaneously if the US and, for example the Slovak Republic, deem it appropriate.

JIT Activities

The composition, duration, location, organisation, tasks, purpose and conditions of participation of members of a team from a State carrying out investigative acts in the territory of another State shall be agreed between the competent authorities responsible for the investigation or prosecution of criminal offences, to be determined and communicated by the States concerned. No separate requests for legal assistance shall be necessary for the performance of acts in the States members of the team. Proceedings shall be governed by the law of the State in the territory of which the JIT is operating.

The agreement on the establishment of the JIT must contain (mandatory elements):

- Composition;
- Duration;
- Objective;
- Organization;
- Liability of members of the investigation team - criminal, civil;

- Conditions of carrying or using a weapon;
- Cost, and
- Technical or logistical issues that may arise in the operation of the JIT.

Theoretical and Legal Definition of the JIT from the Perspective of the Criminal Law of the Slovak Republic

The legal basis, based primarily on the EU law (EU criminal law) and legal documents adopted by the Council of Europe, has in principle been properly implemented in the national legal order of the Slovak Republic. Only in relation to some standards, the Slovak Republic, through its representatives, has made reservations in relation to certain provisions.[4]

The basic source for the issue of JIT at the national level is Act No. 301/2005 Coll., the Code of Criminal Procedure and its Section 10(9), which reads as follows:

> "For the purposes of this Act, a police officer shall be understood to include, within the scope of the delegation of the acts of investigation, a representative of a competent authority of another State, an authority of the European Union or an authority established jointly by the Member States of the European Union, who is included in a joint investigation team established on the basis of an agreement. A joint investigation team may be set up in particular where the investigation of a criminal offence requires complex acts to be carried out in another State or where the investigation of a criminal offence is carried out by several States and the circumstances of the case require that they act in a coordinated and joint manner. The head of the joint investigation team shall always be a representative of a law enforcement authority of the Slovak Republic; the other conditions of the joint investigation team shall be regulated by the agreement on its establishment. The body authorized to conclude an agreement on the establishment of a joint investigation team shall be the General Prosecutor's Office of the Slovak Republic (hereinafter referred to as "the General Prosecutor's Office") after prior discussion with the Minister of Justice of the Slovak Republic (hereinafter referred to as "the Minister of Justice")".

The above-mentioned legislation contains an unacceptable solution in the part concerning the authorization to conclude an agreement on the creation of a JIT. One redundant entity enters into this process, which is the Minister of Justice of the Slovak Republic. Before concluding the agreement on the establishment of the JIT, the law requires the Minister of Justice of the Slovak Republic to negotiate the agreement and the content of the proposal. This entity is in this case over and above. It is a highly formalized process. The result is that the whole process is unnecessarily and unjustifiably prolonged, which causes many problems in practice. In extreme cases, this can be one of the reasons why trust between the law enforcement and the police on the one hand and their counterparts on the other can be eroded, or it can even frustrate the criminal proceedings and the very purpose of the JIT. The identified shortcoming of the legislation is that it is too formalized and explicit to the detriment of the objective pursued. The impact can be seen at two levels:

1. The transnational dimension (not only the agreement on common interests of the criminal proceedings, communication with each other, but also the actual transformation of what the partners have agreed on has an impact on the actual course and purpose of the criminal proceedings).

4 For example regarding the Convention 2000.

2. National level (if there is an overly formalized procedure, it is logical that such a procedure, which realistically in practice means extra work or activity or delays, will not be popular, supported and used. The question of use and degree of effectiveness is therefore also relevant in terms of creating adequate conditions at the national level).

In terms of *de lege ferenda*, I therefore propose to delete the formalized step.

While the basic idea of the JIT was supposed to be to facilitate and simplify international cooperation between two or more countries, national implementation unnecessarily creates systemic obstacles to building trust between partners and to the use of this otherwise positive and massively promoted international judicial instrument.

While there is some international or European or other bilateral or multilateral legal framework governing JIT, this primarily deals with the fundamental issues of the establishment and functioning of JIT. Many key issues of functioning and operations are governed by national legislations. This ranges from the establishment, functioning, operation, obtaining or securing information and evidence to agreeing in which country key procedural acts will take place. In addition to the absence of case law from the Court of Justice of the EU (CJEU) on the issue of CJEU, our full understanding of this issue is limited by our knowledge of the national legislation of all EU Member States. Members of JITs from other states enjoy the same legal protection as state-domestic authorities. This statement is implicit in Article 128(1) of Act No. 300/2005 Coll. on Criminal Law, which provides a legal definition of "public official":

> "A public official is also [...] another responsible employee of a law enforcement agency of another state, of a body of the European Union or of a body created jointly by the Member States of the European Union, if in the territory of the Slovak Republic he/she performs acts of criminal proceedings of such state or body; for his/her protection, according to the provisions of this Act, it is required that he/she performs acts of criminal proceedings in accordance with an international treaty or with the consent of the authorities of the Slovak Republic".

According to the current legislation in force, a representative of the Slovak Republic in the position of a national member in EUROJUST can be a member of JIT. This possibility is regulated by Act No. 383/2011 Coll. on the Representation of the Slovak Republic in EUROJUST. Pursuant to Article 4(1) (h) of the aforementioned Act, a national member may participate in the JTS with the consent of the GP.

Another provision of the law regulates the relations and information obligation - prompt information by the LEA and the courts to the national member about:

- Establishment of a joint investigation team and the results of its work;
- Cases where a jurisdictional dispute has arisen or is likely to arise;
- Controlled deliveries involving at least three countries, at least two of which are Member States of the European Union, and
- Repeated refusals or difficulties in dealing with requests for judicial cooperation or implementing judicial cooperation decisions (§ 14 par. 4 letters a) – d) of Act No. 383/2011 Coll. on the representation of the Slovak Republic in EUROJUST).

In my view, this is a framework transposition of the EU criminal law into national law, without explicitly mentioning further details such as:

- Issues of concluding a JIT with a non-EU country,

- Rules for obtaining evidence from an JIT on the territory of another EU Member State, and
- The action of the so-called assigned members in participating in the performance of individual procedural acts.

Summary of the Basic Theoretical and Legal Knowledge on the Establishment and Operation of the JIT

Despite many legally binding documents adopted several years ago and the passage of time, the issue of JIT is insufficiently elaborated in both domestic and foreign literature. The causes and reasons for this can be debated and discussed. On the basis of such information, we have concluded that from a theoretical point of view, it is probably not a topical, important topic, or an instrument that would be considered and perceived in legal and security theory as an effective and efficient international instrument. Of course, this is a conjecture. Over the last five to ten years, there has been enormous pressure from the international, but especially from the European community, to use this instrument. This pressure has also been felt by some EU Member States, countries that have experience in the creation and use of JIT and whose national legislation is more flexible and operational in relation to their establishment and operation than that of other Member States.

Legislative Aspect

Theoretical and legal knowledge is necessarily based on international norms (public international law norms, legal documents of the Council of Europe, bilateral or multilateral agreements) and the EU law (EU criminal law). Therefore, I have carried out a legal analysis and legal comparison in selected documents in order to approach the current legal framework for the establishment and functioning of the JIT. As a result, it is recognised that this is not a coherent, comprehensive or unified issue. On the contrary, for a more theoretical understanding, it is necessary to look at a number of legally binding documents, many of which are not primarily focused on the issue of JIT as such, but contain provisions on the subject. Some of the legally binding instruments analysed are not primarily related to criminal law, but in a broader sense or understanding they are concepts of a non-criminal nature, expressed as a certain concept based on teamwork (cross-border or transnational). This is the case with the Naples II Convention, which is primarily aimed at closer, more intensive cooperation between customs authorities in protecting the economic interests of the EU and its Member States. So, the primary concern is to create the legislative conditions for a special entity, which is the customs administration, with a focus on the non-criminal section. The aim is thus to strengthen international cooperation in the economic field. The status of the special body - the customs administration - varies depending on the national legislation of the specific EU Member State. Whereas, for example, in the Slovak Republic or Hungary, the customs administration does not have investigative powers, in the Federal Republic of Germany the customs administration does have such investigative powers.

Many aspects of the establishment and functioning of JIT are not regulated at the supranational level and are governed by substantive and procedural rules based on the national law of each country. Thus, while there is a basic legal framework based on supranational law, the focus is on national law. The more important legal question is therefore the transposition of international and European law into national legal orders, or the results of bilateral or multilateral comparisons of national legal orders relating to the issue of JIT in the EU, in the case of certain third countries neighbouring the EU Member States.

National legislation, therefore, has a dominant influence on the establishment and functioning of JIT, and the motivation for JIT depends on it. The legislative factor is one of the key factors, but it is not isolated or the only one.

Other key factors are institutional considerations, the specific case and its individual assessment, the motivational factor, the capacity of the LEA, professional and personal prerequisites for international cooperation, capacity capabilities, the national security strategy and situation (on which priorities are based), etc.

Transposition of Supranational Law into National Law

The theoretical-legal definition has two basic levels, namely the transnational and the national perspective. Therefore, the perception of this issue must also be analysed through the transnational legal framework on the one hand, and its implementation and transposition into the national legal order, in each EU member state or third country separately. Since the use of this instrument is at a very low level, the application problems associated with it are only gradually being revealed and unpacked in practice. The fundamental obstacle is precisely national legislation, although the factors that influence the process of drafting, creating and implementing an agreement establishing a JIT are certainly more complicated and complex.

As many substantive and procedural issues are left to national legislations, there are in reality 27 different national laws in the EU.

At the very beginning, it is always a good intention or idea to create legislation that would be implemented in the field of a specific criminal procedure based on teamwork. This intention is further supported by the legal framework, but in the final phase of the decision-making process of establishing the JIT, the creation, implementation and the process of evaluating the activities and functioning of the JIT, the issue of rigorous and individual assessment of the criminal procedure, interest and objectives from the perspective of national interests is paramount. The national interest has the greatest stake in the creation and functioning of the JIT.

The idea of building a single internal market without permanent controls, in line with the Schengen acquis, has resulted in increasing tensions regarding the EU's internal and external security and the growth of transnational organised crime activities (Compare data in SOCTA 2013 and SOCTA 2017). Since it is not possible to deal with the ideal EU model (under the term ideal EU model, we imagine that the primary law of the EU would solve the issue of justice and order in the form of legal regulation of the legislative and institutional adequate framework for ensuring the internal and external security of the EU) in *de lege ferenda* (legislative and institutional) terms, we must start from a *de lege lata* perspective.

Principle of Individuality of the Case and Its Assessment

I have also concluded that it is not a universal instrument for international judicial cooperation in criminal matters. Joint investigation is not meant to be a block. On the contrary, it is based on a specific criminal or other administrative proceeding, which must be assessed on a strictly individual basis, taking into account the objective pursued and the interest of the specific party (the LEA) or the common objective, which depends on the purpose of the criminal proceeding (primarily it is the enforcement of the safeguarding and protection of one's own national security by means of criminal law, secondarily it is the enforcement of interests in the field of the protection and safeguarding of the internal or external security of the EU) (Jakabovič, 2019: 88). Although it is possible to understand the

term common in a broader sense, it is always for a narrowly pursued and specific objective or interest when assessing and creating a JIT.

The JIT is thus not a universal and general judicial instrument of international judicial cooperation. Its use presupposes a narrowly defined, concrete and specific objective.

Each criminal proceeding is individual and unique. It is, therefore, not appropriate to evaluate in advance the issues of the competence of the case in question of the assessment of the establishment of the JIT. That is why the focus is on communication between the partners (LEA), and the creation of a sufficient trustworthy platform, space and conditions for getting to know each other, building trust between each other. In the legal and security area of the EU, on the basis on *de lege lata* there are two EU agencies responsible for it (EUROPOL and EUROJUST).

Agreement on the Establishment of the JIT

The issue itself, as far as transnational law is concerned, is regulated only in a general way. Many aspects of the establishment, functioning, use of evidence, the operation of team members and other entities are left to the national legislation of the EU Member States. This means that, in reality, there are 27 different national legal arrangements. This factor may also have the effect of discouraging the use of the JIT as a tool. Despite progress, the use of JIT is still considered a rare judicial tool. However, identifying the causes and shortcomings requires much more than qualifying work. To objectively assess the causes and shortcomings, one would need to know the national legislations of all EU Member States. Such knowledge would, of course, have to be complemented by an examination from a non-legal perspective. Many of the practical matters that enter into or influence the process of establishing, operating and implementing the JIT are not elaborated. In my view, this is one of the reasons why there is a simplistic view of the JIT issue.

Subject Matter of the Agreement in Terms of the Type of Criminal Activity and Its Intended Use

The very theoretical and legal definition of the JIT issue implies that it is not a common tool that would be used on a daily basis. The very definition implies that by its very nature the subject matter of the agreement presupposes that, if established and operated, it will involve serious and organised crime committed across borders or transnationally. The theoretical and legal definition itself presupposes that the parties involved (LEA) agree with each other precisely in cases which, in their own way, are difficult to investigate, to secure and to obtain information and evidence from abroad.

The theory assumes that these will be transnational organised crime activities, which is simply not possible without trust between the parties. Although it should be noted here that in addition to co-operation in criminal matters (the primary purpose of establishing JITs), we have also identified the establishment of such forms of international cooperation in non-criminal sphere (e.g. cooperation between customs administrations).

The assumption of teamwork at international level, implemented in the form of an agreement, can be considered as a truly minimum framework for the fight against serious and organised crime or the protection of the European Economic Area (EEA).

My ambition was to elaborate an absolute and clear current supranational legal framework for the use of JIT in Europe, as it also concerns the Slovak Republic but even the third countries. This is of primary national security interest. It should also be added that the Slovak Republic's membership of

the EU strongly affects it not only economically (economic interdependence), but also security-wise. The state and development of the internal and external security of the EU and its Member States has a direct impact on the state and development of the security situation in the Slovak Republic. This is not to mention the ever greater, deeper and more intense globalisation, the result of which is the unification of the world, in which national borders are playing less and less of a role. This is leading to the suppression of nation states.

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THE USE OF MODERN PRINCIPLES OF POLICE MANAGEMENT BY POLICE OFFICERS IN COMBATING CRIME

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Introduction

Before talking about the effects of modern principles of police management used in combating crime, some of the terms must be precisely defined to provide adequate solutions with the already published works in the field of police management and the literature review.

Like all other terms, management has many different definitions in the available literature. *To manage* is to forecast and plan, to organize, to command, to co-ordinate and to control. To foresee and provide means examining the future and drawing up a plan of action. To organize means building up the dual structure, material and human, of the undertaking. To command means maintaining activity among the personnel. To co-ordinate means binding together, unifying and harmonizing all activity and effort. To control means seeing that everything occurs in conformity with the established rule and expressed command (Fayol, 1916). This definition shows the comprehensiveness of management as a process that encompasses several segments, starting with planning, then organizing, then command, coordination and finally control. *Management* is the attainment of organizational goals in an effective and effcient manner through planning, organizing, leading, and controlling organizational resources (Daft, 2016). In this definition, besides mentioning the function of management, special focus is on achievement of organizational goals in an effective and efficient way.

Police as an organization must also be managed. Police management is a specialized management discipline specially adapted to a complex police organization. *Police management* has evolved through three major developmental perspectives. The first is known as classical police management, the second as behavioural police management, and the third as contemporary police management. Classical police management was bureaucratic, meaning that an organization must operate on a rational basis. Behavioural police management addressed the need for a more flexible and democratic organizational model (Novak, et al, 2021). Modern organizations have to work in an unstable environment. Police organizations are no exception. Police are required to understand and effectively operate in a complex social, political, and organizational environment (Casey and Mitchell, 2007). In order to work in such an environment, police officers must be prepared to apply modern principles of police management as well as of decision-making process. The police station carries out tasks that are of key importance for security at the local level. However, a number of obstacles appear and hinder achievement of a high level security and acquiring of the confidence of citizens (Kekić and Milenković, 2018).

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Decision-making is the process whereby an individual, group or organization reaches conclusions about what future actions to pursue given a set of objectives and limits on available resources. This process will be often iterative, involving issue-framing, intelligence-gathering, coming to conclusions and learning from experience *(*Russo, J. E. and Schoemaker, P. J. H., 2014). How will managers choose the best one from a number of solutions and how to conduct selection to the best one that are the most familiar with restrictive resources that can be used to achieve the objective? In response to this question they usually use different techniques of decision-making, depending on the type of decision, or whether it is a routine, adaptive or innovative decision (Buble, 2006). Almost every day, police officers are in a situation where they have to choose the best option with limited resources in combating crime. When it comes to resources limitation, it should be human as well as material resources that are restricted. On the other side, politicians, citizens as well as media centres create pressure that crime must be minimized, and the perpetrators brought to justice as soon as possible. In such environment and based on the core of police job, police officers should follow modern principles of police management in order to reach goals and to do their job efficiently and effectively on the one hand, and fairly on the other.

Moreover, literature recognizes the modern principles of management. There are a lot of theoretical approaches to the principles of management, but for the purpose of this article the authors have selected only the ones that indicate best the modern principles of police management in combating crime. Formally defined, the principles of management are the activities that "plan, organize, and control the operations of the basic elements of [people], materials, machines, methods, money and markets, providing direction and coordination, and giving leadership to human efforts, so as to achieve the sought objectives of the enterprise (Carpenter et all, 2010). The principles of management are drawn from three specific areas —leadership, entrepreneurship, and strategic management (Ibid).

According to the founder of modern management Henry Fayol, there are 14 major principles of management such as:

- Division of work,
- Authority and responsibility,
- Discipline,
- Unity of command,
- Unity of direction,
- Subordination of individual interest to mutual interest,
- Remuneration,
- The degree of centralization,
- Line of authority/scalar chain,
- Order,
- Equity,
- Stability of tenure of personnel,
- Initiative,
- Esprit de corps/team spirit (Fayol, 1916)

A lot of the mentioned principles should be used in the practical work of the police officers in combating crime, especially division of work, authority and responsibility, discipline, unity of command, unity of direction, line of authority/scalar chain, order and team spirit.

Management practices and processes of modern term have been built around a small nucleus of core principles: standardization, specialization, hierarchy, alignment, planning, and control, and the use of extrinsic rewards to shape human behaviour (Meier, 2021).

Moreover, principles of police management should be defined as a part of police laws. For example, the Law on Police stipulates that the performance of police work is based on the principles of professionalism, depoliticization, cooperation, economy and efficiency, legality in work and proportionality in the application of police powers.

General Role of the Modern Principles of Police Management in Combating Crime

The usage of modern principles of police management in the practical work of police officers in combating crime is extremely important.

The United Nations Office on Drugs and Crime (UNODC) proposes three general principles of the use of force in law enforcement, as well as for police officers in combating crime. These principles are: necessity, proportionality and precaution (UNODC, 2019). The principle of necessity has three interrelated elements: the duty to use non-violent means wherever possible; the duty to use force only for a legitimate law enforcement purpose; and the duty to use only the minimum necessary force that is reasonable in the prevailing circumstances. Wherever possible, law enforcement officials should use non-violent means to achieve a legitimate law enforcement objective before resorting to physical force (Ibid). If a parallel is made with modern managerial principles, there are similarities. With the use of minimum of resources, police officers in combating crime should achieve the goals. In this case there is a specificity of minimizing the use of force. The principle of proportionality as it applies to the use of force in law enforcement is often misunderstood. Proportionality does not mean that force must be used by a law enforcement official or police officers in strict accord with any use of force continuum (where the level of force is raised in stages), or as a likely response to violence from a criminal suspect. Proportionality only comes into play if the principle of necessity is respected. Thus, the use of force must already be necessary in the circumstances and the force actually used must be no more than the minimum necessary to achieve a legitimate law enforcement objective (Ibid). The previous principle that emphasizes UNODC clearly indicates the complexity in the process of decision making by police officers during combating crime. Finally, the principle of precaution underpins the principles of necessity and proportionality. Under the principle of precaution, the state is duty bound to plan law enforcement operations in a manner that minimizes the risk of law enforcement agencies and officials having recourse to potentially lethal force. The rationale is to limit the risk of death or serious injury to any member of the public or law enforcement official (Ibid). The last principle maybe shows the best view on the pronounced influence of the environment on the practical work of police officers in combating crime.

Some police organizations develop their own modern principles of police management in the practical work. A good example of the previous fact is the Los Angeles Police Department. The Los Angeles Police Department is one of the largest and most innovative law enforcement agencies in the United States of America. It is responsible for providing police service to an area encompassing 468 square miles and 21 community areas, representing approximately over 4 million residents as of 2022 (LAPD, 2022). The most important management principles of the Los Angeles Police Department are:

- Reverence for the law - the main thrust of a peace officer's duties consists of an attempt to enforce the law,
- Crime prevention top priority - the basic mission for which the police exist is to prevent crime and disorder as an alternative to repression by military force and severity of legal punishment,
- Public approbation of police - the ability of the police to perform their duties is dependent upon public approval of police existence, actions, behavior, and the ability of the police to secure and maintain public respect,
- Public cooperation - the degree of public cooperation that can be secured diminishes proportionately the necessity for the use of physical force and compulsion in achieving police objectives.
- Minimum use of force,
- Limit of police power - the police should always direct their actions strictly toward their functions and never appear to usurp the powers of the judiciary by avenging individuals or the state, or authoritatively judging guilt or punishing the guilty.
- Test of police effectiveness - the test of police effectiveness is the absence of crime and the presence of public order. It is not the evidence of police action in dealing with crime and disorder,
- Managers working with police - supervisors and managers exist to define problems, to establish objectives, and to assist line police officers in the accomplishment of the police mission. The evaluation of a manager should be based on the improvement and excellence of his subordinates in the achievement of organizational goals. The lifeblood of good management is a thoroughly systematic, two-way circulation of information, feelings, and perceptions throughout the organization,
- Police/press relationships,
- Management by objectives - in order to effectively deal with the most important problems, objectives must be established,
- Management by participation - since employees are greatly influenced by decisions that are made and objectives that are established, it is important for them to be able to provide input into the methods utilized to reach these decisions,
- Openness and honesty (LAPD, 2022).

For practice work of police officers in combating crime very useful are principles of management developed by Henry Fayol. Moreover, some of them should be strictly emphasized as modern principles of police management. Division of work, as the first of Fayol's management principles, indicates that the whole practice of crime combating should be divided into small tasks. In this way, police officers recognize the individual abilities of their subordinates and accordingly assign them tasks in order to be as much as possible efficient and effective. Then, authority and responsibility are principles very familiar with the work of police officers at each level in the police organization. This is the issue of commands followed by responsibility for their consequences. Authority means the right of a superior to give the order to his subordinates, whereas responsibility means obligation for performance (Brainkart, 2022). The third Fayol's management principle, which is useful in police management the in process of combating crime, is discipline. In this term it is obedience, proper conduct in relation to others, respect of authority, etc. It is essential for the smooth functioning of all organizations (Ibid). Police officers, besides coordinating their subordinates, are also subordinates of some higher level in the police organization. So, they have to respect authority. For example, during and after closing a certain activity in combating crime, they have to report to their superiors. The next management principle is connected with the unity of command. This principle states that each subordinate should

receive orders and be accountable to one and only one superior. If an employee receives orders from more than one superior, it is likely to create confusion and conflict (Ibid). Combating crime, as one of police specializations, is very complex in modern times. Modern technologies, migrations, world transformation during Covid19 pandemic affect the complexity of this police job, etc. So, without the unity of command, police officers will not have appropriate organization of their subordinates and that leads to misunderstanding, confusion and unsuccessful execution of tasks. Very similar with previous principle is the next one, the unity of direction. This principle means that all related activities should be put under one group of police officers and that one plan of action has to be developed for them. Moreover, they should be under the control of one police officer. The line of authority/scalar chain, as the next Fayol's management principle, refers to the chain of superiors, ranging from the top management to the lowest rank. The principle suggests that there should be a clear line of authority from the top to bottom, linking all managers at all levels (Ibid). This is very specific for police jobs in combating crime. Police organization is hierarchically developed, with different organizational models that are used. But in practice, there are similarities with military organizational charts. So, this principle is very useful for police management in order to have a precisely defined chain of command. Order, as a management principle, should be defined in a few ways, but for police management it should be used in terms of social and material order. Social order ensures the fluid operation of a company through authoritative procedure. Material order ensures safety and efficiency in the workplace. Order should be acceptable and under the rules of the organization (Ibid). Finally, police officers should not manage their subordinates without team spirit. This refers to the need of officers to ensure and develop morale in the workplace, individually and communally. Team spirit helps develop an atmosphere of mutual trust and understanding. Team spirit helps finish the task on time (Ibid).

Serbian Law on police defines some standards and principles of conducting police affairs which can be summed up as the principles of police management. According to this Law, conducting of police work is based on the principles of professionalism, depoliticization, cooperation, economical work and efficiency, legality in work and proportionality in the application of police powers, as well as other principles governing the activities of state administration bodies, civil servants and administrative matters (Law on Police, 2018). Comparing theoretical findings and conclusions, some of these principles should be defined as the modern principles of police management in combating crime. Professionalism is one of the principles that is an obligation in the work of police officers. This implies a minimum degree of improvisation and a high level of competence in performing managerial police work in the activities against crime. Then, depoliticization implies political neutrality in the practical work of police officers and their chiefs. This especially refers to combating crime where there is no place for political implication. Efficiency and economical work are principles that are the base of modern management and organizations. Serbian Law on police recognizes these principles as obvious for police officers. Legality in work is very close to ethics. Police ethics refers to a system of moral values that are generally accepted as professional standards in policing. In policing, ethics includes values such as allegiance, honesty, loyalty and courage. Basically, ethics is "doing the right thing". For example, a police officer is expected to stop and help a stranded motorist or have reasonable suspicion of a violation before initiating a traffic stop. But we know these things do not always happen (Studycom, 2021). The previous definition of police ethics clearly defines one of the modern principles of police management. Police officers often find themselves in situations where they have several options when deciding, some of which are not legal or unethical. Of course, they must always act in accordance with the law and under the auspices of police ethics. In performing police work, the police adhere to established and achieved standards of police conduct, considering internationally generally accepted standards of conduct relating to:

- the duty to serve citizens and the community,

- responding to the needs and expectations of citizens,
- respect for legality and suppression of illegality,
- realization of human and minority rights and freedoms,
- non-discrimination in the performance of police tasks,
- proportionality in the use of coercive means,
- prohibition of torture and inhuman and degrading treatment,
- providing assistance to victims,
- adherence to professional conduct and integrity,
- the obligation to protect classified information,
- the obligation to refuse illegal orders and report corruption (Ibid).

According to compatibility with international standards, standards that are used by Serbian police are the same as the principles defined by international organizations in the area of combating crime. For example, proportionality in the use of coercive means is very similar to the principles defined by the UNODC.

Strengths and Weaknesses of the Use of Modern Principles of Police Management by Police Officers in Combating Crime

For sure, there are more strengths than weaknesses in the practical use of modern principles of police management by police officers in combating crime.

It is important that police officers measure behaviour that matters, i.e. behaviour that will make the agency more successful. The most effective style of supervision is the active style. Managers who serve as good role models and are strict have a positive impact on ethical behaviour, and research reveals that this results in fewer citizen complaints. An officer's organizational commitment determines his/her performance (Novak et al., 2021). In order to have an active managerial style, as the most effective style, police officers should accept modern principles of management, as well as of police management. This will help them to be more efficient in combating crime. Police officers must know how to manage group behaviour, such as that of police subcultures. How an officer is socialized determines his/her view of the job, given that officers may adopt a manager's culture or a street cop's culture. Moreover, the loss of status in police service and transfer to a different department where the employee has less authority than before will cause resistance (Milenković et al., 2016). Police subculture varies among departments. The public world of policing presents a police force dedicated to protecting and serving, whereas the private world of policing reveals a police force that is conservative, cynical, and protective of itself (Ibid). The use of modern principles of police management in combating crime, such as professionalism, equity, depoliticization, legality in work and team spirit, will help police officers to manage different individual and group behaviour, or police subcultures. Police officers should measure and monitor seven dimensions: reduce crime and victimization, call offenders to account, reduce fear and enhance personal security, ensure civility in public spaces, quality services/customer satisfaction, use force and authority fairly, efficiently, and effectively, and use financial resources fairly, efficiently, and effectively (Ibid). Nowadays, achieving results according to all of these dimensions puts on police commanders and officers pressure and can lead to dishonest reporting. The use of principles of police management in combating crime should help police officers in order to have proper results in the whole of metric dimensions.

In the future, greater diversity may lead to more types of employee organizations (Ibid). Moreover, the police organization probably will have a different organizational chart than now. For example, police unions were not strong in the previous period. Recently, unions have been influential in opposing demands for greater accountability, and negotiations between unions and management focused on salaries and benefits, conditions of work, and grievance procedures. Given their influence, unions should be respected by police management (Ibid). In order to effectively combat crime, it is impossible to expect full implementation of all modern principles of management as well as of police management. This refers to the main weaknesses of this management concept. For example, acceptance of all union demands will lead to better working conditions for police officers and in this way the use of modern management principles, such as diversity, ethics, is fully achieved. Otherwise, this practice will have negative consequences on the authority of police officers. Practice shows that full respect of police union demands weakens the discipline of police officers because they will look for police union protection for any kind of mistake in order to avoid responsibility. Some of the modern principles of police management relate to cooperation with civilians. In modern times, most police decisions are directly under the public eye. The need to establish strong media relations and strategic communications is important, too. Police officers should aim at greater transparency with the media and the public. To that end, most police departments employ a public information officer, and police have begun to utilize social media. Police officers must better prepare strategies for dealing with the media during crisis situations (Ibid). Modern principles of police management in combating crime will help police officers to accept importance of the cooperation with civilians, social media, etc. In this way, it can weaken police authority, as there may be too much thought about how the public will comment on police action, rather than whether it has reduced crime rates.

Conclusions

Most countries are generally facing rising crime rates. It is difficult to generalize the reasons that lead to that, but it is certain that police organizations are facing increasingly complex tasks when it comes to combating crime. Therefore, police officers are often faced with very complex decisions that must be made in a limited time and with limited resources. On the other hand, the expectations of the public are high and there is always the question of when and how crime will be reduced to a minimum in order to improve living standards.

Researchers in the field of modern management have recognized and developed several principles that are given as recommendations to managers of different levels. The goal is primarily to make things easier for managers and give them guidelines to achieve the desired results using the principles. It is similar in the field of police management. In addition to the general modern principles of management, there are some closely related to police organization. This primarily refers to those related to ethics, treatment and cooperation with civilians, legality in work and depoliticization. The novelty is that police officers are required to make their decisions in accordance with the postulates of economy. This was not the case before, but now, like other organizations, the police management is expected to spend material and technical resources in the most possible economical way.

The use of modern principles of police management in combating crime should be helpful for police officers. Following the principles, they will avoid mistakes and achieve desired results in combating crime. But, the modern principles of police management have some weaknesses that could weaken police authority and organization. In this way it is best to find a balance between the use of modern principles of police management and the tasks in combating crime.

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MARIJA'S LAW – TEN YEARS LATER – (NON) APPLICATION OF THE LAW AND FUTURE SOLUTIONS

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Introductory Remarks

As a widely accepted truth, it is indisputable that criminal acts directed against sexual freedom, the so-called "sexual crimes" cause serious and long-term, if not lifelong, consequences for the injured person, both physically and especially psychologically. Linguistically and legally, child sexual abuse is a term used to describe sexual activities between a child and an adult or an older child. Ergo, this is criminalized as a criminal offense in almost all countries of the world, for which very strict criminal sanctions are prescribed (Merdović & Vujović, 2022: 66). Knowing different aspects of this phenomenon, different definitions of sexual abuse can often be found in the literature, and no clear line can be drawn between sexual offenses such as pedophilia, illicit sexual acts and sexual violence via the Internet and digital technologies. Sexual abuse of women (girls) is what people usually mean when they speak about sexual abuse in general, and it is almost always assumed that the victim of sexual abuse is female, and some international documents are aimed specifically at protecting women from sexual abuse. Also, women, thanks to the primary drives on both sides, have always been the natural target of men's instinctual animalistic sexual aggression (Filipović, 2022: 118). Noting that the violence against women is a negative phenomenon (Vujović & Filipović, 2022: 332) which has existed from almost the beginnings of human civilization, that is, from the end of matriarchy. Due to these facts, and without diminishing the consequences of sexual offenses against adults, we consider it indisputable that the consequences of these crimes on children and minors are far more pronounced, lasting and particularly serious, which significantly hinders or affects the development of their personality, causing them, as a rule, serious psychological trauma and scars (Matijašević-Obradović & Dragojlović, 2020: 104). Accordingly, this conclusion simply stems from the fact that minors, and especially children, are a particularly sensitive category of every society, as a result of which society and the state, through law, provide this category of persons with special protection and a special status (Matijašević & Dragojlović, 2022). Reasonable are, therefore, the measures and intense interest both the international community as a whole and the national legislators take when it comes to protecting children from sexual abuse, giving them special status and protection.

Dealing with this issue, proceeding from international standards - adopted, first of all, within the framework of the Council of Europe - special criminal legal protection for minors is provided, as a rule, on the one hand by prescribing as serious or the most serious forms of all criminal offenses when they are directed against children and minors, while, on the other hand, in the case of certain criminal acts directed against minors, special measures are prescribed that must be applied to the perpetrators of these acts, as a consequence of conviction. Underlining previously stated, in 2007, within the framework of the Council of Europe, the Convention on the Protection of Children from Sexual Abuse and

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Sexual Exploitation was adopted[2], which foresees a complex mechanism of measures, from preventive measures aimed at persons who work with children, measures towards children themselves[3] and the wider public, through measures of psychological and social assistance to victims, to those measures that should be incorporated into the national substantive and procedural criminal legislation. Respectively, in parallel with this, another initiative was developed that resulted in the drafting of the Convention on the prevention and fight against violence against women and domestic violence, the so-called Istanbul Convention, which partly deals with sexual violence against women and children. Deeming it fundamental for the protection of children, the Republic of Serbia signed the Lanzarote Convention immediately after its adoption by the Council of Europe. Eventually, as the Convention became a part of our legal order through ratification, there was a positive obligation to prescribe the measures provided for in the Convention by the national legislation and to elaborate them in more detail. Viewing the mandates and desired effects of the Convention, this obligation was partially fulfilled by the amendment of the Criminal Code (Criminal Code of the Republic of Serbia (CC), *Official Gazette* RS, 35/2019), and partly by passing the Law on Special Measures for the Prevention of Criminal Offenses Against Sexual Freedom against Minors (Act on Special Measures for the Prevention of Crimes against Sexual Freedom involving Minor ("Marija's Law"), *Official Gazette* RS, 32/2013), which was adopted only three years after the ratification of the Convention.

The Convention, also, as the first international legal instrument that includes all forms of sexual violence against children, establishes a broad prohibition of discrimination (Article 2), thus following the general principle of non-discrimination contained in the corresponding article of the UN Convention on the Rights of the Child. Starting, therefore, from this general principle, the Lanzarote Convention prescribes specific preventive measures and requires the coordination of national and local agencies in charge of protection against sexual exploitation and sexual abuse of children, but this Convention also prescribes appropriate protective measures, i.e. effective social programs designed with the aim of providing the necessary support to the victims, their close relatives and persons in charge of taking care of them, and other short-term and long-term preventive and protective measures (see: Petković & Pavlović, 2016: 185).

With regard to the procedural-legal aspect of protecting the position of the child, Petković & Pavlović (2016: 187) point out that the Lanzarote Convention also contains certain criminal procedural standards aimed at improving the position of the child as a victim, where they include the urgency of the procedure, informing the victim about his rights, protecting privacy and striving to avoid confrontation between the victim and the perpetrator, changes regarding the initiation of *ex officio* prosecution, even when the victim withdraws from a previously given statement.

In the further consideration of this paper, we will look at the circumstances that preceded the adoption of Marija's Law, and we will look critically at the individual provisions of the Law on Special Measures.

Circumstances Preceding the Enactment of "Marija's Law"

Certainly, before moving on to the analysis of the provisions of this Law, it is necessary to point out certain contextual peculiarities that caused the adoption of the Law on Special Measures. Also, based on the content of public debates in the Republic of Serbia, cases of sexual violence, especially against

2 *Council of Europe Convention of the Protection of Children against Sexual Exploitation and Sexual Abuse, Lanzarote Convention (CETS 201)*; in the future to the text: Convention or Lanzarote convention.

3 According to Article 3 of the Convention and for the purpose of the Convention, any person under 18 is considered to be a child.

children, have been attracting significant public attention for the last ten years. The thesis that is presented is that these are irreparable categories of perpetrators of criminal acts, with a high rate of recidivism (Dragojlović & Bingulac, 2019: 240). As a result, an atmosphere was created about the necessity of stricter punishment of sex offenders, especially when the victims are minors. Also, the sequence of events, i.e. legislative activities regarding and in connection with the Convention, is closely related to legislative activities on the plan of passing the Marija's Law.

First of all, it should be noted that the national penal legislation, i.e. the CC, was amended before the ratification of the Lanzarote Convention. Namely, the criminal acts from Articles 185a and 185b of the CC were introduced by the Law on Amendments to the Criminal Code of 2009 (Law on Amendments to the Criminal Code of 2009 (LACC), *Official Gazette* RS, 72/2009). The convention was ratified on July 29, 2010. It is not so unusual and rare for a country to actually take over provisions from an international act and introduce them into its internal legislation even before ratifying that international act, as well as before that international act enters into force. However, as Stojanović (2017: 597) points out, the immediate basis and reason for the adoption of the LACC from 2009, which criminalized these behaviors, was Article 22 of the Convention, which orders the contracting countries to take all necessary legislative measures to criminalize imagining the criminal act of inducing a child to witness sexual acts. These amendments to the CC, therefore, took place in 2009 – almost a year before the legislator would ratify the Convention, and a whole four years before they would pass the Marija's Law.

When it is taken into account that the Convention served as the immediate legal basis for the adoption of both amendments to the Criminal Code and for the adoption of the Law on Special Measures, and based on the fact that more than four years passed between the adoption of these two legal text , that in the meantime, the Convention was also ratified, that almost three years passed from the ratification to the passing of the Law on Special Measures, what other conclusion can reasonably be drawn than that the legislator was not sincere enough in his intention, consistent enough nor, obviously, was there sufficient political will for the actual implementation of assumed international obligations. It was only the tragic events of 2014[4] that forced the domestic legislator to adopt the Law on Special Measures, which will be known in the public as *Marija's Law*, thus finally complying with the international obligations assumed by the Convention. One would have to wonder if the inactivity, reluctance and inconsistency of the domestic legislator had any consequences.

Critical Review of Marija's Law

From the content aspect, Marija's Law is one of the extremely short legal texts, with a total of 19 relatively short articles. As with all modern legal regulations, the first legal provisions are dedicated to defining the field and subject regulated by this legal text.[5] Thus, Article 1 of this Law defines the field and subject of regulation of this Law, and it prescribes *"special measures to be taken against the perpe-*

4 Popularly, the law has been named after Maria Jovanović, an eight-year-old little girl from Stari Ledinci, the suburbs of Novi Sad, who was killed on June 26, 2010 by the perpetrator who was previously convicted of sexual criminal offences against children and minors. After this crime, father of the girl started the initiative for the enactment of the law which would prevent similar events in the future. The initiative was supported by all Serbian political parties and the biggest part of public, and enacted unanimously by the Assembly.

5 This legislative trend of the domestic legislator in the past period can be criticized for simple unnecessariness. It is not disputed that these provisions do not take anything away from the legal text. But they also do not add anything to it. Given the fact that they are mostly empty political declarations, they are not useful in the interpretation or application of the rest of the law. In our opinion, such provisions unnecessarily burden the legal text with platitudes or wordings that have no real meaning or place in legal texts. For example, one of the most basic and important legal regulations - the Criminal Code - does not contain these declaratory and introductory provisions, but no one has ever had a problem understanding what and how the Criminal Code regulates.

trators of crimes against sexual freedom committed against minors specified in this Law and regulates the keeping of special records of persons convicted of those crimes." Although the goal, purpose and content of the legal text can be clearly determined from its name, the legislator had the need to repeat all this in the legal text itself. This provision, from a linguistic and substantive point of view, is derogatory in nature - it establishes a special regime: special measures for individual (special) criminal acts. Ćorović (2016: 416) points out that, due to the existence and application of the principle of *lex specialis derogate legi generalis*, there should be no problem here. Nevertheless, the problem can be posed from the aspect of the absence of a clause of the CC that would allow a special regime by its express provision. Ćorović (2016: 416) also correctly states that it is common for special criminal law regimes to have their own *"iustus titulus in the Criminal Code, as is the case with juvenile offenders and legal entities, but not with Marija's law.*" Although this is common, there is, however, no explicit requirement that for each special criminal law regime there is a corresponding general clause in the CC. The legislator would, thus, be extremely limited when dealing with secondary criminal legislation. Nevertheless, we consider, bearing in mind the general rule on the codification of criminal legislation, as well as the principles of *lex stricta*, the legislator should not lightly and/or too often resort to secondary criminal legislation, and especially should not introduce reforms of criminal legislation and penal policy through the back door of secondary criminal legislation (similarly, Ristivojević, 2013).

The goal of the Law is defined in Article 2, and the goal is to *"remove the conditions that may influence the perpetrators of crimes against sexual freedom committed against minors to commit these crimes in the future.*" Defining the goal of a particular law is, as a rule, of a declarative-political nature and connotation, and the legal value is insignificant. This Law is no exception to that rule. It does not even seem completely clear to us what exactly are the "conditions that may be of influence" that the proposer and the legislator had in mind.

As it is a special criminal law regime, the provisions of this Law do not apply to all criminal acts, but this Law is limited in its application to only certain criminal acts which are, as a *numerus clausus*, listed in Article 3 of this Law. The criterion for distinguishing these criminal acts is completely indisputable: they are criminal acts against sexual freedom with the condition that they were committed against a minor. However, regardless of the fact that they are criminal offenses with the same protective object, the large difference in the severity of the mentioned criminal offenses makes this group extremely incoherent, bearing in mind that within this group of criminal offenses there are also offenses ranging from the most severe to the least serious.

Starting from the goal of passing Marija's Law, Dragojlović (2022: 88) points out that the provisions of the Law on Special Measures will not be automatically applied to all perpetrators of the criminal acts listed in Article 3 of this law. Namely, in order for the provisions of this Law to be applied, it is necessary that a special qualifying circumstance be met during the commission of a criminal act: that the act was committed against a minor, i.e. that a minor was harmed by a criminal act (Dragojlović, 2022: 89).

The Law itself, in Article 4, prescribed that if the provisions of this law do not prescribe otherwise, the provisions of the CC, the Law on the Execution of Criminal Sanctions (LECS, *Official Gazette* RS, *35/2019)*, the Law on Juvenile Offenders and the Criminal Protection of Minors (Juvenile Offenders Act-JOA), *Official Gazette* RS, 85/2005) and the Code of Criminal Procedure (Code of Criminal Procedure (CCP), *Official Gazette* RS, 62/2021) shall be applied accordingly. This provision clearly defines that the provisions of Marija's Law derogate the entire system of criminal law in Serbia; the provisions contained therein are derogated from both the provisions of the general criminal law regime (by derogation from the CC and the CCP), as well as the special criminal law regime that applies to minors

(by derogation from the Law on Juvenile Offenders and Criminal Protection of Minors; JOA). Thus, as the JOA is already a special law in relation to the Criminal Code, it is, consequently, Marija's law "more special" than the JOA in relation to the Criminal Code. It follows that the provisions of Marija's Law will be applied in the first place, then the JOA, and only finally the provisions of the general criminal law (CC and CCP). With this approach, our criminal justice system has become even more complex, which may not have been necessary.

Article 5 of Marija's Law is entitled *"Prohibition of mitigation of punishment and parole and non-statutory limitation of criminal prosecution and execution of punishment"*. Thus, the current Article 5 prescribes that the punishment of a person convicted of a criminal offense from Article 3 of this Law cannot be mitigated by applying the general rules on mitigation of punishment from Article 57 of the CC (paragraph 1), that a person convicted of a criminal offense from Article 3 of this Law cannot be conditionally dismissed (paragraph 2) and, as a result, the criminal prosecution for criminal offenses from Article 3 of this Law, as well as the execution of the punishment for these offenses, does not become statute-barred (paragraph 3). Therefore, the provisions of this article derogate from three basic institutes of criminal law. In its campaign to tighten the penal policy to its extremes, the only thing that is surprising is that the possibility of a suspended sentence has not been ruled out.

In any case, according to the express provisions of Article 5, Paragraph 1 of the Law on Special Measures, for criminal acts from Article 3 of this Law, the sentence cannot be reduced and parole is not possible. This ban on mitigating punishment in connection with sexual offenses in Serbian legislation is based on Article 27 of the Convention, which specifies that "each (state) signatory shall take the necessary legislative or other measures to ensure that criminal offenses established in accordance with this Convention are punished by effective, proportionate and dissuasive sanctions, taking into account their seriousness." However, we believe that this provision of the Convention does not insist on the introduction of an absolute blanket ban on mitigation of punishment, although it does not exclude this possibility (similarly to Miladinović-Stefanović, 2014: 571; Ćorović, 2016: 418). Nevertheless, we believe that the domestic legislator has decided to go a step further than what is required by the Convention, and to prescribe such an absolute ban, which, in our opinion, has no criminological and criminal justification.

We believe that this kind of tightening of the penal policy, and the introduction of a blanket, absolute *in abstracto* ban on mitigation of punishment has no place in our criminal legislation. Even for some of the most serious crimes, this possibility is not absolutely excluded.

Stojanović (2012: 316) points out that these provisions of Marija's Law directly disavow certain institutions of the general part of the CC, and Ristivojević (2012: 46) notes that the difference between, for example, an attempted and completed criminal offense, complicity and execution, diminished capacity and insanity, etc. has been significantly reduced. We believe that with this kind of prescription, the legislator has certainly gone beyond the scope of the *lex specialis derogate legi generali*, so, essentially, he passed a criminal "super-law". No matter how noble the motives of such a regulation may be, we believe that the legislator went too far in derogating from the general rules of criminal legislation.

In the second place, Article 5 of the Law on Special Measures also prescribes the prohibition of conditional release of persons sentenced to prison for criminal offenses from Article 3 of this Law. And this ban, although at first glance more reasonable than the ban on mitigation of punishment, seems inexpedient. Namely, it is generally accepted that the institution of parole is an important instrument for controlling the behavior of prisoners and achieving the purpose of punishment (Stojanović & Kolarić, 2012: 11-12). Tanjević & Đorđević (2014: 113) point out that according to the current legislation, parole becomes a right for the perpetrators of most criminal offenses (with the fulfillment of certain

conditions), and for the perpetrators of some, mostly serious crimes, it remains a possibility (also with certain conditions). The parole facility established in this way with the modalities of mandatory and optional release is in accordance with international standards in this area and is very suitable for achieving its goals, primarily contributing to the rehabilitation of convicted persons and achieving the purpose of punishment, but also relieving the burden of overcrowded correctional institutions. The provision of Article 46 of the CC does not leave the possibility to extend the prohibition of conditional release of convicted persons by means of a special law. However, as in other aspects, the absence of a permissive general clause in the Criminal Code did not prevent our legislator from expanding this prohibition with the Law on Special Measures, so according to Article 5, paragraph 2 of this Law, persons who have been sentenced to prison for a criminal offense against of sexual freedom committed against a minor listed in Article 3, cannot be released conditionally. Absolute denial of the right to parole is not criminologically and criminally acceptable and justified, especially bearing in mind the special measures and consequences of conviction to which persons convicted of these crimes are exposed.

Finally, paragraph 3 of Article 5 of the Law on Special Measures limits, or excludes, the application of the statute of limitations for criminal prosecution and execution of punishment for criminal offenses from Article 3 of this Law. Although some authors believe that such a prescription is not without precedent (see for example Đorđević & Simeunović-Patić, 2015: 240), we believe that this action of the domestic legislator is absolutely unprecedented. The statute of limitations for criminal prosecution from Article 103-106 of the Criminal Code is an almost absolute category. The statute of limitations for criminal prosecution suffers from rare and narrow exceptions. In this sense, there is no legal regulation that foresees a deviation from this rule. The only exceptions are contained in the Constitution of the Republic of Serbia (Constitution of Republic of Serbia, (CRS), *Official Gazette* RS 98/2006; 115/2021) and the CC itself. Thus, the CRS in Article 34, paragraph 6, stipulates that *"criminal prosecution and execution of punishment for war crimes, genocide and crimes against humanity shall not become* statute-barred". In addition to this exception contained in the constitutional norm, the only exception is provided by the provision of Article 108 of the CC, which stipulates that *"criminal prosecution and execution of punishment do not become statute-barred for criminal offenses provided for in Art. 370 to 375 of this Code, for criminal offenses for which a sentence of life imprisonment is prescribed, as well as for criminal offenses for which, according to ratified international treaties, the statute of limitations cannot apply"*. By prescribing the norm within Article 5, Paragraph 3 of the Marija's Law, the legislator went beyond the limits and framework of the criminal legislation, and made significant changes to the domestic criminal justice system, for which he had no sufficient justification or reason. Putting the criminal acts from Article 3 of this Law in the same rank as the criminal acts from Article 108 of the CC is devoid of any sense, logic and criminal law reason.

Dragojlović (2022: 89) points out that the key operational provisions of this Law are contained in Articles 6 and 7, which govern the special measures and legal consequences of conviction. Article 6 of the Law on Special Measures regulates the issue of legal consequences of a conviction, which, again, to some extent expands the general institute of criminal law. Namely, in accordance with the provisions of Article 6 of the Law, with a criminal conviction for the criminal offenses listed in Article 3 of this law, the following legal consequences must occur: 1) termination of public office; 2) termination of employment, i.e. termination of calling or profession related to work with minors; 3) prohibition of acquiring public positions; 4) prohibition of establishing an employment relationship, i.e. performing a calling or occupation related to work with minors. Furthermore, according to paragraph 2 of this provision, the legal consequences of the conviction from paragraph 1 of this article occur on the day the judgment becomes final. These legal consequences of conviction are subject to two-pronged criticism. First, it is found that it was neither necessary nor justified to include them in this legal text, bearing in mind the complete identity with the legal consequences of conviction contained in Article

95 of the CC. Secondly, the insufficiently precise determination of these consequences of conviction is criticized, which makes their concretization and application difficult. In addition, the question of the duration of these consequences of the conviction imposes a serious dilemma.

The provisions of Article 6 of the Law on Special Measures, in their essence, only repeat the provisions of the Criminal Code on the legal consequences of a conviction, with the exception of the legal consequences of a conviction of the loss or prohibition of obtaining certain permits, which is provided for by the CC, and which the Law on Special Measures does not mention. Also, in Marija's Law, the legislator failed to specify which legal consequence follows a criminal conviction for which of the criminal acts from Article 3 of this Law. Article 6 of Marija's Law only stipulates that a conviction for a criminal offense from Article 3 of this law necessarily entails the legal consequences of the conviction, so they are enumerated. As the legislator did not clearly decide when the consequence of the conviction occurs, linguistic interpretation leads to only one conclusion: all listed legal consequences of the conviction will occur. In addition, the question of "concurrent" application of the provisions of the CC, in the sense of Article 4 of Marija's Law, is also raised. Does Article 6 limit the range of legal consequences of a conviction that can occur to persons convicted of criminal offenses from Article 3 of Marija's Law, or can the general rules from the Criminal Code still be applied, i.e. the legal consequences of a conviction that the legislator failed to repeat in Marija's Law? We are of the opinion that the legislator prescribed the legal consequences of conviction from Article 6 according to the *numerus clausus* principle, and that by a conscious choice, i.e. by excluding other legal consequences from the CC, he decided that those legal consequences cannot be applied to persons convicted of one of the criminal offenses from Article 3 of Marija's Law. It is considered that the legislator in the field of penal legislation was perfect and that he prescribed everything he wanted, as he wanted. Therefore, in the absence of express sanctions prescribed by a special law, when there is doubt about the legislative intent, we believe that the interpretation result that is more favorable to the defendant must be taken as correct.

With regard to the legal consequences of a conviction for the loss or prohibition of obtaining public functions, it is emphasized (Ristivojević, 2013: 331; Đorđević & Simeunović- Parić , 2015: 240) that the public functions to which these legal consequences of a conviction refer are not precisely determined. Ristivojević (2013: 331) points out that the interpretation that this legal consequence of a conviction applies to all public functions would violate the nature of the legal consequences of a conviction, which should eliminate dangerous situations from which the re-commitment of criminal acts may arise, and not be some kind of moral sanctions to all public office holders. Agreeing with the nature of the legal consequences of the conviction, although we believe that Ristivojević's objections are justified, we still take a different position. Without going into its justification, we believe that this legal consequence of the conviction refers to all public positions held by the person, that is, to the prohibition to hold such positions in the future. This simply results from the language formulation of the legal provision itself, which is linguistically clear and precise enough - whatever public office the defendant holds, it ends when the criminal conviction becomes final. It seems that the intention of the legislator was to attach a certain social moral stigma to the convicted person with this legal consequence of the conviction, and prevent him from participating in social life in that way, i.e. doing business in the name and on behalf of society, to which he clearly does not belong. However, as Đorđević & Simeunović-Patić (2015: 241) note, the legislator did not define the term "public function" either here, nor in the CC, so in that part it remains disputed which functions and positions can be defined as "public" and to which this legal consequence of the conviction would apply.

Also, the problem of imprecise definition arises with the legal consequences of a conviction related to the termination of the employment relationship, where it is determined that they affect the employment relationship "relating to work with minors", where it is not decided nearly enough what those

jobs and working relationships related to work with minors exactly are. As a novelty provided by Marija's Law in relation to the existing solutions in the Criminal Code, it is determined that a person convicted of a criminal offense from Article 3 of that Law cannot establish an employment relationship related to work with minors. We are of the opinion that the legal consequence of the ban on employment refers to the jobs that involve working with children, where working with children is the primary activity (educator, teacher, professor, social worker, etc.). Although the provision is imprecise and even potentially unconstitutional since it violates the principle of legality, as long as it stands and forms part of the legal order, the court, applying the provisions of Marija's Law, would have to assess in each specific case whether the specific workplace, i.e. jobs and tasks, represent such jobs and tasks that there is a danger that the defendant will be able to commit a criminal offense again, which the legal consequence of the conviction should prevent.

Regarding the duration of these legal consequences of a conviction, it is prescribed that the legal consequences of a conviction from paragraph 1 point 3) and 4) of this law last for 20 years, and, according to an express provision, the time spent serving a prison sentence is not included in the duration of the legal consequences of a conviction. The legally binding judgment from paragraph 2 of this article must also be delivered to the convicted person's employer.

In relation to the legal consequences of the conviction from points 3 and 4, i.e. the ban on obtaining public positions and the ban on establishing an employment relationship, i.e. performing a calling or occupation related to working with minors, bearing in mind that their duration is precisely defined in advance at 20 years, there is no possibility of shortening the duration of these legal consequences of conviction (Dragojlović, 2022: 89-90). A special problem, and what characterizes this entire Law on Special Measures, is its relationship with the Criminal Code, as a general regulation.[6] Namely, Article 96, paragraph 3 of the CC prescribes that "*The legal consequences of a conviction consisting in the prohibition of acquiring certain rights can be prescribed for a maximum duration of up to ten years*." The CC, therefore, allows for a special law to prescribe the time period of the legal consequences of a conviction, but sets a clear framework for the maximum duration of the legal consequences of a conviction. By prescribing Article 6 of Marija's Law, i.e. that the legal consequences of a conviction last a fixed 20 years, the legislator far exceeded the limits set by the Criminal Code. Consequently, we believe, this provision of Marija's Law in the part about the duration of the legal consequences of the conviction, is not in accordance with Article 96 of the Criminal Code, which violates the unity of the legal order, so it is unconstitutional and has no legal effect.

Furthermore, Article 7 of Marija's Law provides for special measures to be imposed on a convicted person for criminal offenses from Article 3 of the Law, which measures are the main objective for the adoption of this Law. The very name "special measures", that is, the name of the law as the Law on Special Measures, was strongly criticized by the professional public. Thus, Ristivojević (see 2013: 324-325) criticizes the legislator because he was not able to determine the nature of these measures (even the Law itself), and consequently, neither the name, so measures are introduced for the perpetrators of these criminal acts that do not have a name; they are special measures, but it is not clear in relation to what they are special - if they are special measures, what are the general measures? These criticisms of the legislator regarding the names of the measures and the law itself are certainly not unfounded. However, we believe that so much attention should not be paid to the name itself, but to the essence of these *special measures*. In other words, unlike Ristivojević , who opts for the Latin *Nomen est omen,* we opt for *Forma non dat esse rei.*

6 Although, as already pointed out, we believe that the relationship of the Law on Special Measures (Marija's law) and Criminal Code, due to numerous and radical deviations and derogation, is not relationship *lex specialis* and *lex generalii*, but a relationship of one general law (Criminal code) and a "super law" (Law on Special Measures).

When talking about the legal nature of these special measures, they are truly special; *sui generis* measures which, in themselves, are closest to criminal sanctions. The only thing they lack in order to fully fall under the category of criminal sanctions is the jurisdiction of the court to impose them, and not that they automatically result in a criminal conviction, regardless of the will of the criminal court, as well as the fact that these special measures are implemented against the perpetrator ***after they served a prison sentence***. The automatic occurrence *of the measure* is inherent in the legal consequences of conviction, and not in security measures or other criminal sanctions. And, as Ristivojević (2013: 327-328) points out, these *special measures* cannot be considered legal consequences of a conviction, since the Law already contains a provision (Article 6) dedicated to the legal consequences of a conviction, and the article itself is called *Legal Consequences of a Conviction,* so it is not logical that these special measures should also be the legal consequences of a conviction. On the other hand, bearing in mind that these special measures limit the human rights and freedoms of persons who have been convicted of criminal offenses from Article 3 of this Law (and who have served their prison sentences), these measures have certain similarities with certain obligations that can be impose as part of protective supervision along with a suspended sentence. Indeed, it is not possible to clearly define the legal nature of these special measures; they are a bit like a punishment (such as the revocation of a driver's license, which is carried out after serving a prison sentence), but also like security measures and legal consequences of conviction and obligations with protective supervision. As they clearly do not fall under any of these categories, these *particular measures* (so unnamed) constitute a category unto themselves; in our opinion, they represent a category of *sui generis* criminal sanctions. Also, we believe that there was no real need for the legislator to resort to prescribing these special measures, thus creating *sui generis* criminal sanctions, destroying along the way the long-existing criminal justice system of the country, but could have achieved its goal within the framework of the existing criminal legislation, with possible minor changes and amendments (in which he is not shy, bearing in mind the number of legislative interventions in the area of criminal substantive and procedural legislation). It seems to us that the hasty usurpation of the criminal justice system in the country, and the introduction of special rules and *sui generis* sanctions, was rather the result of the desire to be original and the desire to provide the public with something special, rather than to truly solve, in a consistent and adequate way, the issue that was subject of this special law.

In any case, against the perpetrator of the criminal offense from Article 3 of this law, after serving the prison sentence, the following special measures are implemented: 1) mandatory reporting to the competent authority of the police and the Administration for the Execution of Criminal Sanctions; 2) prohibition of visiting places where minors gather (kindergartens, schools, etc.); 3) mandatory visit to professional counseling centers and institutions; 4) mandatory notification of change of residence, place of residence or workplace; 5) mandatory notification of travel abroad.

Paragraph 2 of the same article prescribes that the measures referred to in paragraph 1 of this article shall be implemented for 20 years after the prison sentence has been served, and paragraph 3 states that after the expiration of every four years from the beginning of the application of the special measures referred to in paragraph 1 of this article, the court that issued the first-instance verdict, will *ex officio* decide on the need for their further implementation. A request for reconsideration of the need for further implementation of special measures from paragraph 1 of this article can be submitted by the person to whom these measures apply, and the request can be submitted to the court that issued the first-instance verdict after the expiration of every two years from the beginning of the application of special measures. This, therefore, means that these special measures, in the best case per convicted person, will be applied to the convicted person for a minimum of 2 years after serving the prison sentence.

From the aspect of the (im)precise formulation of these measures, we find the measure under point 2 - the ban on visiting places where minors gather (kindergartens, schools, etc.) - to be the only one that is disputed from the aspect of specificity. Namely, Article 9 (conditionally speaking) elaborates this special measure, by prescribing that under it is meant *"the duty of the perpetrator of the criminal offense from Article 3 of this law to refrain from visiting places where minors gather, such as school buildings, schoolyards, kindergartens, playgrounds, children's events, etc."* There are two problems with such a normative solution. First, although mostly determinable, the convicted person is not defined by the behavior that he must observe; the duty[7] of the offender to refrain from visiting places where minors gather is determined. However, it is a fairly broad provision, and it covers or can cover a number of places. The exemplary statement made by the legislator does not sufficiently determine the behavior required of the convicted. Can a convicted person take his child to a child's birthday party? Does this quasi-incrimination include, for example, a public swimming pool in summer, when it is common knowledge that children go to such places? We believe that the legislator should have been more precise in defining the places where the convicted cannot be found. As it stands, this provision is quite controversial from a point of legality; that is, the convicted person can easily refer to both legal and factual error. Another problem is that the legislator left no room for exceptions to this "duty of restraint". The question arises as to whether the convict would violate his duty if he takes his child to and from school; should he drop him off and meet him around the corner and not at the school? Can a single parent take their child or grandchild to a child's birthday or to the playground? According to the provisions of Article 9 of Marija's Law, as it stands now, the answer to these questions would have to be negative. However much the legislator wanted to be retributive with this Law, we believe that it was not his intention to introduce such prohibitions and restrictions, and that, if he did want to do so, he was neither wise nor justified in doing so.

Other prescribed measures do not have such shortcomings. However, as with other aspects of this particular law, the legislator was not correct in tying the court's hands almost entirely. This is because the law does not leave any possibility of assessment and discretion to the criminal court when deciding, but all legal consequences of the conviction and all special measures are automatic and occur and are applied by force of law, regardless of the will of the court. The court cannot decide that only some legal consequences of a conviction should occur or that only some special measures be applied.

As in the case of the legal consequences of a conviction, the legislator failed to determine when and what specific measures will be implemented. This means that everything is carried out simultaneously, without the possibility of deviation. It is expressly stipulated that all special measures nominally last 20 years, unless the court shortens the measure every four years. In doing so, the legislator predicted that the court will decide *ex officio* on the need for further implementation of special measures, while not prescribing a single element that the court should take into account, so that the court is completely free to decide on the basis of whatever the criteria you want; the only thing that is necessary is for the court to obtain the reports of the authorities and organizations that implement these measures (Article 7, Paragraph 6 of Marija's Law). On the one hand, therefore, the legislator completely separates the matter from the hands of the criminal court (determination of special measures and legal consequences of conviction), while on the other hand, he leaves all discretion to decide on the need for further implementation of measures. This approach of the legislator is inconsistent and opens the door to complete arbitrariness of the criminal court (Dragojlović, 2022: 93). Apart from the reasons stated above, the inadequacy of the abstract and linear sanctioning of all the perpetrators of the mentioned criminal acts in an equal and identical manner, apart from elementary unfairness, is also problematic

7 It is interesting that the legislator opted for this wording - that this measure implies *"the duty of the perpetrator of the criminal act"*, and that the legislator did not decide to establish an obligation or impose a ban, even though the article itself is called *Prohibition of visiting places where minors gather.*

due to the nature of the acts themselves, which are so mutually heterogeneous that the same sanctioning cannot be justified in any way.

When it comes to restricting human rights guaranteed both by the European Convention on Human Rights and the CRS, although there are opinions that the special measure under point 1 - mandatory reporting - violates freedom of movement (Ristivojević, 2013: 329), we are of the opinion that the convicted person does not limit his freedom of movement in any way; but he undertakes to report to the competent authority occasionally, once a month, and by the 15th day of the month (Article 8 of Marija's Law). Freedom of movement is not restricted here. The same is the case with the special measure from point 5 - the obligation to inform about travel abroad. Namely, their trip is not subject to approval or any other procedure, but only notification. With that, freedom of movement is not limited. With regard to the measures from points 1 and 5, we can possibly talk about the encroachment on the right to privacy, that is, the right to private and family life from Article 8 of the European Convention, however, in this case as well, all requirements for the permissibility of encroachment on this right have been met. As for the measure from point 4 - the obligation to notify about a change of temporary residence or place of permanent residence - this obligation is, of course, already provided for all citizens of the Republic of Serbia by the Law on Temporary Residence and Residence of Citizens, so it can only be criticized from the aspect of the absence of the need to specifically state, but the legislator probably tried to emphasize it as particularly important, and to sanction it more strictly as a misdemeanor. As for the notification about the change of workplace, we believe that here too there is no violation of human rights, i.e. the right to work from Article 60 of the Constitution. Imposing the obligation to notify about a change of workplace does not limit the right to work, nor does it make work more difficult, nor is this change conditional on consent. The special measures from points 2 and 3 of Article 7 - the ban on visiting places where minors gather and the obligation to visit professional counseling centers and institutions - are, in our opinion, on the border of constitutionality. Ristivojević (2013: 329) correctly notes that, from a technical point of view, Article 39 of the Constitution allows restriction of freedom of movement for 4 reasons: conduct of criminal proceedings, protection of public order and peace, prevention of the spread of infectious diseases and defense of the Republic of Serbia. However, this restriction is provided for by law, it truly serves the legitimate interest of the state and society, and is necessary in a democratic society. Although one could argue the opposite, an argument could be made that imposing such an obligation on those convicted of these specific crimes against minors protects public order and peace. It is not difficult to imagine the state and atmosphere in society and the public if this measure, which serves as a protective measure for children, were declared unconstitutional. Public order and peace would certainly be disturbed. Finally, regarding the measure related to mandatory visits to professional counseling centers and institutions, we agree with the caution that Ristivojević points out and suggests, and with the allegations about the ineffectiveness of involuntary therapies. However, we also point out that this type of obligation does not represent a constitutionally disputed issue, bearing in mind that the same measure is applied within the framework of protective supervision, and this type of special measure is not sufficiently different to require a different constitutional treatment.

In conclusion, therefore, although some authors argue the opposite, these measures cannot be considered unconstitutional, and we believe that these special measures *in abstracto* would pass the constitutionality assessment, even though this issue did not yet reach our Constitutional Court.

In addition to the stated legal consequences of conviction and special measures, Articles 13-15 of the Law on Special Measures stipulate that the ministry responsible for judicial affairs keeps special records of persons convicted of crimes from Article 3 of the Law. This regulation creates, *de facto,* a register of sex offenders against minors. This record contains: 1) name and surname of the convicted

person; 2) the unique identity number of the convicted citizen; 3) the address of the convicted person's residence; 4) data on the convict's employment; 5) data on importance for the physical recognition of the convict and his photograph; 6) DNA profile of the convict; 7) data on the criminal offense and the sentence to which he was sentenced; 8) data on the legal consequences of the conviction; 9) data on the implementation of special measures prescribed by this law. The law also prescribes the manner of keeping these records as well as the availability of the data contained therein. In contrast to "ordinary" criminal records, the maintenance of which is regulated by the CC, the Law on Special Measures stipulates that these records are maintained by the Directorate for the Execution of Criminal Sanctions. One of the objections is that there is no clear record of medical and pedagogical measures in the process of treatment and resocialization of sexual offenders in institutions for the execution of criminal sanctions where perpetrators of sexual offenses are located (Bjelajac et al. 2020: 24). The illogicality of this provision lies in the fact that the general record of all criminal sanctions is kept by the courts, so it is not clear why this type of record was separated and given to the Directorate. In addition, it is obvious that the work in that part of the records is duplicated, which seems inexpedient. It was probably better and more rational to determine within the existing records kept by the courts that the records when it comes to these criminal offenses must also contain the specified data that are not contained in the records kept for other criminal offenses. However, contrary to this, as well as the criticism of the professional public (Ćorović, 2016: 422-423; Ristivojević, 2013: 322; Miladinović-Stefanović, 2014: 580), we believe that this solution was in accordance with the provisions of Article 37 of the Lanzarote Convention, and by which the member states of the convention are obliged to undertake all the necessary legislative measures to collect data related to the identity and genetic profile (DNA) of persons convicted of criminal offenses established by this convention, and the legal provision that special records are kept by the Ministry of Justice, i.e. the Directorate for Execution of Criminal Sanctions is in accordance with Article 3 of the Law on the Ratification of the Convention of the Council of Europe on the Protection of Children from Sexual Exploitation and Sexual Abuse, which designates the Ministry as one of the competent authorities to ensure the implementation of the provisions of this Convention. Bearing that in mind, criticisms of the "transfer" of the competence for managing this register to the Directorate for the Execution of Criminal Sanctions do not stand. Also, it is pointed out that in this way the centralization of keeping data from special records is achieved, which enables more efficient monitoring of the implementation of this law and facilitates access to the necessary data to the authorities responsible for suppressing criminal offenses against sexual freedom, both in the country and abroad.

The legislator, in addition to criticism for maintaining a special register, taking DNA samples and entering a DNA profile into that register (see Ćorović, 2016: 422-423; Ristivojević, 2013: 322; Miladinović-Stefanović, 2014: 580 et seq.), nevertheless established a special register for the perpetrators of criminal acts from Article 3 of the Law on Special Measures, but provided for the possibility that the authorities of other countries have access to this register. Namely, Article 15 of Marija's Law determines the availability of data from special records, and stipulates the obligation for state and other authorities, as well as legal entities or entrepreneurs who work with minors to request information on whether the person who is to establish an employment relationship with them has been entered in this special record. Thus, according to the position of the proponent (Explanation, 2012: 3), it is possible to consistently apply the legal consequences of the conviction, which consists in the prohibition of establishing an employment relationship, that is, performing a calling or profession related to working with minors. Also, it should be pointed out that access to data from special records can be achieved by foreign state authorities, in accordance with the international agreement, which is necessary for the purpose of suppressing the criminal acts of sexual abuse and exploitation of minors on the international level, and which is prescribed in Article 37, point 3 of the Convention.

However, this Law was subject to criticism not only by the professional public, but also by the members of later convocations of the Parliament, as shown by the constant attempts to amend and supplement this Law. There are many problems with the non-application of this legal regulation in practice, starting with the (non)keeping of the register from Article 13 of Marija's Law, the failure to determine the application of special measures and the legal consequences of a conviction, etc. The very application of the Law in practice is disputed. Thus, after the late start of implementation, the first legally binding judgment under Marija's Law was pronounced only in the middle of 2016, while the last data that is publicly available on the Internet indicates that at the end of 2019 there were a total of 279 persons in this special register, and that 58 persons were subject to special measures.

Concluding Remarks

When it comes to sexual crimes, the tightening of the criminal policy towards the perpetrators, the establishment of special records and the introduction of special mandatory measures that impose various restrictions on sex offenders after the sentence has been served, or direct stigmatization of sex offenders aimed at their social exclusion, are part of the modern world trend in opposing this form of criminality and it is certain that such a trend will last, and states will lead joint efforts to achieve this goal at the supranational level, as evidenced by the Lanzarote Convention and its wide reception.

Through an exhaustive and comprehensive analysis and criticism of the legal solutions contained in Marija's Law (or the Law on Special Measures), as well as pointing to the Lanzarote Convention as the immediate legal basis (and source of obligation) for the adoption of this legal text, we tried to point out the omissions made by the legislator when prescribing different legal solutions. By presenting the arguments for and against a certain approach, we indicated the reasons why we decided on a certain position, and indicated how the legislator should correct the observed shortcomings. It is time for this special criminal law from the sphere of populist measures to be integrated into normal and well-established criminal legislation.

It seems indisputable that the legislator, by enacting this Law on Special Measures, violated a large number of fundamental, indisputable and well-tested institutes and categories of criminal law, and with his pretentious approach showed ignorance and misunderstanding of the relationship between basic and secondary criminal legislation in our legal system. Inadequate norming, unskillful nomotechnics, repetition and overlapping of content disrupts the logical and thought coherence of the criminal law system as a whole. Marija's law produces a whole series of hybrid and *sui generis* solutions that call into question the provisions of some of the fundamental and well-established institutes of criminal law, while certain provisions that we pointed out, in our opinion, cross the line of constitutionality. As we have seen, most of the interventions undertaken by the legislator in enacting Marija's Law were carried out without being grounded in the Convention, or with a completely wrong understanding of it, while with other legal solutions, the legislator brought into question the very logical consistency of the entire system of criminal law, by going beyond what the Convention mandates, as well as due to repetition, overlapping content, and aspirations for particular type of repression.

De lege ferenda, remaining faithful to the obligations assumed by confirming the Lanzarote Convention, the domestic legislator should remove from the legal system the provisions that are unconstitutional, as pointed out in this paper, and should adapt the hybrid solutions contained in the legal text to the general criminal legislation, with possible minimal changes to the Criminal Code. The legislator should especially allow the criminal court a certain discretion, setting the framework in which the criminal court will move for determining and imposing special measures, but also the legal

consequences of the conviction, or to prescribe when any of them will be applied; applying all legal consequences of conviction and all special measures is so retributive that it borders on fundamental unfairness. The legislator should not usurp the criminal justice system in our country like this again.

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POLICE ORGANIZATION IN THE NETHERLANDS[1]

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Introduction

The police, like any other state institution, changes over time in accordance with social changes. With the development of society, the organization of the police develops, which must go in accordance with the changes in laws, social and interpersonal relations. Of course, the position of the police within the state organization differs from state to state and is usually aligned with social order. Each country reforms its police system according to the changing circumstances within their societies. Nevertheless, certain reforms of the police organization are taking place within almost all countries, because these are changes that are happening on a wider scale. It is about the transformation of interpersonal relations and values that are a consequence of the passage of time and the challenges faced by modern states.

Nowadays, the first phase of police reform requires new regulations, management and independent analysis of functioning. The second phase of the reform is focused on the functioning of the police, not on its organization. The functioning of the police goes beyond the fight against crime and implies a wider action, which is what citizens expect from the police. The question arises as to how the police and its functioning should adapt to the challenges imposed by modern times. Those challenges that affect the functioning of the police concern the high expectations of citizens, budget cuts and new forms of criminal activities. In modern democratic states, there is a connection between the police and the government. In the past, the police made decisions independently or acted on the orders of the central authorities. Parliament is an institution that has created a new level of governance that oversees the police in the exercise of their powers. A democratic system of governance directly influences central authorities to allow local police more autonomy in action. Determining the way to finance the police is not only an economic issue, but it also determines the area of police work, along with the definition of jurisdiction in the law. If we take a look at the near future, it can be anticipated that the police will be subject to more economic pressure in terms of reducing the budget. However, at the moment, the police are not ready for such financial cuts, considering the level and forms of crime (Greenhalgh & Gibbs, 2014: 5-9).

The modern transformation of the organization and the role of the police is the result, as can be seen, of the advancement in the legislation of modern states that is aligned with the new challenges of the fight against crime. Also, the need for wider autonomy of lower levels of government is reflected in the police organization through demands for wider powers of local police that are in line with local problems. Given the fact that the police do not generate profit in their work, efforts are being made to ensure that the organization and operation of the police does not require large investments and does not burden the state budget beyond the established limits. Today, the economic aspects of modern police organization may be the biggest problem, because criminal activities are constantly transforming and spreading to new social areas. A special problem are new security threats that may have an inter-

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national character, among which terrorism has a primary place. This means that the police are faced with greater efforts, while on the other hand they insist on limiting costs and investments (Ристовић, 2015: 101-104).

When looking at the change in the role of the police in previous decades, it can be said that the police's competences have been supplemented by tasks that citizens expect from them. Of course, the most important role remained the fight against crime. Identifying the perpetrators and arresting them is part of the conventional fight against crime. Public order and peace are other roles of the police, which includes the prevention of civil unrest. This includes regular maintenance of public order and peace, which has always been part of police work. The third role is the protection of human lives and the protection of citizens. It should be emphasized that the transformation in the exercise of the responsibilities of the modern police is a response due to the threats that it carries with it, for example, terrorism. This phenomenon threatens many national and international interests of the state, which requires the use of significant police capacities. That is why one of the most important areas of police activity is the fight against terrorism. The balance of police action has shifted towards concrete response after the incident has occurred, instead of preventive action. In the post-war period, one of the most important roles of the police was solving everyday problems of citizens that were mostly related to security, but which were not the result of criminal acts. Understanding this role of the police, which represents social control, is important to understand today's public demands regarding the functioning of the police. The police are not the only entity that operates in the field of social control, but it is one of the most important, because it operates in different social milieus and has the apparatus of force at its disposal. In certain countries, such as the Great Britain, the activities that burdened the police the most, regardless of the constant growth of police officers, were most pronounced in the areas of social protection and public order. As a result, protection activities became a big burden for police officers, which expanded their competences beyond the areas that were established as their basic ones. For example, the protection of citizens has been extended to the area of the Internet. Offensive and potentially violent behaviour on the Internet falls within the area in which the police respond in the event of a report. Today, the police are regularly present at sports events, but it seems that the police officers are not present to prevent possible fan riots, but to manage the event in terms of security. The constant expansion of police responsibilities in the 21st century to new areas is a consequence of the pressure on previous generations of police officers who were not sufficiently trained and prepared for a significant expansion of their activities (Greenhalgh & Gibbs, 2014: 30-34).

The Development of the Modern Form of Police in the Netherlands

In the Netherlands, during the second half of the 20th century, there was an intense debate regarding the police system. The most important topic of debate was about the parameters within the system. Other important topics were related to the size and strength of the police, as well as the division between state and municipal police. The purpose of the debate was to increase the efficiency of the police, which did not happen in that period due to conflicting interests, among which the interests of local authorities were expressed. The most important reasons for the reform during the 1990s were riots and an increase in crime. Another reason was the transformation of crime, which meant the emergence of organized criminal groups that operated on an international level. Additional factors that influenced the transformation of the police were: greater flow of information, development of communication technologies, development of people's mobility, reduction of social connection, as well as the increasingly pronounced international character of many phenomena. Consideration of the possibility of reform was focused on the problems caused by the insufficiency of the police system,

poor coordination, inefficiency and the inability of this system to fight organized and international crime. That is why the efforts were focused on the development of a larger and better police administration. The main goals of the reform in this period were to reduce the distance between citizens and the police, which included strengthening the care of the police towards citizens and stable democratic control. In the last years of the 20th century, the debate was focused, on the one hand, on the quality of organization and the efficiency of police tasks, and on the other hand, on management and democratic control. Personal relationships had a lot of influence on the functioning of the police, because when they were disturbed, the disturbance in the work of the police was also noticeable. This refers primarily to the influence of personal and informal relations between the administration, the judiciary and the police. That is why the debate on police reform got a new direction, which was about centralization or decentralization. Various arguments were presented for one or another principle of police organization, but there were no concrete results in that period (Cachet & Marks, 2009: 97-99).

The first significant changes to the police system in the Netherlands took place in 1993. The system in which there were national and local police forces was reformed into a system in which, in addition to the national police force, there are 25 regional police forces. The opportunity for this major change appeared in 1989, when the Ministry of Justice and Security and the Ministry of the Interior and Kingdom Relations were specially formed in the Netherlands. The new regional police system was formed on the basis of a compromise between different political entities, the two aforementioned ministries, the mayor and certain judicial bodies. The management of each police region is performed by the police commissioner, the chief public prosecutor and the mayor of the largest city in the region. Operational affairs in the region are the responsibility of the police commissioner, while the administration of the regional police forces is the responsibility of the mayor of the largest city in the region. Based on these competencies of police commissioners and mayors in the management and functioning of the regional police, these two officers have become the most important actors in the new regional police system. The new system was set up and organized so that the principle of decentralization is one of the basic principles in the functioning of the police. During the 1980s and 1990s, concern about the increase in crime gradually grew. An important moment was in 1984 when the Petty Crime Committee informed the Dutch public about the country's crime rate war. Research in that period showed that the citizens of the Netherlands wanted the police to focus more on major crimes. In addition, one of the attitudes in that period was that the police were burdened with tasks that essentially did not fall under their jurisdiction. Therefore, it was necessary for the police to focus on their core tasks related to responding to criminal acts, maintaining public order and protecting the rule of law (Schaap, 2018: 229-232).

The regional police system was based on the Law on Police from 1993. With that legal act, 148 municipal police and 17 national police districts were merged into 25 regional police forces with one support unit at the national level. Regional police forces varied in size, which depended on the region's population, housing density and crime rate. The tasks of the police officers were: effective enforcement of the law and providing assistance to citizens who need this assistance. The stated basic tasks include the maintenance of public order, the implementation of the legal order and the performance of work for judicial authorities. Most of the regional police forces are further divided according to the territorial and functional principle, i.e., into several districts and departments. Departments were specialized in a particular type of police work that was carried out using teams, such as arrest, infiltration and criminal investigation support teams. Some of these departments also functioned at the interregional level. This regional system of police organization was based on the form of decentralization that exists in the Netherlands. Relatedly, within the Dutch decentralized political system the need for police protection went hand in hand with the need for protection from the police. More specifically, in the Netherlands there has always been opposition to the establishment of a strong police organization with strong

powers led by the central authorities. In that period, responsibilities regarding the police were divided between the central and local levels. At the central level, the most important role was played by the Minister of the Interior and Kingdom Relations and the Minister of Justice and Security, while at the local level, the most important were the mayors, whose competence included the maintenance of public order. In accordance with the aforementioned legal act, the Minister of the Interior was responsible for allocating the police budget, and the management of the police force was performed at the central level. Operational management of regional police forces was mainly directed at the regional level, and these forces independently determined the ways in which they performed their duties. The mayor of the largest city in the region also had the role of manager of the regional police, which meant that he had a major role in its management and administration. The main task of the head of the regional police was day-to-day management of the police. The mayor, the chief of police and the public prosecutor were the main subjects who, through consultation, decided on the implementation of the tasks of the regional police. The Manager of the National Police Services Agency (Korps landelijke politiediensten – KLPD) and 25 regional police managers made up the Board of Regional Police Force Managers. This Committee did not have a formal status, but nevertheless met every six weeks and made decisions that had an impact on the functioning of the police. Regional police chiefs and the head of the KLPD participated in the Council of Police Chiefs, but this body also had only a formal status. The KLPD has one important role, which is to advise the Ministry of the Interior and Kingdom Relations on police policy. The aforementioned Council provides support to KLPD in performing that advisory role (Cachet & Marks, 2009: 93-96).

A new transformation of the police took place in 2013 when the system with regional polices was replaced by unified Dutch police at the national level. This established a layered structure in which the central place was occupied by the management team at the national level, which manages policies and priorities in police work. The police system is divided into 10 regional units which are divided into 43 districts, and these district units into 168 basic teams that directly implement the use of force in case of need. This transformation of the police received political support and without any opposition the proposal for its implementation was adopted in 2012. One of the reasons for the re-transformation of the police was dissatisfaction with the previous regional system, and insufficient efficiency, ineffectiveness and weak cooperation between the regional police were highlighted as the main problems. However, in the background of the transformation of the police there were political reasons and the interests of various subjects. In the first place, the Ministry of Justice and Security and the Ministry of the Interior and Kingdom Relations had the greatest influence. However, there was a merger of the police department of the Ministry of the Interior and Kingdom Relations with the Ministry of Justice and Security. Thus, the advocates of the centralization of the police system, primarily from the previous Ministry of Justice and Security, gained strength and influence. The establishment of the national police system was primarily the result of a political process. In shaping the new police system, many ideas of interested actors who dealt with police issues were adopted, which included representatives of political parties, which satisfied different interests. The key strategic interest in the formation of the national police was to increase thereby the trust of citizens and strengthen the legitimacy of the police. The stated goals were to be achieved through: strengthening cooperation with local authorities, having greater authority among citizens, better provision of services to citizens and better attitudes towards victims of criminal acts. The strategy of strengthening the trust of Dutch citizens in their police is aimed at standardizing the services provided by the police. The idea behind this strategy is that the police should establish a relationship with citizens in the same way that large companies relate to their customers. This would present the police as a reliable entity that citizens can rely on. It should be noted that the primary goal of the transformation of the Dutch Police in 2013 was not to strengthen citizens' trust in the police, but had several different goals. The basis for strengthening citizens' trust was the or-

ganization of the Dutch Police as a service-based system. This would establish a relatively centralized institution that is distant from citizens, but with the insistence that distance is not a negative characteristic and does not represent a problematic concept. However, the distance from the citizens was not allowed to be complete, so the existence of one so-called neighbourhood policeman per 5000 citizens was foreseen. The problem in this way of Dutch police organising was the closing of police stations or their replacement by "support points" which were actually much smaller police stations. However, the problem with the "support points" was that they were not open to the public. The closing of stations and their replacement was one of the consequences of budget restrictions, although the idea was to direct police officers to a more efficient way of working. The logic behind this approach, based on the functioning of economic entities, was that more efficient functioning leads to better contact with customers, that is, with citizens. The emphasis was on cheaper and more flexible functioning, which was to be achieved by the technical modernization of the police in accordance with modern trends. In other words, the police and police officers should start using social networks, tablets and smartphones. The problem was that not everyone uses social networks, and especially not senior citizens, which limited the number of citizens who can immediately and without difficulty get in touch with the police. Reporting a criminal act in face-to-face contact between citizens and police officers is the most reliable way, which has now become a secondary way, so a dilemma has arisen regarding the efficiency of the new system. After this transformation of the police system, there was a decrease in the awareness of police officers about local problems, and their direct involvement in solving those problems also decreased (Schaap, 2018: 234-241).

Contemporary Organization and Functioning of the Police in the Netherlands

At the moment, the police force in the Netherlands has 65,000 people. Of that number, 51,000 are police officers, while the other 14,000 are employees who perform tasks important for smooth functioning of the police service (About the Netherlands police, https://www.politie.nl/en/information/about-the-netherlands-police.html). The Dutch police is made up of a Central Unit, 10 regional units and a Police Service Centre. The Police Command has five members and a Support Division, called the Commissioner's Staff. The head of the police in the Netherlands is the Commissioner, and the Minister of Justice and Security is responsible for the functioning of the police in accordance with the regulations. On the other hand, the Security and Justice Inspectorate is competent to ensure that the performance of police work is performed in an adequate manner. The central unit has its original duties, and along with them it provides support in the work of the regional units. The original duties of the Central Unit include: (1) command of major operations, (2) fight against organized crime of various types, (3) support in the fight against other forms of crime, (4) forensic analysis, (5) deployment of mounted police and sniffer dogs, (6) securing and protecting members of the Royal Household, (7) securing and protecting important persons, (8) highway, water, air and rail policing, and (9) combating violence and terrorism. The last duty falls under the jurisdiction of the Department for Special Interventions. As for the regional units, each of them is headed by a Chief Constable. Each regional unit is divided into districts, and each of the districts is divided into Frontline Teams. The duties of these teams include the provision of basic police services at the municipal level, and the goal of their work is to ensure the safety of everyday life in the city and region. Their daily tasks include patrolling, responding to calls for help, advising citizens, solving traffic issues, investigating, issuing official reports and sharing information. Management of finances, human resources, communications and information and communication technologies falls under the jurisdiction of KLPD (Organisation of the Dutch police, https://www.government.nl/topics/police/organisation-of-the-dutch-police).

Each police region decides on its own management. The regional police have broad powers in the implementation of their competences, as well as in defining priorities in their work. For example, the police region independently decides on its funding, organization, officers, facilities it uses, and the like. The mayor of the largest municipality in the region performs the role of police manager and is in constant contact with the Minister of the Interior and Kingdom Relations. The administrative centre of the regional police is also located in the largest municipality in the region, which is otherwise called the central police station. The most important decisions regarding the work of the regional police are made by the executive power of the region, which consists of all mayors of municipalities and the chief public prosecutor. The Minister of the Interior and Kingdom Relations is responsible for managing 10 police regions. In the Netherlands, it is the practice that no one has exclusive authority over the police and that authority must be shared between two ministers. In the current case, on the one side there are the Minister of the Interior and Kingdom Relations and the Minister of Justice and Security, while on the other side there are the municipal and regional authorities (Policing in the Netherlands, 2004: 10-11).

The Ministry of the Interior and Kingdom Relations provides an annual budget for the police which is shared between the regional police, the KLPD and the Police Training and Knowledge Centre. This budget is intended for the financing of officers and equipment and is distributed among the police forces proportionally. Various factors affect the amount of funding allocated to a regional police force, one of the most important being the size and composition of the population in the region. The amount of funds allocated to the regional police is divided into general purpose funds and special purpose funds. The ways and conditions of using general-purpose funds are not defined, so each regional police can use these funds according to their needs. The only thing that is respected are the guidelines for using the police budget, which are established at the central level. On the other hand, special purpose funds must be used for the realization of the tasks for which they were allocated. Such funds are allocated, for example, to finance special teams investigating smuggling or drug trafficking (Policing in the Netherlands, 2004: 13).

Police units themselves decide on their management at the operational level, while the Ministry of the Interior and Kingdom Relations is responsible for managing the police in a general sense. The policy of police management is jointly decided by the Minister of the Interior and Kingdom Relations and the Minister of Justice and Security. More specifically, it decides on the goals that the police should achieve in their actions, such as law enforcement, preservation of public order, wider surveillance and greater police efficiency. The number of police officers is not the same in every region and varies from region to region. The size of the police force in a region depends on the number of people living there. Regardless of whether it is urban or rural region, the number of police officers is determined according to the number of inhabitants. Police units carry out operational tasks in the local communities themselves, i.e., as close as possible to the citizens. The majority of police officers work within basic police units that directly fulfil their tasks. An important part of police work is the prevention of criminal acts. That is why police officers are in regular contact with institutions, citizens' associations, business entities and other interested parties. Basic police units' function and perform their duties from one or more police stations. Regular duties of basic police units include: (1) patrolling, (2) providing emergency police assistance, (3) receiving reports of violations, (4) maintaining contact with institutions, civic associations and business entities, (5) mediating disputes, (6) conducting investigations, (7) preventing criminal acts, (8) regulating traffic, (9) enforcing laws on environmental protection and (10) supervising the implementation of certain legal acts important to local communities. For the maintenance of public order, mobile units have a very important place, that is, units that are engaged in the event of unrest. Each region has at least one such unit that is ready to engage at any time. There are also units that have been formed and trained to deal with ship-related incidents. Any police officer

can be transferred to a mobile unit, but in that case, he or she must undergo adequate training for engagement in such units (Policing in the Netherlands, 2004: 13-15).

Each of the regions has units specialized in carrying out certain police duties. Arrest teams carry out arrests of suspected persons who are armed and dangerous to citizens. In addition, these teams work closely with investigation teams in certain cases. Infiltration teams provide assistance in criminal investigations. Monitoring teams also assist with criminal investigations, and most regions have their own monitoring team. Special support units are engaged in cases of kidnapping and terrorist acts. Support teams in the investigation of crimes have a special weight due to their nature and frequency. These teams are not permanently formed, but are assembled on a case-by-case basis. They are composed of police officers from the regional police. Each regional police force has specially trained detectives who deal with crimes related to sexual offenses. These are acts such as prostitution, child prostitution, pornography and child pornography. Traffic violations that are most often the subject of the regional police are speeding, running a red light, driving under the influence of alcohol, not wearing a seat belt and not wearing a helmet. In this area, the regional police analyse problems and set goals for reducing traffic violations. The operation of the regional police in the field of environmental protection, that is, in the enforcement of laws concerning environmental protection, takes place on three levels. The first level are minor offenses that can be handled by any police officer. The second level are offenses that are at an intermediate level in terms of seriousness. These violations can be independently prosecuted by investigators dealing with environmental protection in the region where the violation occurred. Serious violations in the field of environmental protection are the third and highest level of activity of the regional police. These offenses are dealt with by multidisciplinary police teams of the region, together with competent services or representatives of ministries. The action of the police in environmental protection is not the same in every region, because it depends on local conditions that differ between regions (Policing in the Netherlands, 2004: 16-17).

KLPD has several basic competencies. These responsibilities are: overseeing the most important state infrastructure such as highways, railways and waterways, conducting criminal investigations at the national level, providing expert support to regional police forces and securing the Royal Household. It should be noted that the competences of the KLPD exceed the powers of the regional police. That is why the KLPD has the role of coordinator among regional police forces in the activities of maintaining public order and in conducting criminal investigations (Das, Huberts & van Steden, 2007: 522). Pursuant to the responsibilities regarding public safety and the safety of the main infrastructure, KLPD implemented two initiatives. The first initiative strengthened the management of police affairs based on information and intelligence. It is about the development of a methodology that enables a clear description of criminal offenses in the field of traffic control, as well as their subsequent effective detection. The second implemented initiative was called Traffic Safety. As part of this initiative, topics related to the execution of criminal acts were addressed. Those topics were: (1) connecting sources of information, (2) determining the patterns of execution of criminal acts, (3) establishing intelligence software that should, on the basis of data, determine indicators of the execution of criminal acts, and (4) establishing an organizational structure for the use of information and experts. The purpose of implementing the two mentioned initiatives was that, in addition to other roles, KLPD would become a centre for the dissemination of information and knowledge that can be applied in practice (Schakel, 2013: 34). KLPD has 11 departments in its composition, namely: Traffic Police, Railway Police, Water Police, Aviation Police, Mounted Police and Police Dogs Service, Operational Support and Coordination Service, Royal and Diplomatic Protection Service, Logistics Service, National Criminal Intelligence Service, International Network Service and Specialist Investigation Applications Service.

Safety Regions in the Netherlands – Position of the Police

The Netherlands is organized as a constitutional parliamentary monarchy. The highest representative body is the Parliament, which consists of the Senate and the House of Representatives. Citizens' representatives sit in the House of Representatives, while the Senate is made up of provincial representatives. The Government of the Kingdom of the Netherlands exercises executive power. The composition of the Government depends on the election for the House of Representatives. Decentralization was implemented in the Netherlands, and the country's territory was administratively divided into municipalities and regions. According to the structure, local self-government can be divided into one-level, two-level and three-level. Two-level local self-government implies that in addition to the municipality, there is another higher level of local self-government that includes a larger territory and broader powers (Јазић, 2014: 79-80). This is exactly the kind of system of local self-government that exists in the Netherlands. The responsibilities of the municipality and the region are clearly determined and defined by special laws, which guarantees their autonomy. Also, a separate law clearly establishes the division of competences between the central government and lower levels of government, i.e., municipal and regional authorities.

The representative body of the municipality and its most important body is the local council. This body has a leading role in the territory of the municipality. It is in his competence to make the most important decisions related to the municipality, and he can also make by-laws. The mayor presides over the local council. The number of councillors of the local council depends on the number of inhabitants living in the territory of the municipality, so that number differs from municipality to municipality. The executive body of the municipality is the board of mayors and councillors. The competence of this body is the preparation and implementation of decisions of the local council. In addition, this board implements the policies of the central authorities that relate to the municipal level of government. Members of the board of mayors and councillors are elected from the local council, and their number varies from municipality to municipality. The chairman of the board of mayors and aldermen is, as in the case of the local council, the mayor. He is appointed by the Government, and on the proposal of the local council. Local authorities are responsible for many areas, one of which is disaster management. One of the powers of the local council is the formation of committees for the purpose of implementing their decisions, but also for the purpose of consultation with the executive authorities of the municipality. Executive municipal authorities may also establish committees.

The territory of the Netherlands is divided administratively into regions. The authorities of the region are the regional council, the executive board and the King's/Queen's Commissioner. The number of representatives in the regional council depends on the number of inhabitants living in that region. The legislative bodies in the regions are the regional councils, and their competence includes the adoption of by-laws. Regional councils are presided over by the King's or Queen's Commissioner. The executive body of the region is the executive board. His competence includes the preparation and implementation of regional council decisions. In addition, the executive board implements the policies of the central authorities at the regional level. In addition to the King's/Queen's Commissioner, the Executive Board has from three to nine members. They are appointed by the regional council. The King's or the Queen's Commissioner presides over the executive board, and is appointed by the government on the proposal of the regional council. Regional representative and executive bodies, as well as in the case of municipalities, can establish committees according to their needs (Јазић, 2016: 100-103).

Regionalization is most often understood as the formation of a new level of government within the territorial organization of a country. This process includes the formation of new institutions with adequate powers and obligations. Regions are most often divided into administrative-statistical and

political. In the first case, the central government conducts policy or collects data through these regions. In the second case, regions have democratically elected and clearly defined authorities, and may represent a local self-government unit or a federal unit (Јазић, 2014: 155-156). In the following text, it will be seen that the safety regions in the Netherlands do not belong to one or the other group, but represent a completely new form of grouping municipalities and forming a territorial organization at a higher level.

According to the first idea, the safety regions in the Netherlands were supposed to be established during 2009, but it happened one year later. More specifically, these regions were established on February 11, 2010 with the adoption of the Safety Regions Act. In the meantime, the aforementioned Law was amended, so its revision was definitively completed on January 1, 2013.

Fire service, disaster and crisis management and medical assistance fall under the jurisdiction of municipal executive bodies. Tasks and powers related to the aforementioned services of the municipality are transferred to the safety regions. The mayor remains in charge of the fire service and retains the authority to issue orders if there is a danger. That is why the mayor can, regardless of the establishment of a safety region, issue orders to organizations that are not under his authority under regular circumstances, but participate in an emergency situation.

Joint regulations on the establishment of a public body designated as a safety region are drawn up by the executive bodies of the municipalities located in the territory of that region. These regulations are the legal basis for the functioning of each safety region. Thus, each of the municipalities located on the territory of the safety region assumes its share of responsibility for the administration, organization and management of that region. It is the duty of every safety region to have a prepared professional organization that can effectively manage the crisis in the event of an emergency. Given the association of adequate municipal services in the safety region, better conditions are created for an effective response to an emergency situation, as well as for its elimination. This is especially pronounced in the case of emergency situations that have a large scale. Accordingly, the competent administrative authority of the safety region shall adopt a coherent policy for all emergency services.

The most important body of each safety region is the governing board. This body is composed of the mayors of all municipalities participating in the safety region, and decisions are made by majority vote. One of the mayors is elected to the position of chairman of the management board of the safety region. The Steering Committee of the Safety Region coordinates its activities with many participating countries. Therefore, in certain cases, partner organizations and subjects are invited to participate in the meetings of the management board. The tasks of the Safety Region Steering Committee relate to fire service, medical assistance, firefighting and emergency preparedness, supply, acquisition and distribution of equipment, risk counselling and information provision. At least once every four years, the management board of the safety region adopts an activity plan, which is coordinated with the tasks of the safety region. In addition, the activity plan is determined based on the existing and possible risks on the territory of the safety region. During the making of this plan, the management board consults with the participating municipalities. Once a year, consultations on risks in the region are held between the board of directors and entities that can be engaged in emergency situations. In addition to the activity plan, the management board of the safety region adopts a crisis plan once every four years. This plan in each potential risk situation must contain a clear description of the organization, competencies, tasks, powers and responsibilities related to the management of an emergency situation or similar crisis. In this plan, the measures that will be taken by the municipalities are determined, and the facilities that the municipal authorities will provide are also determined. Within the crisis plan, one part is dedicated to agreements with other entities that will be involved in a potential emergency

situation. In the Netherlands there is also a Security Council made up of individuals who chair safety regions. The Council functions as a national platform for safety regions, but also as their consultative body (Јазић, 2019: 240-243).

In safety regions, police, firefighters, municipal authorities and emergency medical services conduct activities together in the event of an emergency. Services whose task is to act in emergency situations are established and organized at the regional level. These services work closely with municipal authorities in firefighting, disaster response, crisis management, emergency medical services (EMS) and law enforcement. In the area of crisis management and response to disasters, the police have certain tasks. Investigating offenses, regulating traffic and regulating the movement of people are included in the tasks performed by the police. Together with other emergency services, police officers prepare and practice emergency procedures (Policing in the Netherlands, 2009: 9). Each safety region has a control room from which representatives of emergency services such as fire, police and ambulance work together. Each of the control rooms has a unified call reception system for all emergency services. This ensures that every emergency situation is recorded, as well as that every emergency service has insight into it. This system is significant, because it automatically shows how many people should participate in reporting the situation, as well as what actions need to be taken further. In the Netherlands, there is a unified digital mobile communication system for all emergency services called C2000. This system brings together the fire service, EMS and police, which includes the KLPD as well as the Royal Military and Border Police. This system provides excellent call quality, complete coverage of the territory and high call capacity significantly contributes to the stability of communication between emergency services. C2000 represents a reliable and fast network, which is based on the Tetra system. The importance of the role of the police in the organization and functioning of safety regions can be seen in the fact that the Dutch Centre for Police Cooperation is responsible for the management and maintenance of the described communication systems (Policing in the Netherlands, 2009: 24).

Within the framework of crisis and disaster management, each emergency service has clearly defined tasks. The police are responsible for: maintaining public order, regulating traffic, identifying victims, conducting criminal investigations in order to find the cause of the emergency situation, and executing administrative measures (Legal Aspects of International Disaster Response in Dutch Emergencies and Crisis Situations, 2010: 22). In addition to the above duties, police tasks during an emergency include clearing the area, conducting evacuation, closing and securing the area, as well as giving instructions.

Conclusion

The organization of the police in the Netherlands has undergone significant changes over the past half a century. Competent institutions were looking for the best solution that would enable more efficient organization and work of the police. A good aspect of these transformations is the adaptation of the police organization to changes in society, as well as to new threats to the safety of citizens. The most important aspect is the adaptation of the functioning of the police to the needs of citizens, that is, the development of its organization in the direction of shaping the police as a service that should serve citizens. In the Netherlands, the authority over the police is divided between several state entities, which speaks of the democracy of the political system in this country. In terms of democracy, the participation of local government representatives in the functioning of the police and in making decisions about its management should also be emphasized. Local authorities, knowing the best needs of their citizens, can directly influence the work of the police in a way that will best suit the needs of the citizens. The participation of local authorities in their work is also important for the police, be-

cause they can easily gain insight into the daily needs of citizens and potential security threats that exist at the local level. Contact with local authorities, that is, citizens, brings another advantage for the police, which is the possibility of more effective preventive action, which strengthens security and eliminates potential dangers at the very start. The division of responsibilities over the police and the participation of local authorities in the functioning of the police also achieves effective control over the implementation of police responsibilities, which prevents or significantly complicates potential abuses. Consequently, citizens are protected from the appearance of arbitrariness and they exercise control over the police indirectly through democratically elected authorities. From the aspect of control, it is also important that the local authorities participate in the work of the police, because they are the closest to the citizens. It is a significant fact that unnecessary costs are avoided in the work of the police, and the money saved is directed to the training of police officers and the purchase of new equipment. This avoids spending funds on the existence of parts of the system that do not contribute to more efficient police work, but only burden the budget intended for the police. As we saw in the text, the police organization in the Netherlands is divided into regions, which brings with it certain advantages. For example, it enables the adaptation of police work to the needs that differ from region to region. The way of functioning and the number of police officers is adapted to each region, because a different number of citizens live in each region. In addition to the regional police, the existence and functioning of the KLPD has an important place. This ensures the functioning of the police in the Netherlands as a whole, because otherwise there would be a danger that each of the regional police forces would start functioning independently, without paying attention to the common interests of all citizens in the area of security. In addition, without a central police organization, it could happen that the jobs of the regional police forces overlap, which would reduce the efficiency of police work and increase unnecessary costs. By exercising jurisdiction in safety regions, the organization of the police in the Netherlands has demonstrated a willingness to act in situations that have a wider scope, as well as the ability to act effectively at a level that is higher than the local level. Since safety regions are not political regions, but rather regions established to respond to emergency situations, regional police forces in the Netherlands are prepared to act in situations involving activities that differ significantly from their regular activities. It is another indicator that after effective reforms, the police organization is well thought out and set up. It can be concluded that the organization of the police in the Netherlands has a modern character, because it has characteristics that are present in democratic societies. One of the examples is adaptation to the existing decentralization, which is a sign that it is a democratically founded institution.

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ANALYSIS OF DISCIPLINARY OFFENSES AND DISCIPLINARY PUNISHMENT IN THE CLOSED PENITENTIARY IN ZENICA IN THE PERIOD FROM 2020 TO 2022[1]

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The Purpose of the Research

The problem of resocialization in correctional institutions is basically related to the psychological problem of the effectiveness of punishment and reward in changing the attitudes and behaviour of individuals. At the same time, it is always an open question to what extent the imposed prison sentence is a "revenge" of society, and to what extent this is a factor of resocialization and how the prisoner subjectively feels about it. In most cases, they do not feel guilty and consider the punishment unfair, or at least inadequate. Modern penological principles of resocialisation emphasize it as the goal of punishment. However, if the prisoners do not accept the punishment, then they essentially do not accept resocialization based on punishment and reward. For this reason, resocialization treatment should have certain content that is maximally adapted to the specific personality. In practice, resocialisation work is mainly based on one type of behavioural therapy, that is on conditioning, which means that motivation for work, schooling and behaviour is realised in accordance with house rules, based on punishment and reward. They represent the basic method of resocialization treatment and its ultimate content[3].

In principle, it could be said that punishment is the main form of resocialization, and reward is an additional one, whose basic function is to reduce the deprivation of prisoners.

The core of punishment in prison is a disciplinary offense for which the prisoner is brought to a disciplinary report where a disciplinary measure is imposed. Punishment causes frustration, and if it is carried out preventively, it has mainly negative effects on the personality. Of course, we cannot give up punishment as a form of resocialization, especially in the conditions of work in prisons[4]. In the relationship between the prisoner's disciplinary offense and the sentence imposed, there are several factors on which the effects of punishment depend. These factors are:

1. The strength of the prisoner's motivation for practicing punishable behaviour,
2. The existence or non-existence of the possibility of alternative behaviour that can satisfy the motive in a permissible way,
3. Characteristics of punishment, i.e., its intensity, frequency, consistency, succession,

1 Research approved by the Federal Ministry of Justice by decision no.: 04-49-2830/22 dated September 22, 2022. Sarajevo.
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3 In essence, the theory of exchange warns us that perpetrators of disciplinary offenses satisfy a certain need for reward through their activity, regardless of disciplinary punishment.
4 Prisoners recognize that the use of power in prison is necessary, desirable, and can be legitimate, even when it is used ´against´ them (Crewe, Liebling, 2017, p. 899).

4. The relationship between the punisher and the punished,
5. Circumstances under which the penalty is applied,
6. Orientation of punishment to the person or to the procedure.

In prison conditions[5], the effectiveness of punishment is probably greatly influenced by the attitude of the prison community[6], its public opinion and the group to which the person in question belongs, that is, the support he receives. However, the significance of punishment cannot be denied. It quite successfully suppresses illegal forms of behaviour.

The prison community differs by a number of variables such as: educational and social structure, social milieu and background, age and intellectual abilities and character traits, type of crime, length of sentence and attitude towards the crime, contact with family, etc., which have a significant impact on the effects and effectiveness of punishment and reward. At the same time, these variants have a great influence on the behaviour of prisoners during their sentence, and thus on the overall state of discipline in prison, the type of frequency and severity of disciplinary offences. Bearing in mind that the state of discipline and the effectiveness of punishment and reward are mutually conditioned, and depend on almost the same variables, in our research we decided to emphasize discipline in order to make an easier definition of the term, as well as an easier operationalization of the subject of research.

From the presented research problem, it follows that in this paper we want to emphasize its applicative significance, without neglecting the social and scientific aspect of the problem, because its ultimate goal is the verification of the disciplinary situation in a certain period of time. The applied significance of this research is also reflected in its diagnostic and prognostic value, and can be the basis for preventive action, undertaking the necessary corrections, as well as for planning further work and development of resocialization treatments.

The social significance of this research stems from society's interest in raising the security situation in prison to a higher level, as well as in further humanizing and individualizing the execution of punishment. The scientific significance of the research is reflected in the systematic collection of facts in an area over a long period of time, because prison is largely closed to the public and scientific research work.

Theoretical Approaches to the Phenomenon of Disciplinary Offenses in Prison

The act of confronting of the prisoner to prison staff is in refusing to assist the prison officer in any way in connection with his work, what also includes the denial of the authority they are formally given. Prisoners are generally glad to comment on the work of official staff. The source of this value is their feeling of social isolation, and the official staff is representative of those who isolated them (legal system). The official staff is the transmission of the legal society in the prison system, and, as a response to rejection (punishment), the prisoner's response is position of confrontation to prison staff. The continuum of confrontation to the official staff is not equal in relation to every position, and the most

5 Dominant form of punishment is imprisonment. Thomas Mathiesen (2000) offer radical explanation of social functions of imprisonment, he draws attention to the fact that commission of socially harmful acts is by no means the prerogative of one particular section of society. Socially dangerous acts are increasingly being committed by individuals and classes with power in society even though they are most unlikely to be punished for their transgressions (Cavadino, Dignan & Mair, 2013).

6 Within the prison community, as the creator of the prison code, there is a significant number of actors who commit offences (Butterfield, 2002).

often it is towards the prison guard. The dynamics and direction of confrontation depends on the strategic goals of the profitability of confrontation, that is, if confrontation will not result in the abolition of some status issues and privilege.

Gresham Sykes and Sheldon Messinger (Sykes&Messinger,1962, according to Špadijer-Džinić, 1973:156-158) reviewed the literature, and on basis of series of researches, they noted a certain normativity within the prison code which referred to the relationship between prisoner and official staff and relationship between prisoner and prisoner:

1. Norm of prohibition of assisting staff in the sense of providing information or "snitching". The ban protects the prison community from the reaction of the formal system concerning the prohibited actions regulated by house rules. This norm produces a norm of loyalty and tolerance towards another prisoner;
2. The norm of control and conflicts which arise from this, should be minimal in order not to disturb the balance within the community, that is, the minimal conditions of tolerability;
3. The norm of relation to material values, the prisoner should generally share material goods with others.
4. The norm of dignity refers to the ideal type of prisoner, labeled as a "right guy".
5. Norm of non-recognition of reputation and respect for prison staff and the society they stand for.

Recent research (Hemedl & Monina,2021:18-22) emphasizes some aspects of prisoner disciplinary offenses through a wider structure such as physical force (the threat of physical offence, sexual offence, psychological harm or manipulation) which is the first thing that comes to mind, but they include also structural and cultural offence. Structural offence (or indirect offence) implies systematic, structural or institutional ways through which people are kept from accessing the resources needed to meet their basic needs. Cultural offence has its roots in the values, religion and ideology of a society. Cultural offence has impact on violent behaviour or shaping how conflicts begin and end, and whether offence in prison is celebrated, condoned, or condemned. Cultural offence may include a cynical attitude by staff towards prisoners, feelings of superiority of one group over the other.

Edgar Kimmett (Kimmett, 2015:20) in the understanding of prisoner offenses starts from the definition of conflict which means situations as competing interests which the parties pursue in uncompromising ways. The most important factors that contribute to offensive behavior are: tactics, such as intimidation or threats, that tend to aggravate disputes, theft, exploitation, and other forms of victimisation, racial and cultural tensions and misunderstandings, emotions, such as frustration, anger and shame, transitory relationships, lack of familiarity with peers and low self-esteem. In another work (Kimmett, 2018:6-9) Kimmett developed the idea of conflict as a cause of offenses in prison through two models of cycles of violence. For the first key variable is feeling of danger and key answer is how prisoners deal with their fears for their personal safety. Feeling unsafe leads to psychological preparation to use force in defence then to defensive reactions which result in aggravate disputes and, finally, use of force to demonstrate toughness to 'audience'. Another model of cycles of violence refers to private justice. This model starts from the fact that prisoner feels risk of being cheated, defrauded, or exploited, then, material deprivations increase the urgency to defend personal property, so cultural norms hold that wrongdoing merits punishment and at the end of process who feels exploited will react with violence

James McGuire (McGuire,2018:1-3) considers that the occurrence of offences assault in prison is a challenging problem. He made Analytical Summary Reports which concern the findings of a rapid

evidence assessment (REA) into the causes of physically violent assaults by male adult prisoners. He reviewed 97 research studies published since 1st January 2000. Key findings are:

- Most of the published research is focused on imported characteristics – the personal characteristics of men who are violent in prison;
- Crowding-evidence that crowding in and of itself was a direct cause of violence;
- Prison activity- places within a prison where prisoners are engaged in purposeful activities they consider valuable are less prone to be sites of aggression. Violence is more likely to occur in places that offer less purpose, have fewer formal ground-rules, and lower staff oversight;
- Situational control- means organisation of space designed to reduce violence oriented towards situational control aspects of day-to-day prison management. The open research questions set for REA were as follows:

1. Who (which prisoners) is the most likely to commit incidents of violent disorder within establishments?
2. When are incidents of prison violence most likely to occur?
3. Where are the incidents of prison violence most likely to occur?
4. Which are the strongest drivers of prison violence, taking into account interactions amongst the various drivers (covering the dimensions of who, when and where)?
5. What are the key lessons for operational policy and/or delivery in terms of mitigating and reducing the risk of violent disorder?
6. Are there any clear protective factors.

He found out that the studies were grouped into categories according to the focus of the research. Number of research studies and used theoretical model are:

- Importation model / individual variables 25;
- Integrative model 14;
- Tests of predictor scales 10;
- Mental disorder 9;
- Administrative / procedural / managerial factors 9;
- Deprivation model / prison conditions / situational factors 8; Gang effects 5;
- Race/ethnicity differences 5;
- Bullying 4;
- Crowding / overcrowding / density 3;
- Gender differences 3;
- Strain theory 2

Total included for full review 97.

Our earlier research (Šabani, 1999: 163) also confirms this relationship. In 1990 it was noted that conflicts between the prisoner and official staff occurred in 21.2% of cases, in 1991 in 27%, in 1993 in 26.6% of the total number of disciplinary offences. In the prisoner-prisoner conflict, the percentage is somewhat lower. In 1990 this type of conflict was present in 7% of conflicts, in 1991 in 12.8%, and in 1993 in 16.3% cases of conflicts. The afore mentioned conflicts were also the most frequent conflicts out of the total number of disciplinary offences. Regarding the frequency of disciplinary offences (up to two offences) in the period 1993, 1994 and in 1997 the percentage was 28.3% of total number of offences, and on two or more offences referred 11% of cases. The relationship between age and disci-

plinary offences throughout the observed period showed that prisoners under the age of 29 who committed more than one offence are represented in 41% of cases. The participation of other age structures is negligible in disciplinary offences. According to the type of crime, the most frequent perpetrators of disciplinary offences were prisoners convicted of robbery (56.2%), followed by those who committed murder (34.6%). Regarding the previous convictions, prisoners who were convicted once committed a disciplinary offense in 38.5% cases, and those who were convicted multiple were presented in 69.6% cases. Therefore, the more evident the previous conviction, the greater the tendency to commit disciplinary offences.

Research Methodology

The main hypothesis

1. Does the frequency of disciplinary offences and reports, and the severity of imposed disciplinary measures in the period from 2020 until 2021, indicate a deterioration or an improvement in discipline in the observed period?

Research goal

1. The goal of the research is to determine what are the tendencies of disciplinary behaviour in prison, i.e., whether the disciplinary situation is worsening or improving?

Research tasks

1. Determine the frequency of disciplinary offences and disciplinary reports in the period from 2020 until 2021.
2. Determine the most common types of disciplinary offences in the period from 2020 until 2021.
3. Determine whether there is a tendency disciplinary offense, committed by the same prisoner, to be frequently repeated in the period from 2020 until 2021.
4. Determine the position of conditional solitary confinement in the total set of disciplinary reports, that is, the correlation between conditional solitary confinement and the length of the conditional period.
5. Determine whether the imposed disciplinary measure has been standardized in the period from 2020 until 2021.

Research set and subset

In the mentioned period, an average of 892 prisoners per year were serving their sentences in prison. Due to the impossibility of monitoring fluctuation, we took this number as the average number, so a total of 2,696 prisoners. Out of that number of prisoners, a total of 842 disciplinary reports were recorded, and in this way a subset was formed, which is at the centre of our research interest. In the structure of perpetrators of disciplinary offences, the most represented are members of the Bosnian nation (n=679), followed by Croats (n=94), Albanians (n=49), and Serbs (n=19). This structure is expected considering that prison is located on the territory of FBiH.

In the analysis, we relied on the empirical data that were available to us in the research of Sadagić (2015), which related to the basic socio-demographic-criminological characteristics of the prison community in the period between 2007 and 2012. As the main characteristics of the prison community, it was stated that the most frequent crimes were theft and aggravated theft, robbery and murder. The average age of the perpetrators of murder and attempted murder was around 37 years, while

the average age of prisoners convicted for theft was 29 years, and of robbery 26 years. The majority had completed high school, while 28.3% had completed primary school and 20.8% did not complete school. Regarding the perpetrators of murders and attempted murders, 55% of prisoners had completed high school, and 32.5% have completed primary school, while 10% have not completed school. Among prisoners convicted of theft and aggravated theft, 45% had completed high school, 30% had completed elementary school, and 25% had not completed school. Regarding prisoners convicted for robbery, 49.7% had completed high school, 22.5% had completed primary school and 27.5% had no completed school. Regarding work qualifications, 52.5% of the perpetrators of murder had qualifications, and 35% had no qualifications. Regarding the prisoners convicted of theft, 45% had a qualification, 35% had a partial qualification and 25% had no qualification. Regarding the crime of robbery, 55% had a qualification, 17.5% had a partial qualification and 27.5% had no qualification. Most of the prisoners were unemployed at the time of the crime, i.e., 93.3% of them. Prisoners convicted of robbery were not employed at the time of the crime. Most of the prisoners from that period were born in the city and smaller towns, but the village, as a place of birth, is completely negligible. Regarding the criminal offense of murder and attempted murder, it was concluded that these perpetrators are mostly from a smaller town, while the perpetrators of robbery and theft are from the city. (Sadagić, 2015; p. 56-57).

Although we did not have access to the mentioned variables in our research, it is justified that the quality of the structure of the prison community did not change significantly during the period of our research. In almost all the analyses of the criminal population of prison in Zenica, perpetrators of the crime of theft and serious theft, murder and severe murder, and robbery dominate (Bogojević, 1991, Šabani 2005). By analogy, it is to be expected that the perpetrators of the most frequent criminal acts are most likely to participate in the acts of disciplinary offenses.

Variables

I Dependent variable:

a) Disciplinary behaviour of the prisoners in the period from 2020 until 2021.

II Independent variables

a) Types of disciplinary punishments.

b) Critical time periods or critical months during the year.

Methods

Based on the method of collecting and analysing facts, it can be said that the empirical-non-experimental survey method was applied in this research. The choice of the applied method was based on the goal and tasks of the research, as well as from its primarily applied significance, which helped the elaboration and the level of generalization of the collected facts. Two techniques were used in this research:

I Analysis of documentation

II Statistical data processing

The book of disciplinary reports was used to analyse the documentation.

The prison community differs by a number of variables such as: educational and social structure, social milieu and background, age and intellectual abilities and character traits, type of crime, length of

sentence and attitude towards the crime, contact with family, etc., which have a significant impact on the effects and effectiveness of punishment and reward. At the same time, these variants have a great influence on the behaviour of prisoners during their sentence, and thus on the overall state of discipline in prison, the type of frequency and severity of disciplinary offences. Bearing in mind that the state of discipline and the effectiveness of punishment and reward are mutually conditioned and depend on almost the same variables, we decided to emphasize discipline in this research, due to easier definition of the term and subject of research. as well as easier operationalization.

Under the disciplinary offense of a prisoner, we mean the definitions given in The Law on the Execution of Criminal Sanctions in the Federation of Bosnia and Herzegovina (Article 93), where it is stressed that prisoners are subject to disciplinary liability for behaviour committed contrary to the law, to rulebook on prison rules and to orders of the institution's officials.

Serious disciplinary offenses are (marked from T1 to T19 T- means serious disciplinary offenses which we marked for easier statistical counting):

T1-1) refusal of the orders of official persons;

T2-2) providing active or passive resistance to officials;

T3-) escape or preparation of escape from serving a sentence, or helping other persons to escape or in preparing to escape;

T4-4) removal from the institution or workplace without the approval of an official;

T5-5) consumption and taking into prison alcohol and narcotic drugs;

T6-6) possession of illegal items;

T7-7) unjustified lateness from free outings, absences or vacations;

T8-8) mutual quarrels and fights;

T9-9) making any kind of items, and doing private jobs for yourself or others without permission of official persons;

T10-10) singing, uproar, shouting from room to room, i.e. through the window or in the corridors, creating unnecessary crowds when lining up, entering or leaving the building;

T11-11) rude behaviour towards officials;

T12-12) avoiding to greet officials;

T13-13) improper maintenance of accommodation, bed linen, clothes and shoes;

T14-14) smoking in a forbidden place, throwing waste and rubbish in the corridors and similar;

T15-15) entering bedrooms and other rooms at the time when it is prohibited;

T16-16) mutual resale or exchange of any items, theft, gambling, illegal gambling games

T17-17) bringing the items that prisoners are not allowed to have with them into the institution;

T18-18) offence of provisions on electronic surveillance;

T19-19) all other actions prohibited by the rulebook on house rules, instructions and orders of the head of the institution.

Another part of definition disciplinary offense is Rulebook on House Rules in the Zenica Closed Penitentiary Article 94.) which belong to minor disciplinary offenses of prisoners (marked from L1 to L13- L means minor disciplinary offenses which we marked for easier statistical counting).

Minor disciplinary offenses are:

L1-1. intentional or rough negligent damage to property and Institute inventory or to property of other prisoners;

L2-2. failure to maintain personal and collective hygiene;

L3-3. untidy bedroom and bed;

L4-4. encouraging other prisoners to commit disciplinary offenses;

L5-5. lying down and sleeping at unauthorized times;

L6-6. entering the dormitories with shoes on;

L7-7. wearing clothes and shoes that do not comply with the Order on daily activities;

L8-8. delay in counting of prisoners;

L9-. stay in places where it is not allowed;

L10-10. movement near the walk surrounding the Institute;

L11-11. preparing meals and making coffee, and making other drinks in the premises where prisoners reside and live;

L12-12. written and oral presentation of untruths that harm officials.

L13-13. other offenses determined by this Rulebook, instructions and orders of the Director of the Institute.

Findings and Discussion

Based on the collected facts, we performed an analysis, on the basis of which we tried to formulate the structural characteristics of disciplinary offences in the closed-type prison in Zenica in the specified period.

In table No. 1 we present the most frequent disciplinary offenses per year. The criterion for the significant presence of a certain disciplinary offence was the limit of 10 cases and more.

Table 1 *Most Frequent Disciplinary Offenses per Year*

	2020		2021		2022		UKUPNO	
Disciplinary offence	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
T8	61	19.6%	101	33.8%	63	27.2%	225	26.7%
T1	43	13.8%	42	14.0%	15	6.5%	100	11.9%
T5	20	6.4%	30	10.0%	41	17.7%	91	10.8%
T17	7	2.3%	10	3.3%	24	10.3%	41	4.9%
T11	9	2.9%	16	5.4%	11	4.7%	36	4.3%
T14	6	1.9%	16	5.4%	7	3.0%	29	3.4%
L1	7	2.3%	9	3.0%	12	5.2%	28	3.3%
T16	2	.6%	11	3.7%	11	4.7%	24	2.9%
T3	11	3.5%	12	4.0%	1	.4%	24	2.9%
T19	13	4.2%	2	.7%	2	.9%	17	2.0%
T6	9	2.9%	2	.7%	6	2.6%	17	2.0%
L12	5	1.6%	3	1.0%	4	1.7%	12	1.4%
L8	3	1.0%	3	1.0%	6	2.6%	12	1.4%
Others	115	37%	42	14%	29	13%	186	22%
Total	311	100%	299	100%	232	100%	842	100%

Chi Square =314,452 P = 0.000

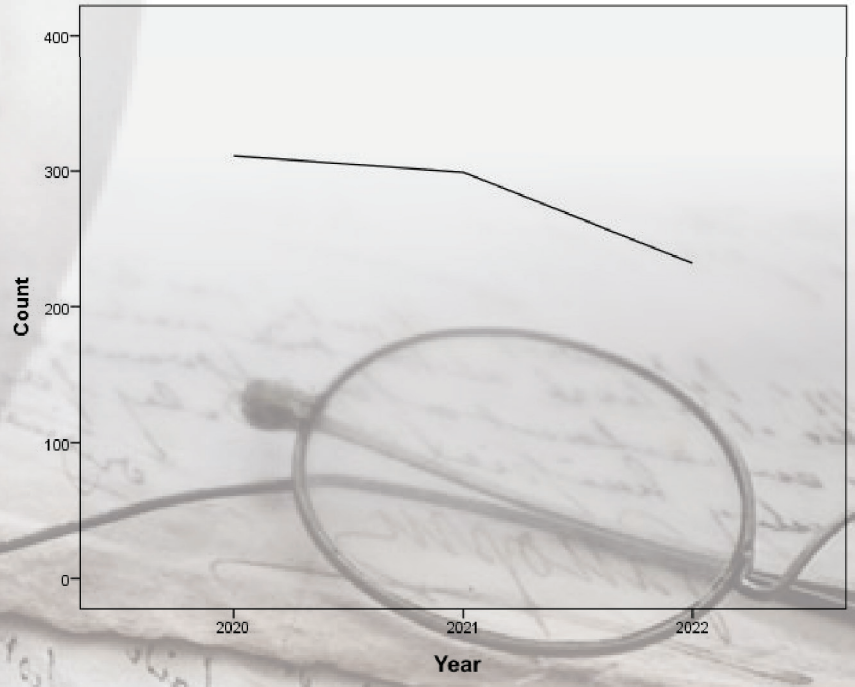
In Table 1 we note that out of a total of 311 offenses in 2020 were committed mostly in relation to mutual quarrels and fights (n = 61), refusal of orders from officials (n=41), enjoyment and taking of alcohol and narcotic drugs into the institution (n = 20), actions prohibited by the Rulebook on prison rules, instructions and orders of the head of the institution (n = 13). It also refers to the refusal of prisoners to comply with the regulations related to the Covid-19 epidemic. 11 cases refer to escape and preparation of escape from serving a sentence, or helping other persons to escape. Thus, 47.5% of the total number of offences this year refers to the mentioned offences.

In 2021 the largest distribution of disciplinary offences related to mutual quarrels and fights (n = 101), and refers to almost every third offence. This is followed by the offenses of refusing orders from officials (n = 42), consumption and bringing of alcohol and drugs into the institution (n = 30), rude behaviour towards official staff (n=16), smoking in a forbidden place (n = 16) and mutual resale and barter (n = 11).

In 2022 mutual quarrels and fights dominate (n = 63), enjoyment and bringing into the institution of alcohol and drugs (n = 41), bringing into the institution objects that prisoners are not allowed to have with them (n = 24), refusing the orders of officials (n = 15), written and oral telling of untruths that harm official staff (n=12), rude behaviour towards official staff (n = 11) and mutual resale or barter, gambling (n =11).

In the total period of observation (n=842), the offenses of mutual quarrels and fights (n = 225), refusal of orders from officials (n = 100) and enjoyment and bringing of alcohol and drugs into the institution (n = 91) dominate, which represents 416 disciplinary offences or 49.4% out of total offences. 2021 appears to be a dominant year in which these offences were somewhat more intense. Compared to earlier studies, prisoners, alcohol and drug addicts, appear to be an important group of offenders who commit disciplinary offences.

In graph number 1, we show the number of disciplinary offences by year



Graph 1 *Disciplinary Offenses per Years*

Graph No. 1. shows us that the number of disciplinary offences decreased in the given period, but it would be a wrong conclusion that the disciplinary situation has been improved. Namely, the disciplinary situation tends towards the stabilization of the most common disciplinary offenses in terms of qualitative characteristics, and a significant deterioration was observed in 2021.

Based on these indicators, we believe that it is a question of structural disciplinary offences because they appeared in earlier periods as well (Bogojević, 1988). It will probably appear in future periods as a permanent attribute of the disciplinary situation in prison. This fact can be considered an aspect of unsolvable problems and to some extent calls into question the treatment ideology.

We tested the difference in the number of disciplinary offences within the observed period.

Table 2 *Testing Differences in the Number of Offenses Among Three Years*

Year			
	Number of Cases	**Expected N**	**Residual**
2020	311	280.7	30.3
2021	299	280.7	18.3
2022	232	280.7	-48.7
Total	842		

Chi-Square=12,914; df=2; Asymp. sig. = .002

The presented table indicates that the number of disciplinary offences decreased in 2022 compared to previous periods. In 2020 the current Covid-19 pandemic was still on, and it acted as an intervening variable. It increased the already existing set of deprivations of prisoners. Chi-Square shows that the difference is at the limit of significance, but we can safely claim that the disciplinary situation in 2021 worsened, and stabilized again in 2022 in a qualitative sense. Dominant disciplinary offences have crystallized. It means that a group of prisoners, who tend to commit disciplinary offences, significantly appeared to be present during the whole observed period.

In the observed period, all the listed offenses were not punished with solitary confinement, and we were interested in the structure and strategy of punishment with solitary confinement (n=329). We present all the cases for a more precise insight.

Table 3 *Average Number of Solitary Days for Each Disciplinary Offense*

Disciplinary offense profile	**Mean**	**Std. Deviation**	**N**
L1T1T2T10	20.00		1
T1T6T8	20.00		1
T3T4	20.00		1
T6T19	20.00		1
T7	20.00		1
T1T8T17	18.33	2.887	3
T1T8T15T17	17.50	3.780	8
T2T8	17.00		1
T3	16.36	5.387	14
L4L8T12	15.00	7.071	2
T14	15.00		1
T4T10T14	15.00		1

T5T17	15.00		1
T9T16T17	15.00		1
T6	13.83	3.764	6
L1	13.50	6.028	4
T10	13.50	2.121	2
L8	13.00		1
T10T19	12.00		1
T11T19	12.00		1
T1T8	11.67	5.686	3
T4	11.67	2.887	3
T16	10.50	3.317	4
T1T2T10T11	10.33	4.041	3
	10.00		1
L4L9	10.00		1
T11T13	10.00		1
T12	10.00		1
T1T11	10.00	0.000	2
T3T19	10.00		1
T4T11	10.00		1
T5T8T17T19	10.00		1
T6T8	10.00		1
T9	10.00		1
T8	9.97	3.579	91
T1T2	9.80	3.271	5
T17	9.62	4.011	13
T5	9.11	4.058	45
T1	8.69	3.948	58
T19	8.67	2.251	6
T18	8.63	5.041	8
L12	8.50	2.121	2
T1T9	8.50	2.121	2
T1T5T8	8.00		1
T11	7.50	2.204	8
T2	7.50	2.887	4
L11	7.00		1
L12T1	7.00		1
L1L5	7.00		1
L2	7.00		1
L2L8	7.00		1
L4	7.00		1
T1T5	7.00		1
T5T7	7.00		1
L2L5L8	5.00		1
T1T15	5.00		1
Total	10.33	4.487	329

From the presented table, we note that the maximum penalties are imposed in those cases where there are simultaneously several combined disciplinary offences, concerning the act of committing, but the number of perpetrators is negligible. Predominant punishments were imposed for mutual quarrels and fights (n=91), refusal of orders from officials (n=58), consumption and bringing of alcohol and drugs into the institution (n=45), escape (n=14) and introduction of illegal substances into prison (n=13). In the total number of imposed disciplinary punishments, the average length of solitary confinement is 10.33 days, with sd=4.48. Dominant disciplinary offenses have a significant impact on these indicators and mostly the punishments are predictable and standardized.

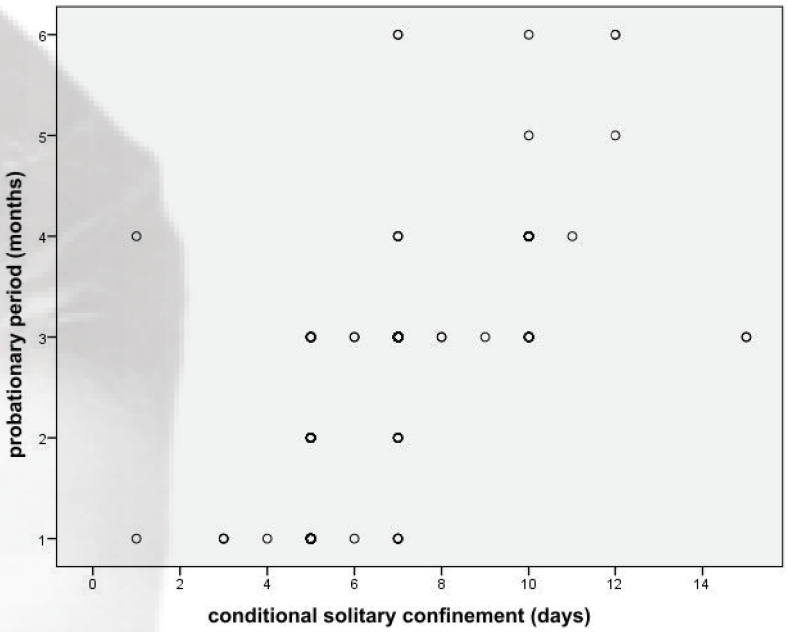
Table 4 *Structure of Prisoners According to Repetition of Disciplinary Offences Repeaters*

Repeaters	Frequency	Percent
1	266	31.6
2	160	19.0
3	150	17.8
4	76	9.0
5	20	2.4
6	60	7.1
7	35	4.2
9	27	3.2
11	22	2.6
12	12	1.4
14	14	1.7
Total	842	100.0

From the presented table, it is evident that a group of prisoners who frequently commit disciplinary offences has stood out, and, that in fact, they represent the basic security and risk factor in the functioning of prison. It also indicates the fact that the prison community is deeply divided within itself, and that there is no communication among them despite the fact that they share the same categories of time/space as the prison. That's how the social roles[7] of prisoners are formed. Thus, the relationship between repression and the prison code, as elements of the prison's social climate, gain importance (Moos, 1960, 1968, 1974). In our earlier research (Šabani, 2005; p.261-267) we determined the correlation coefficient rRK=0.34 in 1993 in 1994 rRK=0.70, in 1997 rRK=0.64, and in 2016 rRK=0.36 (Šabani, 2018). Correlations of repression and the prison code maintained statistical significance in the mentioned periods, which points the conclusion that the conflict between the formal and informal community took place in the direction of a greater presence of repression, and the prison community was thus kept under control and directed towards desirable and acceptable behaviour. The multitude of subgroups within the prison community, such as multiple perpetrators of disciplinary offences, indicate the differentiation of this community. In relation to them, classic forms of penal treatment have lost their influence, such as work therapy, individual and group work, rewards and the like.

The imposition of conditional solitary confinement, as a compromise solution, and reaction to a disciplinary offense, is cantered on a suspended sentence in duration of 3 months (59.7%). Accordingly, we can say that this disciplinary measure is also standardized, what is also indicated by the corresponding correlation coefficient of r=0.685. This is also shown in the graph below.

7 Empirical regularities of groups of roles Schrag calls "configurations of roles" Pseudo-social prisoner, (Schrag,1962, according to Špadijer- Džinić, 1973, p. 110-132).



r=0.685; p=0.000

Graph 2 *Correlation of Probationary Period and Its Duration*

Financial fines, as a form of disciplinary measure, were imposed in the observed period in 67 cases, most often for causing damage to prison property. A fine of 20 KM prevails.

We were interested in the qualification and direction of the offense in terms of prisoner-prisoner, prisoner-official and self-directed offense.

In the inmate-prisoner relationship, we have included the disciplinary offenses of mutual quarrels and fights[8] [9] [10], mutual bartering, gambling, reselling and inciting other prisoners to commit disciplinary offences. We have found that 29.5% of the total number of disciplinary offences relate to this relationship, and as expected, the largest number refers to fights and quarrels.

Disciplinary offenses in relation between a prisoner and an official person[11] include refusing orders from officials, offering active or passive resistance to officials, rude behaviour towards officials, avoiding greeting officials, and written and oral untruths that harm an official. As expected, the most common disciplinary offense is refusing an official's order (11.9%), and together with other offenses, it accounts to 17.6% of the total number of offences.

Self-directed offense is a type of disciplinary offense committed by a prisoner on his own initiative. We classified them according to motives:

a) deprivation of freedom - refers to escape and preparation of escape from prison (2.9%),

8 Aggression is any reaction (physical or verbal) carried out with the intention of causing damage or injury of any kind to someone, and aggressiveness is a relatively permanent and stable personality characteristic that determines the degree and frequency of a certain person's manifestation of aggression in different (primarily provoking) situations.

9 Assaults sometimes also occurred in the context of a trading relationship. A key function of assaults was conflict-management. Crudely speaking, prison conflicts were sometimes dealt with through force (O´Donnell & Kimmet, 1998a:10-16).

10 In dominance dyads the aggression is almost entirely pro-active (O´Donnell& Edgar, 1998b:268-269).

11 Self-legitimacy affects the performance of prison workers and their willingness to establish the legitimacy of their position in relation to prisoners (Hacin, Fields& Mesko, 2019).

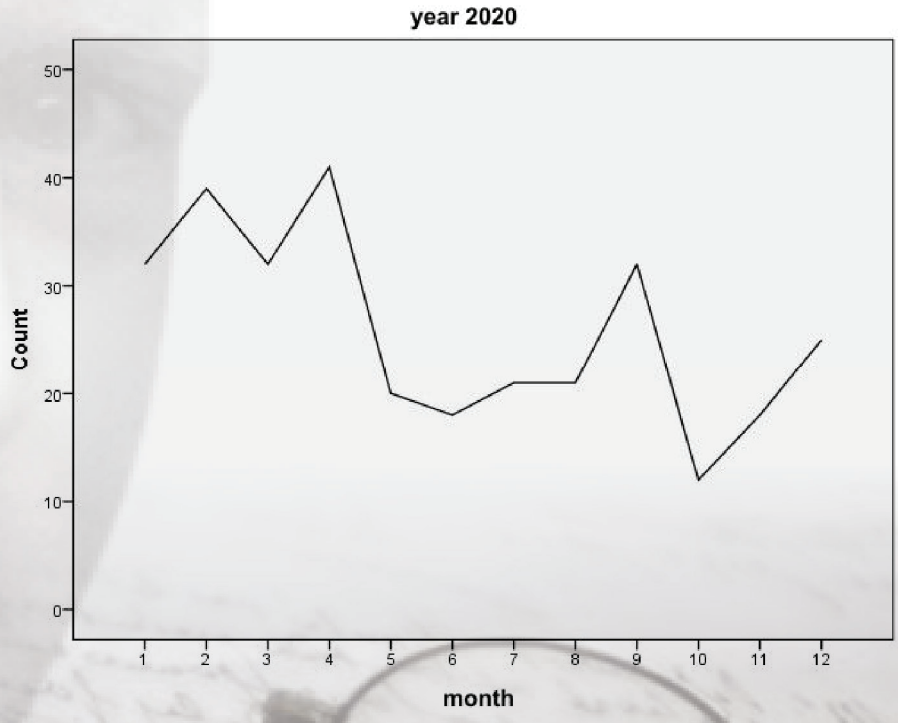
b) deprivation of material goods and services[12] – refers to the possession of illegal objects (2%), bringing objects into the institution that the prisoners are not allowed to have with them (4.9%). This type of offense refers to 6.9% of the total number of disciplinary offences,

c) addictions – disciplinary offenses related to the bringing of alcohol and drugs into the institution amount to 10.8% of the total number of disciplinary offences[13].

d) social neglect - refers to indiscipline, hygienic neglect and tendency to lasciviousness. In this type of offense, we have included untidy maintenance of premises, smoking in an unauthorized place, entering bedrooms, hygienic neglect and offence of provisions on electronic surveillance. This type of offense is represented by 6.3% in relation to the total number of disciplinary offences.

It is evident that the distribution of disciplinary offenses is dominant such as conflicts with officials, fights and arguments between prisoners, and deprivation of freedom[14]. These are the structural attributes of disciplinary offenses that are constantly repeated in the categories of time/space, and belong to the intractable problems of serving the sentence. Since they are constant attributes of the phenomenology of disciplinary offences, we consider them to be key problems of serving the sentence. These problems may vary depending on the wider surrounding social conditions, but it could be considered successful if these offences do not cross the limits of tolerance.

We were interested in whether disciplinary offences vary by month.

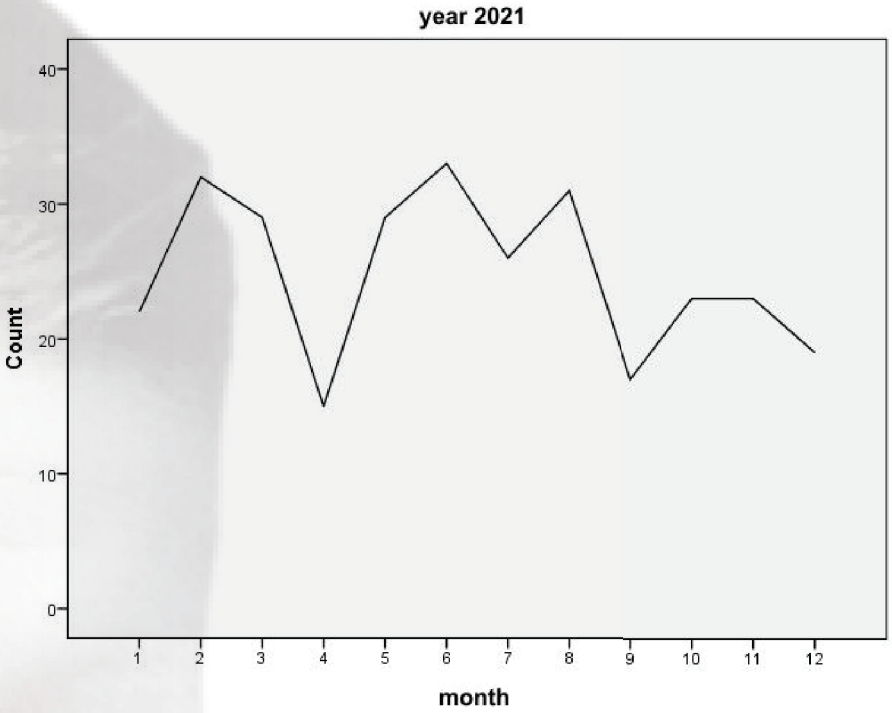


Graph 3 *Distribution of Disciplinary Offenses by Month in 2020.*

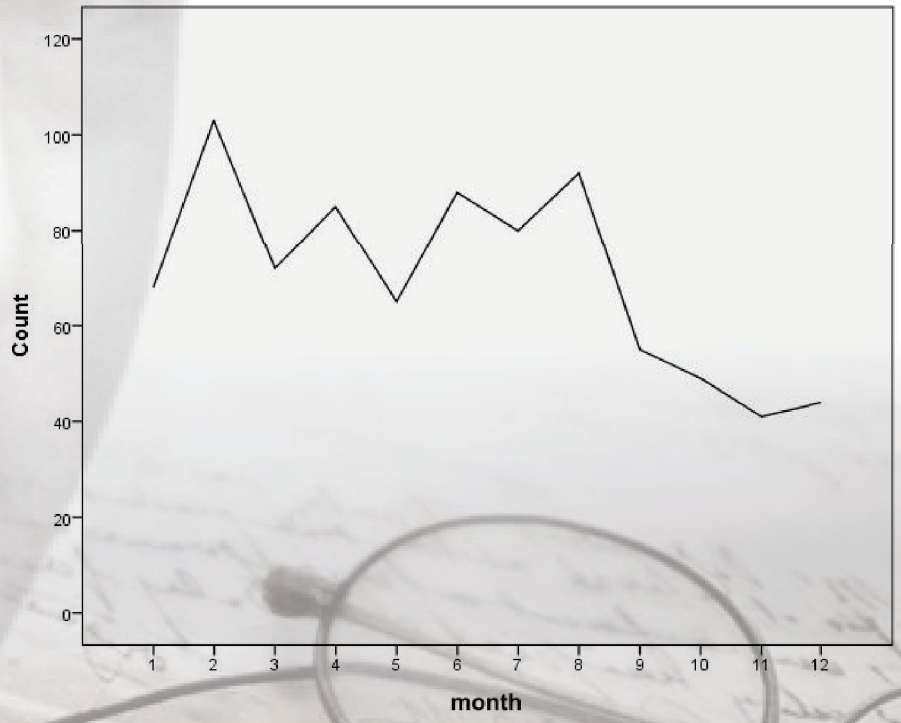
12 Deprivations are very strong motives for committing disciplinary offences. For example, food has several symbolic meanings in prison community(Einat & Davidian ,2019).

13 The prevalence of alcohol and drug addiction within the criminal population is also indicated by the Dictionary of American Slang, which lists 560 expressions and phrases (Kipfer, 2007, p.579-584).

14 Prison situation, its reality, its social climate or a number of simultaneous facts make an event that is naturally variable, however, multiple measurements can crystallise the main components or events that constitute a prison situation. (Moos, 1960, 1968, 1974, Šabani, 2005).



Graph 4 *Distribution of Disciplinary Offenses by Month in 2021.*



Graph 5 *Frequency by Month – the Whole Period*

From the presented graph for 2020, we note that the largest number of disciplinary offences occurs in February, April and August, while the graph for 2022 suggests that February is also highly represented in terms of disciplinary offences, as well as August and June.

According to the total number of disciplinary offences in the analysed period, it is evident that February and August remain the dominant months in which the largest number of disciplinary offences occur. We can attribute this to the fact that February is an extremely unstable month in terms of weather and that many prisoners are exposed to the impossibility of controlling their health. August is a month of great heat and vacations, and it is possible that these facts cause increased feelings of deprivation of freedom, heterosexual needs and material goods.

Originality

Based on the presented analysis, several important conclusions emerge:

- In the total period of observation, offences of mutual quarrels and fights, refusal of orders of official persons and enjoyment and bringing of alcohol and drugs into the institution dominate of total offences.
- 2021 appears as a key year in which these offences were somewhat more intense. In comparison with whole period, the most important group of perpetrators of disciplinary offenses are prisoners who are addicts of alcohol and drugs, and probably prisoners who committed the crime of theft and robbery.
- In the observed period, the number of disciplinary offences decreased successively, the disciplinary situation tends towards the stabilization of the most common disciplinary offenses in terms of qualitative characteristics (a significant deterioration was observed in 2021).
- In the total number of imposed disciplinary punishments, the average length of solitary confinement is 10.33 days, with sd=4.48 and we can conclude that these punishments are predictable and standardized.
- In the observed period, a group of prisoners who often commit disciplinary offences stood out and that represent the basic security and risk factor in the functioning of prison.
- Repeat offenders of disciplinary offenses are the most active core in the disruption of discipline in prison. It means that the prison community is deeply divided within itself (prosocial prisoners opposite antisocial, asocial, addicts) and that there is no communication between them despite the fact that they share the same categories of time/space as prison. Future research should prove this assumption
- With regard to conditional solitary confinement, conditional solitary confinement in duration of 3 months was standardized.
- In the relation prisoner-prisoner (disciplinary offences are mutual quarrels and fights, mutual bartering, gambling, reselling and inciting other prisoners to commit disciplinary offences) amounts almost a third of the total number of offences. As we expected, the largest number refers to fights and quarrels among prisoners.
- In disciplinary offenses in the relationship between a prisoner and an official, the most common disciplinary offense is refusal of an official's order, and together with other offenses, it accounts to 17.6% of the total number of offences.
- Self-directed offense is a type of disciplinary offense committed by the prisoner on his own initiative. In the substructure of this type of offense, the following stood out:
  1. deprivation of freedom- refers to escape and preparation of escape (2.9%),
  2. deprivation of material goods and services - refers to the possession of illegal objects (2%), bringing objects into the institution that a person is not allowed to have with him (4.9%). This type of offense refers to 6.9% of the total number of disciplinary offences,

3. addictions - disciplinary offenses related to bringing of alcohol and drugs into the institution amount to 10.8% of the total number of disciplinary offences,
4. social neglect - refers to indiscipline, hygienic neglect and tendency to laziness. This type of offense is represented by 6.3% in relation to the total number of disciplinary offences.

- According to the total number of disciplinary offences in the analysed period, it is evident that February and August remain the dominant months in which the largest number of disciplinary offences occur. We can attribute this fact to the influence of health-deprivation factors on the number and scope of disciplinary offences in these months.

Implications

It is obvious that at the centre of the drama in prison are the prisoners who often committed offences and these are the structural problem in prison which lead to the intractable problems of serving the sentence. It means that there is a need to intervene in this direction by improving treatment procedures. We also believe that the official staff (specially prison guards) should be re-educated through various trainings, and in this sense, we propose several ideas:

- Conflict as type of micro-drama is a source of stress for guard in his relation with prisoners who tend to conflict behaviour. It is important to stress that the personality characteristics of guards influence the choice of their conflict strategies in relation to prisoners. First, guard must be trained in self-efficacy, perceived as a belief in own abilities to act effectively in certain conflict events. People with a higher perception of self-efficacy manage their behaviour by constructing successful consequences, instead of dwelling on things that could go wrong. Second, self-regulation, as strategy is the ability to start, direct and maintain the instructions that an individual lead himself through a task. Self-regulation can moderate the impact of negative events. Third, self-control ability to undertaking adaptive actions. Fourth, emotional intelligence, as a set of abilities that contribute to the assessment and expression of own emotions, as well as the assessment of other people's emotions. It is about using emotions for adaptive purposes in conflict situation.

The complexity of the tasks which are demanded from each prisoner guard requires skill, efficiency in any conflict situation concerning prisoner and the adequate education. The constant presence of guards, the observation of emerging difficulties and problems, as well as their objective presentation of the potential, and the real problem, as well as desire to resolve them, greatly contribute to the realization of the principle of individualization of punishment.

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FORMATION OF THE DIRECTORATE FOR ANALYTICS AS A PREREQUISITE FOR THE EFFECTIVE AND EFFICIENT APPLICATION OF THE ILP MODEL IN THE REPUBLIC OF SERBIA

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Introduction

The term Analytics (derived through synonyms) has been used in police organisations for over a century and has multiple meanings: thorough, detailed, methodical, careful, precise, etc. The modern evolution of Analytics began with the appearance of computers in the 1950s. The first computers enabled data storage and analysis, making it easier to collect, manage, analyse, and create reports. Considering the ever-increasing amounts of data (so-called sophisticated scientific methods and developed computer resources for data processing) in literature and practice, the term science of data (Science) is often used as a synonym for Analytics, and when it comes to data from the field of crime, it is called Criminal Analytics.

Analytics in police organisations contributes to proactivity by identifying emerging forms of criminality and other forms of threat to public safety, including making critical conclusions about the intentions of criminal groups and individuals. It includes research and development of analytical products, which is carried out by applying the function of analysis (Racić, 2023).

The tasks of Analytics in the Ministry of Interior of the Republic of Serbia were institutionalised in 1967 when the Department for Analytics was created in the State Secretariat of Internal Affairs. In the following years, the Department grew into the Directorate for Analytics (hereinafter: DFA), which was part of the Department of Public Security, i.e. later the General Police Directorate, until September 2009, when it was transformed into the Sector for Analytics, Telecommunications and Information Technologies (hereinafter: SATIT). In December 2015, with changes in the internal organisation of the Sectors within the Ministry of Interior (hereinafter MOI), Directorates were abolished as organisational units within the Sectors, and Departments were formed as the primary organisational units of the Sectors. Thus, the DFA was abolished, and two departments were formed: The Department of Analytics and the Department of Statistical Analytics and Development (Racić, 2018:143).

In May 2023, with the adoption of the Rulebook on internal organisation and classification of workplaces in the Ministry of the Interior, the DFA was established at the headquarters of the General Police Directorate as an organisational unit responsible for performing analytical tasks and applying the intelligence-led police model at all three organisational levels (central, regional and local). The Directorate for Analytics is a centralised organisational unit created by unifying the analytical units of SATIT and analytical workplaces in the organisational units of the General Police Directorate, and it consists of the Department for Strategic Analytics, the Department for Statistical Analytics and

Criminal-Operational Records and the Department for the Development of Strategic Products and planning documents. At the regional level, the Department for Analytics was formed in the Regional Police Directorate for the City of Belgrade, and the Divisions for Analytics were formed in 26 Regional Police Directorates. In this way, it was aimed at consistently applying Article 3 of the Regulation on principles for internal organisation and classification of workplaces in ministries, namely: 1) that workplaces are based on the scope of work of institutions and work processes therein, and 2) to enable bringing together the same or related and interconnected jobs within the corresponding internal units in the institution. By establishing a modern concept of human resources management in the MOI, significant progress has been achieved, finally modernising the bureaucratic administration (Tomićević, Racic: 2021:195).

Before the establishment of the DFA, analytical tasks were carried out in the General Police Directorate, namely at the central level: Criminal Police Directorate (hereinafter: CPD), Traffic Police Directorate, Border Police Directorate, Directorate for International Operational Police Cooperation and Gendarmerie. Within the CPD were several services: A service for Criminal Analytics, a Service for Criminal Intelligence Tasks, a Unit for Financial Investigations, a Service for the Detection of War Crimes, and a Service for Combating Drugs. At the regional level, in Regional Police Directorates, analytical tasks are performed within the Criminal Police Department (work positions - operational analytical work). In the Regional Police Directorate for the city of Belgrade, in the Criminal Police Directorate, the Department for Operational Analytics has been systematised, which performs analytical tasks in this Directorate. In addition to the General Police Directorate, analytical tasks were carried out in the Sector for Analytics, Telecommunications and Information Technologies (SATIT). Within SATIT, the performers of analytical tasks were the Department for Police Analytics and the Department for Statistical Analytics and Operational Criminal Records. One of the critical weaknesses that contributed to establishing the Directorate for Analytics as a centralised organisational unit is 1) the dispersion of analytical functions in several organisational units. When preparing the report, each analytical unit looked at security problems from the scope of the organisational unit to which it belongs. Analytical reports did not contain a complete picture, which affected their poor quality and concern for managers when making decisions. An example is the preparation of the Assessment of the threat from serious and organised crime, as one of the vital criminal-intelligence products, for the preparation of which it was necessary to form a Working Group whose members were mainly members of various analytical organisational units from the central level; 2) irrational use of human, material and financial resources; 3) the jurisdiction of the analytical units was not clearly defined, which resulted in the overlapping of specific tasks of different analytical organisational units; 4) the process of education of analysts that is not standardised, which leads to the fact that analysts in organisational units possessed different levels of knowledge and skills; 5) decentralisation of databases.

Methodology

General-scientific, logical, and empirical methods were used in the research. Comparative and statistical methods were applied from the corpus of general-scientific methods used in this research. The statistical method was used to apply statistical techniques: grouping data (numerical and attributive/descriptive), presenting data (tables and graphs), describing data, and establishing relationships between phenomena. The following were applied from the corpus of logical methods used in this research: analysis (descriptive and explicative analysis), synthesis, generalisation, induction, and deduction.

From the empirical data collection methods, the following were applied: the method of questioning, by applying the survey technique, as well as the analysis of the content, by having insight into historical sources of theoretical character related to ILP. The survey was conducted among 60 ILP contact persons employed in organisational units at the headquarters of the General Police Directorate (coordinators in the General Police Directorate, Criminal Police Directorate, Uniformed Police Directorate, Traffic Police Directorate, and Border Police Directorate), the Police Directorate for the city of Belgrade and Regional Police Directorates. Their knowledge and experiences regarding ILP have significantly contributed to a better comprehension of adequate organisational structure, which is a necessary condition for the successful establishment and implementation of ILP in the police force of the Republic of Serbia. The following was used in the research: scientific and expert papers that directly or indirectly dealt with ILP; scientific and expert research projects from this field, and positive legal regulations (national). The method mentioned above was used in the historical context as well. The papers within the "KOBSON" database, monographs, and articles available to the author were analysed. After analysing 46 different bibliographic units, abstraction was carried out through a general overview of compliance of organisational structure.

Research Results

The results of conducted theoretical and empirical research are divided into two parts. The first part is the research results: "Centralized Analytical Organizational Unit for the Implementation of ILP". The second one refers to "Conditions for the successful operation of a centralised analytical organisational unit".

Centralized Analytical, Organisational Unit Intended for the Implementation of ILP

The results of theoretical research in which the establishment of a centralised analytical organisational unit that coordinates criminal intelligence work at central, regional, and local levels stands as a critical requirement for the establishment and implementation of ILP are presented through the following theoretical attitudes: 1) Brincka (Brincka), titled "From enhanced oversight to today" where it is stated that the key precondition for the establishment of ILP in the police of the Republic of Croatia was the reorganisation of organisational structure by establishing a centralised organisational unit "Service for criminal intelligence work" within the Crime Police Directorate, which was created by merging two organisational units: criminal intelligence unit and criminal operational analytics (Brincka, 2012: 605); 2) In the "National intelligence model" handbook, the basic problem during the establishment of PIM in the Swedish police was the decomposition of the old structure. This way, a centralised organisational unit, "Criminal Intelligence Directorate", was formed. This unit has access to all information and capacities intended for processing and analysing information to obtain quality crime reports (Svenska Polisen, 2006); 3) In their text entitled "Factors that influenced the implementation of ILP in the police of the Republic of Slovenia", Potparic (Potparič) and Dvorsek (Dvoršek) have concluded that the key factor that influenced the successful implementation of ILP in the police of the Republic of Slovenia was the reorganisation of the Criminal Police Directorate by the establishment of a centralised organisational unit "Center for Criminal Intelligence Activities". This contributed to the consolidation of all analytical and operational units (Potparic (Potparič), Dvorsek (Dvoršek), 2011: 263);

The above-mentioned theoretical attitudes were tested empirically through interviews with 60 ILP contact persons from the General Police Directorate of the RS police. The following tables (1-3) and the graph (1) present the answers to these questions.

Table 1 *Respondents' answers to the question: "Do you think that forming a centralised analytical organisational unit that coordinates criminal-intelligence work at the central level is a prerequisite for the efficient, effective and economic establishment and implementation of POM in the RS police?"*

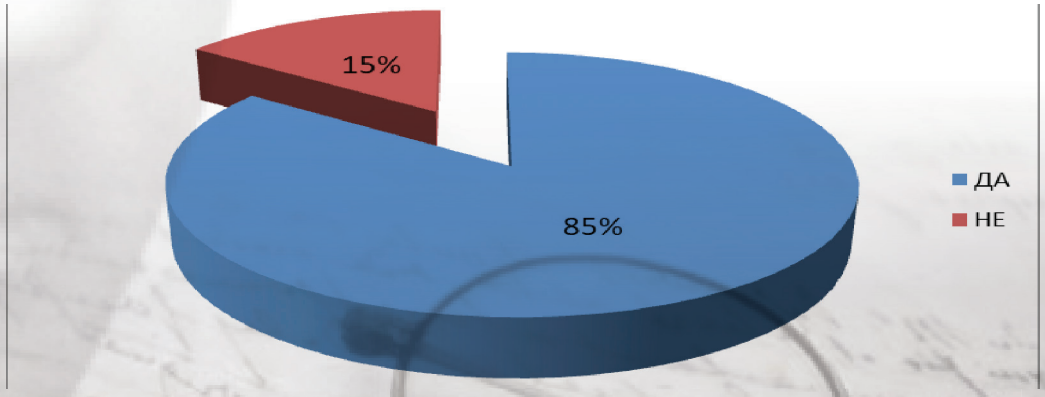
Type of response	Total number of respondents	Percentage of respondents
YES	56	93,33%
NO	4	6,67%

Among the surveyed police officers in the RS police, 56 made positive claims that a centralised organisational unit coordinating criminal-intelligence affairs at the central level is a prerequisite for the efficient, effective and economical establishment of POM in the RS police, which is a total of 93—33%. The remaining four respondents made a negative statement, 6.67%. Analysing the above answers, one can conclude that a centralised analytical organisational unit coordinating criminal intelligence work at the central level is a condition for establishing a POM in the RS police.

Table 2 *Respondent' answers to the question: "Do you think that the formation of a centralised analytical organisational unit that coordinates criminal-intelligence affairs at the regional and local level is a prerequisite for the efficient, effective and economic establishment and implementation of POM in the RS police?"*

Type of response	Total number of respondents	Percentage of respondents
YES	51	85%
NO	9	15%

Among the surveyed police officers in the RS police, 51 respondents made positive claims that a centralised organisational unit that coordinates criminal-intelligence affairs at the central level is a prerequisite for the efficient, effective and economical establishment of POM in the RS police. The remaining nine respondents made a negative statement. The representativeness of respondents' answers is presented in the following graph.



Graph 1 *Representation of respondents' answers in relation to the centralised analytical, organisational unit that coordinates criminal intelligence work at the regional and local level for the needs of the POM in the RS Police.*

Analysing the answers given by respondents, we can conclude that a centralised analytical organisational unit that coordinates criminal intelligence work at the regional and local level is a condition for establishing a POM in the police of the RS, bearing in mind that 85% of the respondents made a positive statement in the explanation, while a negative claim was made by 15% of respondents.

Comparing the stated views, we can conclude that the theoretically-empirically confirmed view is that the critical condition for the establishment and implementation of POM in the RS police is the formation of a centralised analytical organisational unit that coordinates criminal-intelligence work at the central, regional and local levels.

Conditions for the Successful Operation of a Centralised Analytical Organisational Unit

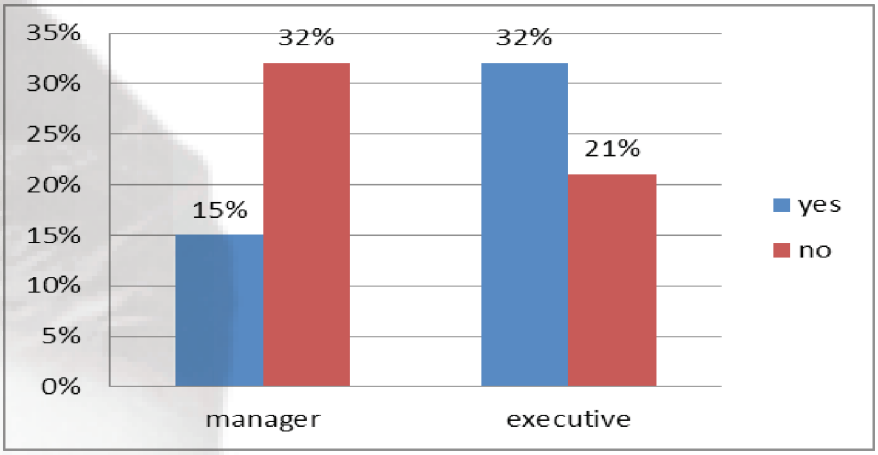
The results of the theoretical research in which, as a key precondition for the establishment and implementation of ILP are the establishment of a centralized analytical organizational unit which will consolidate analytical functions performed by the employees deployed to adequately named analytical work positions by using an information-communication interconnected database, will establish the educational necessity for a standardized and comprehensive process of educating analysts from several organizational units, are presented through following theoretical attitudes: 1) Carter (Carter) believes that the implementation of ILP requires a centralized analytical organizational structure of ILP: participants, partners, defined procedures for data exchange (information), operational plan, analytical capacities, tactical and strategic alternative responsibility (Carter, 2009: 97-128); 2) Brincka (Brincka) in the research called "From enhanced oversight to today" by establishing a centralized analytical organizational unit "Crime and Intelligence Services", more efficient, more effective and more economical, criminal intelligence products are made: strategic assessment, tactical assessment, target profile and problem profile (Brincka, 2012: 605).

The above-mentioned theoretical attitudes were tested empirically by examining 60 ILP contact persons of the General Police Directorate in the RS police. The answers to these questions are presented in the following tables (4-7) and graphs (2-4).

Table 3 *Respondents' answers to the question: "Is there sufficient coordination between analytical organisational units when creating criminal-intelligence products (Strategic assessments of public security, operational assessments of public security, Strategic plan of the police, operational plans of the police, profiles of security problems and profiles of security interest" persons/groups)?"*

Type of response	Total number of respondents	Percentage of respondents
YES	28	46,67%
NO	32	53,33%

Among the interviewed police officers in the RS police, 28 answered affirmatively that there is sufficient coordination between analytical and organisational units in the process of making criminal intelligence products, which is 46.67% in total. The remaining 32 respondents answered negatively, which is 53.33% in total. The respondents are classified as executives and officers related to the coordination of the work of analytical organisational units in making criminal intelligence products, and the respondents answered as presented in the following graph.



Graph 2 *Structure of respondents classified as executives and officers and their answers to the question related to coordination between analytical organisational units in the making of criminal intelligence products*

Among the interviewed police officers in the RS police, 15% of executives answered affirmatively that there is sufficient coordination between analytical organisational units in making criminal intelligence products, representing twice as many responses as the negative statement, which was made by 32% of respondents. Regarding officers, 32% of respondents answered affirmatively, compared to 21% of the respondents with negative answers.

Based on the analysis of the respondents, it can be concluded that the following attitude prevails. There is no sufficient coordination between analytical organisational units in making criminal intelligence products.

Table 4 *Respondents' answers to the question: "Are analytical jobs rationally distributed in accordance with the real needs of POM?"*

Type of response	Total number of respondents	Percentage of respondents
YES	2	3,33%
NO	58	96,67%

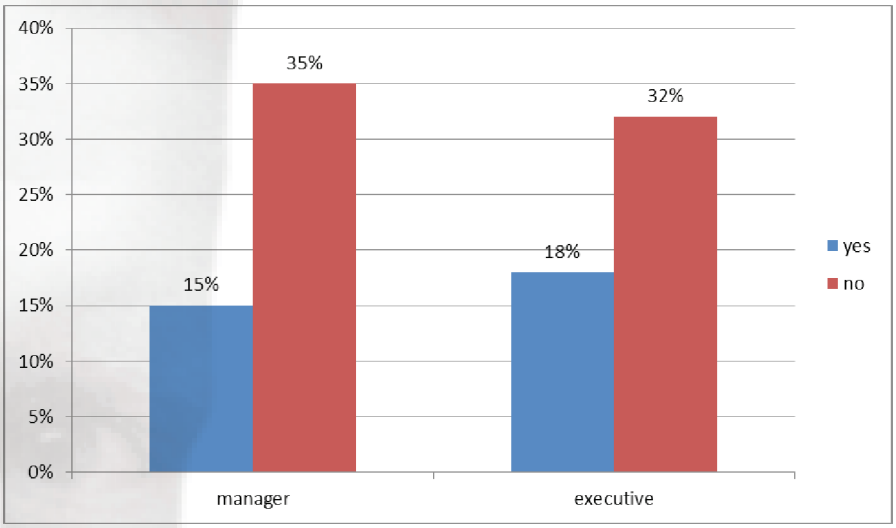
Among the interviewed police officers in the RS police, 58 answered negatively that analytical work positions are not rationally allocated in line with the real needs of ILP, which is 96,67% in total. The other two respondents answered affirmatively, which is 3,33% in total.

Based on the analysis of the respondents' answers, it can be concluded that the analytical capacities and resources have been limited in previous years, both in the General Police Directorate and in the Sector for analytics, telecommunication, and information technology (hereinafter: SATIT). Unevenness is present in the staffing in organisational units and the lack of training for analysts, especially in SATIT. Also, the attitude of the leadership of the General Police Directorate does not contribute to a rational approach towards analytical work positions. Analytical work positions are systematised in several organisational units without accounting for ILP. Each organisational unit has formed an analytical structure according to its needs. The question is how much it is about analytics in the true sense of the word since various operations fall under this term. Analytical work in different organisational units is mutually unrelated and unknown regarding the work content, and it isn't easy to talk about their rationality concerning ILP.

Table 5 *Respondents' answers: "Is the analyst training process standardised?"*

Type of response	Total number of respondents	Percentage of respondents
YES	20	33,33%
NO	40	66,67%

Among the surveyed police officers in the RS police, 40 made negative claims that the training of analysts is not standardised, which amounts to 66.67%. The remaining 20 respondents, 33.33%, made a positive statement. The structure of respondents was classified as managers and executors related to analyst training, and the respondents answered as presented in the following graph.



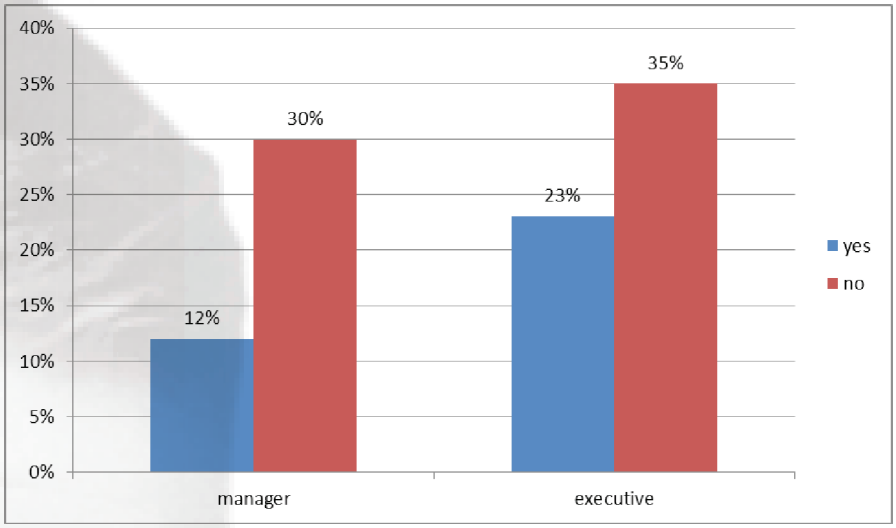
Graph 3 *The structure of respondents classified as managers and executors and their answers to the question about analyst training*

Among the surveyed police officers in the RS police, 35% of managers made a negative statement that the training of analysts is not standardised, while 15% made a positive statement on the same question. As for the perpetrators, a positive claim was made by 18% of respondents, compared to a negative claim by 32% of respondents. Based on the analysis of respondents' answers, it can be concluded that the training of analysts in the RS police is not standardised.

Table 6 *Respondents' answers: "Is there sufficient information-communication connection between analytical organisational units that coordinate criminal-intelligence work in the function of POM?"*

Type of answer	Total of respondents	Percentage of respondents
YES	21	35%
NO	39	65%

Among the interviewed police officers in the RS police, 39 answered negatively, presenting the attitude that there is no satisfactory information-communication interconnection between analytical organisational units that coordinate criminal intelligence work in the function of ILP, which is 65% in total. The other 21 respondents answered affirmatively, which is 35% in total. The structure of respondents is classified as executives and officers, related to information-communication interconnection between analytical organisational units that coordinate criminal intelligence work in the function of ILP, and the respondents answered as presented in the following graph.



Graph 4 *The structure of respondents classified as executives and officers and their answers to the question related to the information-communication interconnection between analytical organisational units that coordinate criminal intelligence work in the function of ILP*

Among the interviewed police officers in the RS police, 30% of executives answered negatively that no information-communication interconnection between analytical organisational units coordinates criminal intelligence work in the function of ILP, while 12% answered affirmatively to the same question. When it comes to officers, 23% of respondents answered affirmatively, while 35% of the respondents answered negatively.

Based on the analysis of the respondents' answers, it can be concluded that there is no satisfactory informational and communicational interconnection between analytical organisational units that coordinate criminal intelligence work in the function of ILP.

Discussion

The theoretical and empirical research results have shown that ILP has significant potential as a modern model for managing police work. Still, success largely depends on the prerequisites that must be met, which are indicated in further sub-headings.

Centralized Analytical Organisation Adapted to ILP

The general theoretical position regarding a centralised analytical organisation adapted to ILP is that the critical condition for establishing and implementing ILP is establishing a centralised analytical organisational unit coordinating criminal intelligence work at the central, regional, and local levels. A centralised organisational unit that coordinates criminal intelligence work at the central level empirically was supported by 93.33% (56 out of 60) of the respondents. Establishing a centralised organisational unit that coordinates criminal intelligence work at the regional and local levels empirically was supported by 85% (51 out of 60) of respondents. Comparing these views, we can conclude that the theoretical and empirical position is confirmed – the critical condition for establishing and implementing ILP is setting a centralised organisational unit coordinating criminal intelligence work at the central, regional, and local levels.

Developed Analytical Capacities in the Making of Criminal Intelligence Products

The general theoretical attitude regarding the centralised organisation adapted to ILP is that the critical conditions for establishing and implementing ILP are developed analytical capacities in making criminal intelligence products. On the other hand, empirically, 53.33% (32 out of 60) of respondents support the position that it is necessary to develop analytical capacities when making criminal intelligence products, where the difference in attitudes is mainly expressed among executives (not officers). Comparing these attitudes, we can conclude that, theoretically and empirically, the following attitude prevails: the critical condition for establishing and implementing ILP is the developed analytical capacities in making criminal intelligence products.

Rationally Allocated Analytical Work Positions in Line with the Real Needs of ILP

The general theoretical attitude regarding the centralised organisation adapted to ILP is that the critical condition for establishing and implementing the ILP is the rational allocation of analytical work positions. On the other hand, empirically, 96.7% (58 out of 60) of respondents support the view that it is necessary to rationally allocate analytical work positions following the real needs of ILP. Comparing these attitudes, we can conclude that the attitude according to which the critical condition for establishing and implementing ILP is the rational allocation of analytical work positions is theoretically and empirically confirmed.

Standardized Analysts' Training

The general theoretical position regarding the centralised organisation adapted to ILP is that the critical condition for establishing and implementing ILP is the standardised training of analysts. On the other hand, empirically, 66.67% (40 out of a total of 60) of the respondents support the standardised training of analysts, whereby such a difference in attitudes is mainly expressed by managers (not executors). Comparing the above positions, we can conclude that it is theoretically and empirically confirmed that the critical condition for establishing and implementing ILP is the standardised training of analysts.

Information and Communication Interconnection of Analytical Organisational Units that Coordinate Criminal Intelligence Work in the Function of ILP

The general theoretical position regarding the centralised organisation adapted to ILP is that the critical condition for establishing and implementing ILP is the informational and communicational interconnection of analytical, organisational units coordinating criminal intelligence work. On the other hand, 65% (35 out of 60) of respondents empirically support the information-communication interconnection of analytical organisational units that coordinate criminal intelligence work, where such a difference in attitudes is mainly expressed among executives (not officers). Comparing these attitudes, we can conclude that the theoretical and empirical positions confirmed that the critical condition for establishing and implementing ILP is the information-communication interconnection of analytical organisational units coordinating criminal intelligence work.

Conclusion

The strategic decision of the highest executives in the RS police to establish ILP represents an entirely new strategic concept in the performance of operational, intelligence, and analytical work, which is based on consolidating and directing all available resources, capacities, and potentials to confront all identified security priorities. The choice of organisational solution is the foundation of ILP, on which the quality and capability of the entire process depend and by which the focus is aimed at upgrading the missing elements such as targeted data collection and information, strategic analysis, quality management, and performance management.

In this research, the theoretical and empirical position was confirmed that the condition for the establishment and implementation of ILP in the RS police is the necessity to establish a centralised analytical organisational unit that will coordinate criminal intelligence work at central, regional, and local levels, which will contribute to a more efficient, effective and more economical performance of criminal intelligence tasks. In this way, the analytical functions that will be carried out by the employees deployed to adequately called analytical work positions would be consolidated, which will contribute to a better quality of criminal intelligence products (strategic assessment of public safety, operational assessment of public safety, strategic plan of police, operational plans of police, profile of security problem and profile of person/group interesting in terms of security). The establishment of an educational need for training of analysts from several organisational units and the establishment of a single information-communication database would contribute to the improvement of data collection, faster search, and availability of operational data in one place, which would influence more efficient, effective and more economical performance of police duties and tasks.

Each of the methods mentioned above can be practically applied. However, first of all, special attention should be paid to the utilisation of existing capacities (human, professional, methodological, technical), taking into account the rationality of the solution following the Regulation on the principles for internal organisation and job classification in the Ministry, which foresees that the work positions are based on the scope of the body itself and work processes in it, as well as to enable to group the same or related and interconnected jobs into appropriate internal units within the body. This way, a model with the lowest material and financial costs would be established. Criminal intelligence work within the proposed organisational structure will be followed by standardisation according to the model and criteria of the description of work processes, which are in line with the models of developed EU countries, which is essential considering that the RS is in the process of joining the EU. The research results can significantly contribute to the field of strategic analysis and planning of the future functioning of the police in the prevention of crime and other security threats.

The conducted empirical research has led to findings regarding essential facts and characteristics of the centralised organisational unit as a condition for establishing and implementing ILP in the RS police as a modern police innovation in the field of controlling criminal activities, violations, and other security-threatening phenomena. Further scientific research should be directed to the research of best practices (Benchmarking) of the application of ILP, especially in the areas of organisational solutions, coordination, management, information management, and training.

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INTEGRITY – HUMAN NARRATIVE OF CORRUPTION PREVENTION AND/OR AI-BASED LEGAL PROTECTION

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Introduction

"Integrity is doing the right thing even when no one is watching."
C. S. Lewis

The present study focuses on the change in perspective that has been characteristic of the literature discussing the phenomenon of recent corruption[2]. It prioritizes the determinant aspects of the change in perspective. It examines the approach, focusing on prevention; and the reality of how the prevention-based integrative approach and methodology might become legitimate beside the trend that aims to confine the phenomenon of corruption by the means of criminal law. Since this approach does not focus on aspects that can be captured by the means of criminal law, it is inevitable that it reimagines the interpretation of corruption itself.

This is the reason why this study interprets the set of conditions of corruption prevention with a value-oriented approach, in the context of management-literature in one respect, and in another respect, it examines the complex interpretability of the phenomenon of corruption as a consequence of it. Drawing on contemporary corruption research, on the whole, value-consciousness, organizational development and risk analysis all discuss the phenomenon of corruption less in an exact way, but more in a 'system culture'- dependant way.[3] For models of this cross-boundary work the authors propose[4] going beyond anti-corruption theory and using insights from organisational and social-system theory. System experts suggest that in the face of complex problems we need to engage in a collective inquiry among many disciplines, fields and experiences and to initiate a processual and dialogic approach that can create a new understanding and knowledge from the diverse insights and expertise of those who participate. (Pallai, 2016: 12)[5]

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2 "The word "corruption" has a root in the Latin corrumpere, to spoil (as a virgin) or destroy. Corruption classically referred to such things as "the turning of the head" of a judge: instead of being blindfolded with a fair scale, the judge turns his/her head and tips the scale toward the one who pays a bribe. John T. Noonan, author of the remarkable tome Bribes, says "the core of the concept of a bribe is an inducement improperly influencing the performance of a public function meant to be gratuitously exercised". (Noonan, 1984: xi). Bribes introduce market-like payments into systems that are meant to allocate goods and positions by merit, votes or lottery (Rose-Ackerman, 1978)." (Klitgaard, 2015: 17-18) See: ibid. 18-19 Different perspectives on the meaning of corruption. See also: "Corruption is a crime of calculation" (Klitgaard et al., 2000: 28).

3 In this sense, it is important for the organization to actively work to strengthen its own integrity and constantly analyze the changing environment and how the constant changes pose new challenges for the organization.

4 For example: Heijden, 2005; Senge 2013; Senge at al., 2004; Scharmer, 2016)

5 The spirit of a learning organization is created and sustained every day by the set of values that govern its actions. If the values are based on hierarchical, authoritarian and punitive principles, the spirit of those who work under such conditions will reflect those values. A formal "Declaration of Values" may be needed to help bring out the creative and liberating spirit necessary for creating a learning organization. (Kim & Eillen)

The establishment of the integrity approach[6] – and on the whole, the preference of prevention in anti-corruption endeavours presupposes the effective operation of leadership cultures, internal control systems and a risk-based mindset. In this respect, the study examines the phenomenon of corruption in the context of integrity management[7], and at the same time it points out that integrity development is not the same as corruption prevention, since it is a much broader concept and altogether 'it was intended to implement a proper, effective and efficient operation' (Pulay, 2021). Among the situations endangering and working against these values, the act of corruption is only one of the many. Meanwhile, we interpret integrity as a context constructible to corruption prevention, which means that people's intra-group and intra-community behavioural characteristics stand behind corruption. This means that in order to understand corruption, we must take a human ethological approach as a starting point[8] (Klotz, 2017: 43).

The aim of the paper is to emphasize that the essence of the integrity approach is precisely that integrity is not an absolute and absolute category in itself, but rather a concept that conveys flexible content. Integrity can be understood as the guiding principle of a learning process. Situation/organization specificity is also an essential element of the integrity approach. There is no standard strategy that can be applied everywhere, but it is a guiding principle of organizational culture (society?).[9]

The paper pays particular attention to how integrity can be interpreted as an ordering principle for society's anticorruption strategy in the age of AI.[10]

The Two Perspectives of Anti-Corruption Efforts

The rules-based strategy is a punitive, regulatory approach based on the law, which in practice can only achieve limited results. Unless it is complemented by a social approach that interprets the potential for unprincipled benefits in a negative context, it can only produce short-term results. Those who are tempted will always detect ways around the rule.

Therefore, a balanced integrity-based approach of values alongside rules is necessary for long-term results. The term "integrity" is used here in the original Latin sense of the word "intagere"; "intact", i.e. morally adequate, inviolable, blameless (Nieuwenburgh, 2002). This concept of integrity includes both personal and organizational integrity, as well as the integrity of the connection between person and organization. In this broad sense, integrity is the basis for the legitimacy and trustworthiness of the public sphere, underpinned by the integrity of institutions and the people employed by them.

In international practice, governments in the fight against corruption follow a historical sequence from a rules-based strategy to integrity. The following stages can be distinguished in this process:

6 Previously, the term 'ethics' was generally used (OECD, 2000a), and basically, the term 'integrity' has taken its place in more recent publications. (OECD, 2000b, 2009). This probably reflects well the change which is more connected to the contemporary approach of integrity-management, connecting the rules-based and value-based approaches. We will refer to some synonymous terms without going into complicated interpretative discourse, such as ethics, morality, integrity, deontology, accountability, which bear nuanced differences in meaning in different languages.

7 The integrity management framework (or "system") will not be considered a closed system, but an open system that is embedded in a wider "integrity context". This means that integrity management instruments should not only be coordinated with each other, they should also be coordinated with other, related actors and factors that might have an impact upon the organizational members' integrity (Maesschalck & Bertók, 2009).

8 Within natural sciences, human ethology aims to synthesize the scientific knowledge about human beings with the contribution of psychology, anthropology, sociology and biology, more specifically, ethology, genetics and neurosciences (Csányi, 2000).

9 See: Klitgaard, 2015

10 In this sense, the following question is more than important: "In what way is integrity more than compliance?" (Pulay, 2014)

a) Ignoring corruption, keeping it secret, avoiding publicity. This is usually a consequence of the low level of social control that previously existed in the past, where disclosure of corruption could be a source of social tension, but the lack of social control (integrity) allows the stakeholders to hold together.

b) Awareness. A specific given incident is uncovered, which raises awareness of corruption in the wider public. Depending on the intensity of the social reactions triggered, institutions are forced to introduce control measures in order to preserve legitimacy. This usually means rule-based measures as a preliminary step.

c) Developing rule-based protection towards a governmental level. This usually generates specific legislation in the legislature on the one hand, and on the other hand, it sets in motion preventive activity in the investigative side powers and by statutory mandates.

d) Recognising the shortcomings of a strategy based solely on suppression. Despite an increase in the work of investigative bodies and the judiciary, a substantial reduction in corruption cannot be experienced. Evidentiary procedures are proving problematic, and the penalties in the few concrete verdicts do not act as a deterrent to repeat offending.

e) An integrity-based approach is coming to the foreground. Governments first introduce the so-called hard measures: identifying those responsible, developing control systems; then soft measures are introduced, which emphasize ethical behavior and appropriate leadership attitudes.

f) Finding a balanced approach which applies both rules and preventive methods that maintain integrity.

There is another, a management-type model of anti-corruption policies, which is associated with Hartmut Schweitzer (2005) and has been gaining increasing popularity. This concept distinguishes four essential factors:

1. corruption caused by changes in norms that exceed the capacity of society to follow the norm;
2. corruption arising from the unenforceability of previous privileges following the restructuring of society;
3. corruption due to the "looseness" of the new social elite following the consolidation of social structures and norms;
4. corruption resulting from the coexistence of old and new social structures and norms.[11]

A Human Ethological Approach of Corruption

Corruption has been present in highly organized societies for thousands of years. "Corruption is a social phenomenon which follows the modern history of human societies. Its presence can be found in a thousand-year-old texts, in the headlines of newspapers from the last century and on the continuously updated internet portals as well. Yet, what is this seemingly ineradicable phenomenon which is able to resurface so persistently in ever newer forms and survives every form and system of society? " (Klotz, 2017: 7).

The need for its elimination throughout history can be linked to the strengthening of the institution of the state and parallel with this, to the emergence of highly qualified social classes which had advocacy potential.

Human ethology research derives the evolutionary reason for social organization from the benefits of human grouping, which presupposes the establishment of a set of rules for all members of the group and their adherence to them as a condition for a cohesive group. At the same time, the set of rules that

11 Taking all the above into consideration, analyzing a given society according to the above aspects can contribute to the development of effective measures against corruption. Accordingly, four different anti-corruption strategies can be distinguished: a. rule-based, which focuses on organizational systems; b. rule-based, which focuses on individuals; c. principles-based, which focuses on individuals; d. principles-based, which focuses on organizational systems. (Pallai: Párbeszéd)

makes the group work is not unconditional and not always in everyone's best interests. Thus, within the group, individual initiatives may appear which do not directly or indirectly contradict the group's system of rules, however, those may also appear which contradict the group's system of rules and are therefore enforced by hidden means.

Sociological research shows that in groups where private property does not exist, corruption is not present at all. Conversely, private property implies corruption almost automatically.

The elementary form of corruption – the so-called proto-corruption – is gift giving, which means having a subtle influence on the decision-maker and is common in tribal-family organizational systems. Increasingly complex social structures create more complex internal rules of operation, which can provide greater scope for controlling corruption, but also more opportunities to hide corruption.

The most common form of corruption is bribery. This requires that the relevant decision-maker can be bribed at a relatively lower value than the value of the resource to which the briber has access by the bribe. This condition alone shows that corruption is essentially a two-way phenomenon, that is, reciprocity is assumed in bribery.

The reciprocal nature of bribery makes any such transaction extremely sensitive and risky, especially, if it is detrimental to the interests of a third party or if a third party or public authority has a direct interest or responsibility in detecting the corruption. Thus, in addition to the fact that a corrupt agreement, unlike a public/legal agreement, is not protected by the group's rules, the group's rules may also be aimed at preventing such an event. Together with all this, the implementation of a corrupt event contains uncertainties that at all points in the implementation process carry the possibility of failure for the parties, or even a disproportionately higher penalty than the expected benefit. Because of the high risk factor, corruption deals can usually only be reached in a relationship of trust (Major & Čudan, 2015).

The scope for corruption is reduced by the operational logic of highly organized states, where broader layers are able to control distributive relations through their representative bodies. On the other hand, the results of research in human ethology show that the practice of some form of corruption can be traced back to a large extent to the socialization processes provided by a society. Within this, a key issue is the awareness of the group's system of rules in individuals at an elementary level, starting in the family environment, and also at an institutional level, such as in schools or in the military service. It is therefore determinant as to what extent the socialization – with the moral motive encoded as the group's system of rules – of the growing number of members of the group excludes unprincipled gain from the legal possibilities. This, however, does not depend solely on the group's rule-making capacity or on the efficiency of the institution responsible for enforcing the rules, but also on the hereditary or spontaneous characteristics and drives of individuals. If, however, a coordinated socialization environment is accompanied by the institutional deterrent activity of the group's rule system, the incidence of corruption can be reduced to a level sufficient for the healthy functioning of society. This will presumably never mean a complete absence of corruption, the more so as new forms of corruption will always emerge in changing social conditions, adapted to the prevailing economic environment. At the same time, keeping corruption low in relation to the current level of GDP is essential to maintain the efficiency of social functioning.

The Potential of Information Technology in the Fight Against Corruption

"Corruption continues to be one of the biggest societal challenges of our time. New hope is placed in Artificial Intelligence (AI) to serve as an unbiased anti-corruption agent."
Köbis & Starke & Rahwan

The use of Artificial Intelligence opens up new possibilities (Köbis/b) for detecting and preventing corruption in at least three areas:

1. AI can reveal systemic contexts that, on the one hand, are not part of a system by design, on the other hand, in the absence of human preconditioning, are not subject to search and would remain latent in the long term. Consequently, the control of AI can radically reduce the potential for corruption.
2. AI can take over previously human functions that have given room for corrupt activity. In contrast, properly operated machine intelligence eliminates the potential for corruption.
3. With the use of AI, the scope of human corruption control is narrowed to those who programme and use the AI. This is a much narrower scope than the control of the full range of activities in operation. Conversely, this circle can only be controlled by persons with at least the same training and experience. A further problem may be the need to check the auditors.

In the sense of the above, the use of AI is an effective tool for improving the integrity of society. In fact, if the competence of AI to control and detect data is made public, as well as the functional consequences of the use of AI, the increase in the risk of corruption can support the social consensus against the acceptance of corruption (De Benedetto, 2021). It is possible and necessary to develop a – very well-founded – presumption in connection with the application of AI that the processes of social operations are transparent to AI and that, if unintended correlations appear in these processes, AI will reveal and make them visible.

Influencing social consciousness in this way is not aggressive, but it does make clear a significant increase in the risk factor compared to previous possibilities. Therefore, in addition to raising awareness of aspects of the overall societal interest, it is worthwhile to include the implications of the potential for operating AI in outreach programmes to enhance social integrity.

However, it can be seen that, while the scope for corruption for broad sections of society is indeed significantly reduced by the use of AI, a very narrow group of people, namely the planners, implementers and operators of AI, still have a scope for corruption, and this scope is even significantly increased.[12] It is therefore of the utmost importance to look at the possibilities of control for this narrow group. This is all the more important because, if a corruption mechanism operating at this level were to become known in the longer term, it could lead to a breakdown of trust in the whole social structure in a context where AI is responsible for a significant part of the organization of social functioning.[13]

> "Such AI-based anti-corruption tools are primarily fuelled by recent breakthrough advances in machine learning. Such technologies already match, or even exceed, human abilities across a growing range of (narrow) tasks, spurring hope that AI can contribute to more effective anti-corruption efforts. Overall, interest in AI is on the rise (again)." (Köbis &Starke& Rahwan)

It can therefore be seen that social trust in AI plays a crucial role in the vision of an effective use of AI. A breakdown in such social trust can lead to disasters, revolutions and the breakdown of power structures.

> "Current directions in corruption research outline the importance of specifying the respective type of corruption one seeks to combat before embarking on an anti-corruption crusade." (Köbis & Starke & Rahwan)

12 See: Tinnirello, 2022

13 "In the past decade, technological breakthroughs have occurred in the field of machine learning – a subdomain of AI that trains algorithms to engage in tasks autonomously." (Kobis et al., 2022)

Educational Program

The development of community control over the creation of AI is therefore not a task for the future, but for the present. If the development of a control methodology does not precede the design phase of the AI, there will be no guarantee that the AI will be free of corruption.

In order to ensure that the AI is free of corruption, it is advisable, as a first approximation, to ensure transparency of the AI stakeholders in the positive feedback of the AI. At the same time, it can be seen that the emergence of a new technology that decisively transforms the processes of social functioning opens up new, hitherto unknown possibilities of corruption, which are not only characterized by the fact that they have the potential to radically narrow the scope for corruption, but also by the fact that they open up new spaces that, although for a narrower social circle, represent a more significant opportunity in terms of intensity. Facing up this will be one of the greatest challenges for the conscious organization of society in the future.

The genesis of anti-corruption efforts shows that they are increasingly focused on the process by which values and norms are shaped in society and in organizations. In this approach, training professionals who understand the need for[14], the essence and the process of developing values of integrity and who themselves become promoters and drivers of integrity mentality in different segments of society, becomes an indispensable element of integrity-oriented problem-solving (Pallai & Gregor, 2015). The justification for this type of training lies above all in the fact that there is much more general experience in the field of policymaking than in the use of value-shaping tools. Generally speaking, people working in public administrations are familiar with the practice of policy-making, and if there is any value-creating work, it is in no way conscious. And in a systemic context, it is barely comprehensible.

The aim of the integrity advisory training programme is therefore to train public administration professionals who can identify and analyze corruption and integrity risks in the organization, and can initiate organizational development tasks involving the prevention of corruption and the establishment and operation of an integrity management system.[15]

Conclusion

"Grasping the risks of corrupt AI requires a closer inspection
of the socio-technical implementation of AI."
Transparency International, 2022

"The impact of AI on societies around the globe continues to grow, while the rising capabilities of AI shift existing power structures. In a digital age, power resides with those who have the code and the algorithms – currently mostly large tech companies and governments. Corrupt AI occurs when power holders abuse this power for their private gain."
Transparency International, 2022

In this study, the authors started from the premise that corruption is a huge social challenge all over the world today. After a long struggle, in recent times there may have been noticeable progress, but an actual breakthrough in a new approach is expected.

14 See: Pallai: Integritás
15 See: (Klotz, 2019)

The basis for this is twofold: partly placing the emphasis on prevention, an anti-corruption narrative with an integrity approach is necessary, and partly the application of artificial intelligence with appropriate competencies can help the break-through. Education is a prominent element of both conditions. In the study, we dealt with the integrity specialist training, which prepares specialists - corruption experts - in a new scientific approach.

For examining case studies, the authors recommend the Budapest National University of Public Service continuing education course in Integrity Counselling analysis of its launch.[16]

Minimizing corruption requires a social awareness of its long-term consequences, both direct and indirect. If a clear awareness of this is an integral part of a person's integrity, it becomes impossible to practice corruption and illegality. Avoiding corruption therefore provides a higher level of motivation than utilizing it.

Transparency in the organization of society and the running of the economy is an effective barrier to the motivation for corruption. A further possibility is the use of machine intelligence in the organization and regulation of institutional functions, which excludes the influence of personalities. Further, using machine intelligence, transparency and social control of the creator and operator of the machine intelligence provides an appropriate guarantee (Major, 2022). "Making AI systems more resilient against corruption risks requires novel safeguards. Here, we call on policy-makers, programmers, private companies and civil society organizations to address three main aspects: (1) Develop innovative regulatory frameworks that support the ethical design and implementation of AI, as well as mandating model audits. (2) Facilitate such audits by ensuring transparent code and data, as well as the interoperability of different programming languages. (3) Sensitise new powerful actors like data scientists and programmers to AI ethics and anti-corruption through training and codes of conduct." (Transparency International, 2022:15)

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INDICATORS OF ECONOMIC SECURITY IN THE REPUBLIC OF SERBIA

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Purpose

Not so long ago, in the analysis of economic security in the Republic of Serbia, macroeconomic indicators such as GDP, unemployment rate, average salary and others were used as indicators of economic security. Some monetary indicators such as the level of foreign exchange reserves, inflation rate, then, the extent of the gray economy, indicators of the standard of living such as the poverty rate and various indicators of inequality were also used in the analysis of economic security (Mijalković & Milošević, 2011; Milosavljević, 2016; Stajić & Milošević, 2017, 2018). There was a general opinion that these are adequate indicators of economic security, given that the economic situation in the country, as well as monetary, financial and external stability, reflect the security of the national economy and the economic security of citizens (Ljubojević & Petrović, 2019). Economic security is considered a part of national and an element of individual security. It started from the understanding that "Economic security as part of the function of the national security system represents the protection of the economic interest of the national economy from all types and forms of threats, that is, it represents the economic and security protection of the country with the absence of any form of threat to the economic potential of the national economy."(Stajić, Milošević, 2017: 177-178).

This approach was based on domestic literature, then on some generally accepted opinions in the theory of international economic relations, as well as on the views of international organizations and institutions on the topic of economic security that were formed in recent decades.[2] In this approach, macroeconomic indicators were used as indicators of national economic security, indicators that reflect not only the economic situation in the country but also the economic security of the national economy and the citizens themselves. For example, gross domestic product (GDP) has traditionally been used to give a general overview of economic and social developments which is a prerequisite of economic security of citizens. The level of public debt is an indicator of the indebtedness of a country, and from the aspect of national security, public debt affects different types of independence in decision-making. It is believed that more indebted countries are more susceptible to pressure from international factors, which reflects on the level of national security. The inflation rate is not only an indicator of the general price level, but also an indicator of the economic and financial stability of a country as the basis of national security and so on.

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2 An extensive review of the literature on the evolution of the concept of national security, the understanding of the concept of economic security and the determinants of economic security can be found in (Mijalković, Milošević, 2011).

Although these indicators have not lost their importance, informativeness and security content, in recent times, in the last decade, attention has been more focused on the development and measurement of the concept of individual economic security of citizens, that is, individuals and households. The concept of economic security has been expanded to include not only national but also individual economic security. As the focus in the study of economic security shifted more and more to the micro level, security indicators related to the standard of living and economic well-being of citizens were developed. A new approach to economic security has emerged, and new, more sophisticated indicators have been defined. Today, individual economic security is considered as economic well-being, while indicators of economic security are viewed as indicators of quality of life.

This approach is relatively new. The approach defines economic security as vulnerability to economic loss, and treats "economic" as a description of the consequences (such as income loss) rather than the causes of insecurity (Hacker, 2018). The concept was developed in the last decade by OECD and the European Commission, while they working on defining and collecting indicators.

In this approach, the perception of economic security is subjective. The assessment of the level of economic security by an individual can be based on objective facts and indicators, but in the end, it is still subjective. Measures of perceived security rely on individuals' own perceptions of their economic situation (Eurostat, 2021). The perception of economic security is people's assessment of their own ability to cope with unexpected economic shocks and to face unexpected risks (Ljubojević, 2016). Regarding the expectations of individuals about future events, individuals themselves assess the risk of future events, losses, or the risk of present crime that threatens their economic security. The perception of the economic situation depends on the subjective assessment of risk by individuals themselves, therefore indicators of economic security contain an element of subjectivity. The measure of the achieved level of economic security is the risk faced by citizens. This risk-based approach prevails today in defining and measuring the concept of economic security.

Eurostat has adopted this risk-based approach in expressing and measuring economic security, defining economic security as the degree of vulnerability to risk. Economic security is analysed with indicators that measure situations in which people may find themselves, such as being unable to cope with unexpected financial expenses, or being in arrears with a mortgage, rent, utility bills or hire purchase payments. (Eurostat, 2021). One can name many risks that could affect an individual's or a household's material security and these risks can be classified in two categories: economic security and physical safety. The analysis of physical security refers to the frequency of certain criminal offences and is based on crime statistics, as well as the assessment or perceptions of individuals and households regarding crime, violence or vandalism that are present in the area where they live.

There is another aspect of economic security, which is not covered by this paper, and which refers to the security of individual participants in economic activity on the production side (enterprises, corporations). This aspect of security is developed and analyzed by the European Commission within the framework of the European Economic Security Strategy (European Commission, 2023). In contrast to the individual economic security of individuals and households, this aspect of security refers to the assessment and measurement of risks in different areas of economic activities of companies (production, trade, technology). Risk in these areas includes: risks to the resilience of supply chains, risks to physical and cyber security of critical infrastructure, risks related to technology security and technology leakage and risks of weaponisation of economic dependencies or economic coercion (Димитријевић, 2023). However, this aspect of economic security will not be considered here in the paper. In this paper, we will focus on indicators of individual economic security that reflect the development of the

concept of economic security by the OECD and Eurostat, and the application of this concept to the analysis of the achieved level of economic security in the Republic of Serbia.

Although the main goal is the analysis of indicators of individual economic security, indicators of economic and social development (GDP per capita, GDP growth rate, number of unemployed, unemployment rate, foreign exchange reserves, inflation rate measured by the Consumer Price Index-CPI, fiscal surplus/deficit as a percent of GDP, share of public debt in GDP and foreign trade deficit as a percent of GDP) will also be presented, which should provide a broader picture of the achieved level of economic security at the national level in the Republic of Serbia. The aim of the paper is to assess the level of economic security of citizens based on the value of the indicators during the observed period. Finally, the goal is to determine the level of economic security of citizens in relation to EU member states through a comparative analysis.

Design/Methods/Approach

In the analysis and the assessment of economic security of citizens in the Republic of Serbia, the level and movement of indicators of economic security and physical safety was analyzed. According to Eurostat's approach, which was adopted here, the concept of economic security is associated with the concept of risk, while risk manifests itself in two categories: economic security and physical safety. In fact, economic security and physical security are, according to Eurostat's approach, dimensions of quality of life. Other dimensions of quality of life or well-being of citizens are: Material living conditions (income, consumption and material conditions), Leisure and social interactions, Governance and basic rights, Natural and living environment, Overall experience of life (Eurostat, 2021).

The analysis of economic security is complemented by the analysis of physical safety because the population's perception of physical safety greatly affects well-being and living standards, decisions about economic activity such as consumption or investment, and ultimately reflects the economic security of citizens. Therefore, in order to obtain a complete picture of the state of economic security, it is necessary to take these indicators into account.

Economic security in Eurostat's approach is measured by the share of the households unable to cope with unexpected financial expenses and by the share of the household with arrears in payments of financial obligations. The corresponding indicators are Inability of households to face unexpected financial expenses and Arrears on mortgage or rent payments. Unexpected financial expenses refer to all those expenses that the household did not expect and must bear, such as medical expenses, repair expenses and similar expenses. Delays in the settlement of obligations can refer to different types of obligations such as rent or mortgage.

The analysis on physical safety is based on data from crime statistics, as well as on the information about the perceptions of the population regarding crime, violence or vandalism in the area where they live. It is based on indicators named Rate of Intentional homicide and Perceived crime, violence or vandalism. In fact, crime rates for various crimes can be indicators of physical security, but Eurostat uses Rate of Intentional homicide as the most representative in this area. By definition, intentional homicide is an unlawful death inflicted upon a person with the intent to cause death or serious injury. Intentional homicide also include murder, honour killing, serious assault leading to death and other.

Crime rates in Eurostat's crime statistics are calculated as the number of criminal offences per 100,000 inhabitants. The source of data collected by Eurostat for crime statistics by country (and which are then used to calculate the EU average, used in the comparisons in this paper) are national statistical

offices, which collect data on crime most often from public prosecutors and the competent basic and higher courts. Data from the field of crime statistics produced by the Republic Statistical Office and submitted to Eurostat are the result of the process of development and harmonization of the methodology with international standards and Eurostat practice, which has been ongoing since 2006 (Radović-Stojanović & Tomić, 2013: 456).

The source of data on the basis of which Eurostat calculates indicators of economic security is the EU-SILC survey (The European Union Statistics on Income and Living Conditions survey). EU-SILC is European statistics on income and living conditions and it is the reference source of data for statistics on income and social inclusion and the main source of information on quality of life at individual and household level in the European Union. EU-SILC was launched in 2003. EU- SILC is based on standardized methodology for all European Countries and is conducted in annual periodicity. In the Republic of Serbia, the Survey was for the first time conducted in 2013. Data from this area as well as from the area of crime statistics are available in the Eurostat database. Also, these data are available in the publications and database of the Statistical Office of the Republic of Serbia. Therefore, the research will cover the period from 2013-2021 and the data for 2021 are the last available data for the Republic of Serbia.

The selected indicators for the Republic of Serbia will be presented, as well as the average value of the indicators for the European Union (for 27 countries). Also, for the sake of comparison, the values of indicators for some European Union member countries are listed. The goal was to compare the level of economic security of citizens in the Republic of Serbia in relation to citizens in EU member countries and in relation to the EU average. For physical safety indicators, the latest available data is for 2020. But first, the values of the macroeconomic indicators of economic and social development will be presented (for which the latest available data is for 2022). Data source for the values of these indicators is the database of the Statistical Office of the Republic of Serbia, Statistical Yearbook of the Republic of Serbia, Ministry of Finance and the National Bank of Serbia.

Findings

Indicators of economic and social development are macroeconomic indicators that describe trends in the real, monetary and financial sectors of the Republic of Serbia. The most important macroeconomic indicators will be presented here: GDP per capita, GDP growth rate, number of unemployed, unemployment rate, average salary, foreign exchange reserves, inflation rate measured by the Consumer Price Index-CPI, fiscal surplus/deficit as a percent of GDP, share of public debt in GDP and foreign trade deficit, also as a percent of GDP.

In 2022, GDP per capita almost doubled compared to 2013. The number of unemployed decreased by 326,000 and the unemployment rate dropped from 24% to 9.6%.Foreign exchange reserves increased by 73.5% compared to 2013. Unemployment decreased and the average salary increased and almost doubled. In 2022, foreign exchange reserves are at a historical maximum of 19,416 million euros. The public debt, which in 2015 amounted to 71.2% of GDP, was reduced to 55.6% in 2022, and before the start of the Covid-19 pandemic it was even lower and amounted to 52.8% of GDP. The rise in inflation in 2022 is a consequence of the rise in energy prices due to the complex international security situation and can be identified as a moderate risk to the economic and above all energy security of the Republic of Serbia. The foreign trade deficit is at a higher level, reflecting the import dependence of the Republic of Serbia on foreign countries. This deficit is primarily a consequence of the increase in the prices of energy products and other products (raw materials, semi-finished products).

Table 1 *Macroeconomic Indicators Indicators of Economic and Social Development, the Republic of Serbia, 2013-2022.*

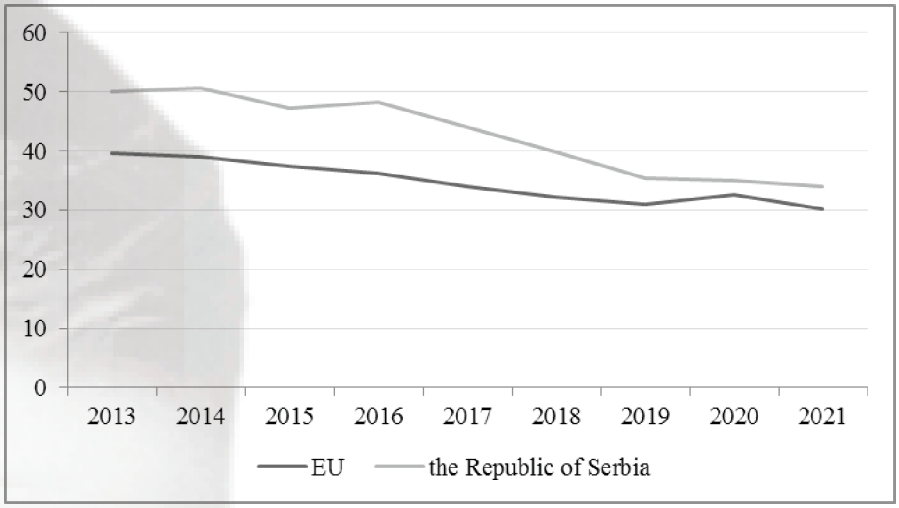
	GDP per capita (current prices) in euros[1)]	GDP real growth, in %[1)]	Number of unemployed, in 000[2)]	Unemployment rate[2)]	Net average salary, RSD,[2)]	For. exch. reserves, mil. eur[2)]	Inflation CPI[2)]	Fiscal surplus/ deficit, % GDP[2)]	Public debt, % GDP[2)]	Foreign trade deficit, % GDP[2)]
2013	5,081	2.9	775	24.0	43,932	11,189	2.2	-5.1	57.5	-12.3
2014	4,973	-1.6	767	20.6	44,530	9,907	1.7	-6.2	67.5	-11.4
2015	5,037	1.8	743	18.9	44,432	10,378	1.5	-3.5	71.2	-11.3
2016	5,211	3.3	713	16.4	46,097	10,205	1.6	-1.2	68.7	-9.9
2017	5,588	2.1	651	14.5	47,893	9,962	3.0	1.1	58.6	-11.1
2018	6,143	4.5	583	13.7	49,650	11,262	2.0	0.6	54.4	-13.1
2019	6,624	4.3	530	11.2	54,919	13,378	1.9	-0.2	52.8	-13.8
2020	6,786	-0.9	509	9.7	60,073	13,492	1.3	-8.0	57.8	-12.6
2021	7,806	7.7	513	11.0	65,864	16,455	7.9	-4.1	57.1	-13.3
2022	9,067	2,5	449	9,6	74,933	19,416	15.1	-3.2	55.6	-18.9

Sources: [1)] Statistical Office of the Republic of Serbia [2)] Ministry of Finance

Based on the presented macroeconomic indicators, it can be concluded that the level of national economic security in the Republic of Serbia has significantly increased compared to 2013. Serbia preserved macroeconomic stability and achieved economic growth by recovering very quickly after the 2020 pandemic. As the public debt has been reduced, the level of economic independence has increased and the growth of foreign exchange reserves that has been achieved is a guarantee of preserving monetary stability, the value of the national currency and the ability to react to possible security shocks.

Let us now see how the increase in economic security at the national level in the observed period was accompanied by changes in the level of economic security at the individual level. The first observed indicator, Inability to face unexpected financial expenses, visibly decreased in the period 2013-2021.

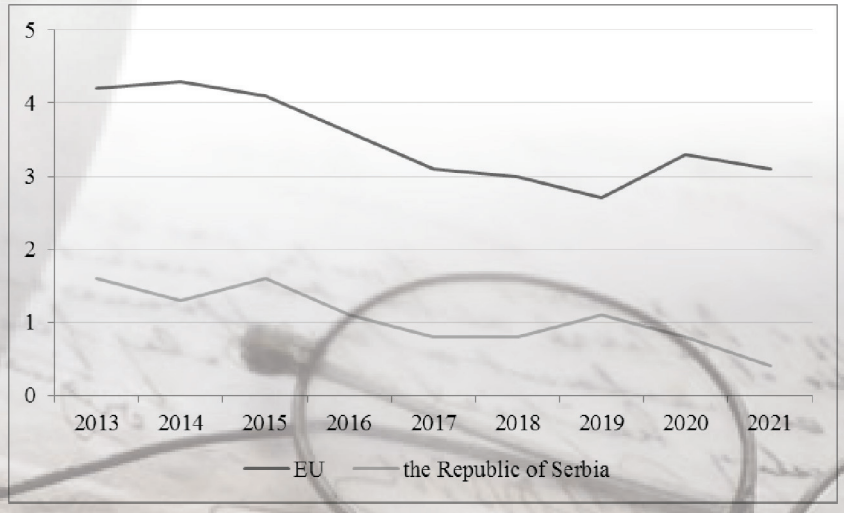
In 2021 30.1 % household in the EU reported was unable to cope with unexpected financial expenses, 2.4 pp less than in 2020 and 8.3 pp less than one decade before. In 2021 33.9% household in the Republic of Serbia reported being unable to cope with unexpected financial expenses), which is 1.2 pp less than in 2020 and 16,2 pp less than in 2013. As the Covid-19 pandemic began, the inability of households to face unexpected financial expenses in the European Union increased, while in the Republic of Serbia it continued to decrease, although at a somewhat slower pace compared to the previous period. Among the member states, the share of the population unable to cope with unexpected financial expenses was the highest in Romania (47.3 %), Croatia (46.5 %), Greece (46.3 %), Cyprus (43.4 %) and Latvia (41.7 %). Observing the macroeconomic indicators, it is not difficult to see that in the Republic of Serbia, with the growth of the average salary, the population's ability to cope with unexpected expenses has significantly increased. Based on this indicator, the economic security of citizens has increased. At the same time, this is an illustration of how changes at the macro level (wage growth, employment growth) reflect positively on the growth of individual economic security of citizens. Serbian citizens are now more able to face unexpected expenses and in this respect the difference between them and EU citizens has visibly decreased.



Source: EU-SILC survey

Graph 1 *Inability to Face Unexpected Financial Expenses, % of Households, EU and the Republic of Serbia, 2013-2021*

In terms of arrears on mortgage or rent payments, Serbia is in a more favorable position than the European Union in the entire observed period. In the European Union, after several years of decline, the share of the population in arrears of payment began to increase in 2020, when the Covid-19 pandemic began. What is interesting is that this percentage, which was already low, decreased even more in Serbia after the pandemic, perhaps as a result of a more cautious approach to finances and that greater efforts were made to settle financial obligations. It can be said that this percentage of less than 1% is extremely low and that the economic security of citizens is not to a greater extent threatened due to delays in arrears.The largest share of European Union households in terms of arrears on mortgage or rent payments in 2021 was in Greece, where it was 8.5 %, then Ireland (7.0 %), Spain (6.5 %), France and Cyprus (both at 5.4 %). It is noticeable that some of the more developed EU members are among them.



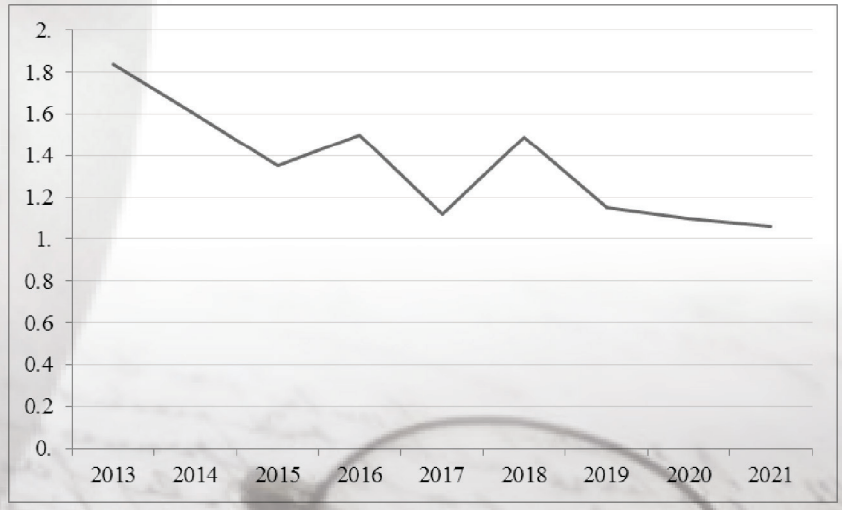
Source: EU-SILC survey

Graph 2 *Arrears on Mortgage or Rent, Utility Bills or Hire Purchase, % of Households, EU and the Republic of Serbia, 2013-2021*

Physical safety determines people's sense of well-being and satisfaction with life. Endangering physical security means exposure to crime and violence. It reduces the level of satisfaction with life, affects the plans of individuals and households, and increases the feeling of economic insecurity. Indicators of physical safety indirectly provide a picture of the level of economic security. Violence and crime affect the standard of living and economic security of citizens. Different theoretical approaches explain the cause-effect relationships between living conditions and crime. In these theories, socio-economic status is always present as a determinant of social relations. It has an indirect effect on crime, and the reverse is also true (Tomić & Radović-Stojanović, 2019: 50). Exposure to the risk of physical attack, theft of property and other forms of threats to physical safety affects the level of economic well-being and decisions of the population regarding various forms of economic activity. For example, if the population lives in areas of the city that have an increased risk of endangering physical security, this indirectly affects the level of economic development of those areas and threatens the economic security of the citizens.

Crime rates for various crimes can serve as indicators of physical safety. A logical choice would be criminal offenses against life and limb such as murders, serious and minor bodily injuries, and Eurostat adopted intentional homicide as an indicator of physical safety.

In 2020 (the year with the latest available data) the rate of intentional homicide per 100 000 inhabitants was the highest in Latvia (4.88), Lithuania (3.54) and Estonia (2.78) and the lowest rates were recorded in Luxembourg (0.32), Italy (0.48) and Slovenia (0.52). In Serbia, already low homicide rate has been decreasing in recent years and in 2020 it is 1.06%. According to this indicator, the safety of citizens of Serbia increases over time. Otherwise, average rate for European union are not published, probably due to differences in national legislation regarding the definition of this criminal offense, which is why it is not possible to calculate average rate of intentional homicide for European union.

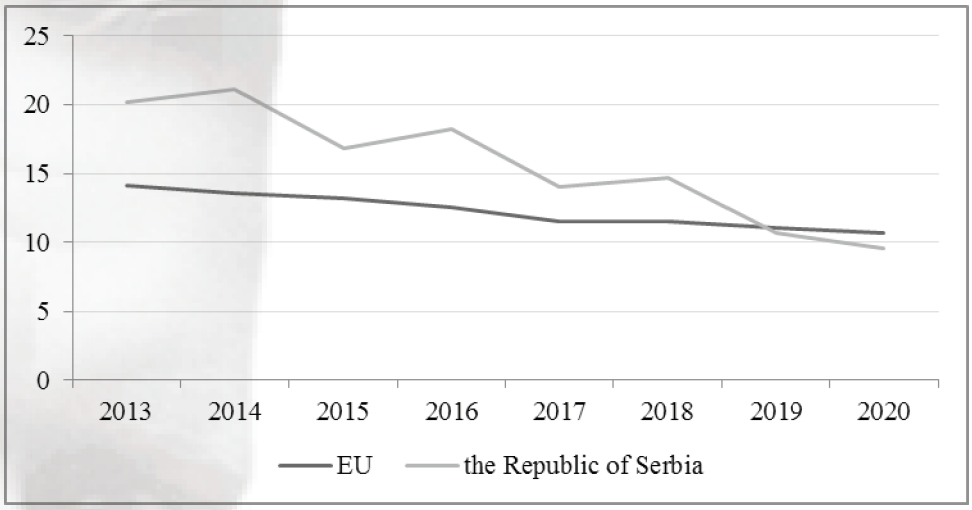


Source: Eurostat, Crime statistics

Graph 3 *Intentional Homicide per 100 000 Inhabitants, the Republic of Serbia, 2013-2021*

What is really important is not the actual level of crime, but the citizens opinion about the level of crime, the so-called perception of crime. As noted (Eurostat, 2020), the perception of crime often differs from the actual level of crime. In EU state members, in 2020 (latest available data) 10.7 % households perceived that there had been crime, violence or vandalism in the area where they lived. The share of household was the highest in Bulgaria, (19.1 %) followed by 18.1 % in Greece and 17.7 %

in France. In almost all of the member states, the highest perception of crime, violence or vandalism was recorded among people living in cities: the perception of crime was the highest for people living in cities (16.3 %) than it was for one living in towns and suburbs (8.4 %) and in rural areas (5.8 %), which is somewhat expected. As for Serbia, the share of households that had a perception of crime, violence or vandalism in 2020 has more than halved since 2013, so based on the value of this indicator, it can be said that there has been an increase in the level of individual safety in the Republic of Serbia.



Source: EU-SILC survey

Graph 4 *Share of the Households who Perceived There Was Crime, Violence or Vandalism in the Area Where They Live, EU and the Republic of Serbia, 2013-2021*

In the Republic of Serbia, in 2020, 9.5 % of households perceived that there had been crime, violence or vandalism in the area where they lived. This percent in European union amounts 10.7%. Over the years, this percentage in the European union was far lower than in Serbia. While the population of Serbia perceived over 20% of crime in the areas where they live, this percentage was below 15% in the European union, but in recent years the situation has changed in favor of Serbia. The indicators we observed here reflect what is already known in crime statistics, namely that crime rates for some major criminal offences in the Republic of Serbia are decreasing (Radović-Stojanović, 2021) and that there was a general decrease in crime in the observed period. This decrease in crime is a continuation of a trend of crime reduction that was manifested until 2014 (Radović-Stojanović, 2016) and which has continued until today.

Originality/Value

The paper provided what was missing in the literature until now, which is an analysis of economic security in the Republic of Serbia at the individual level, i.e. at the level of citizens and households. By using Eurostat economic security and physical safety indicators, this analysis as well as comparison between countries has now become possible.

Based on macroeconomic indicators, economic security and physical safety indicators, the level of economic security at the national level and also at the individual level in the Republic of Serbia in pe-

riod 2013-2021 has increased. Unlike the European Union, the pandemic did not negatively affect the growth of the individual economic security of the citizens of the Republic of Serbia.

Still, there is plenty of room for expanding this analysis and supplementing it primarily with indicators of the standard of living, indicators of the quality of life and other macroeconomic indicators. The second direction of analysis, also at the micro level, should go in the direction of risk analysis in the areas of production, trade, technology, i.e., in the direction of analyzing the economic security of individual participants in economic activity on the production side, which is not covered here in the paper given that the paper includes analysis of risk for individual participants in production on the consumption side (individuals, households). Based on European Economic Security Strategy, such an analysis should include assessment and measurement of risks to the resilience of supply chains, risks to physical and cyber security of critical infrastructure, risks related to technology security and technology leakage and risks of weaponisation of economic dependencies or economic coercion. Such an analysis would be a good complement to the existing results, providing an even clearer picture of the level of economic security in the Republic of Serbia.

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FINANCIAL REPORTS – AN INSTRUMENT OF PERPETRATION AND DETECTION OF FRAUDULENT ACTIONS

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Introduction

Financial reports represent a key source of information for investors, creditors, lenders, and other interested parties who base their investment and business decisions on them. Users of financial information expect reliable financial reporting as a foundation for making rational economic choices. The importance of making various business decisions related to the activities of modern business entities has necessitated the establishment of a purposeful and efficient information system geared towards satisfying the numerous informational needs of different users. An essential component of every enterprise's information system is the information contained within financial accounting. The informational significance of financial reports, as a relevant, publicly available, and comprehensive source of information for numerous stakeholders, has led to the quality of these statements becoming a current topic of crucial importance at all levels: global, national, and the level of individual reporting entities.

The issue of financial reporting is nowadays regulated by legal provisions, appropriate accounting standards, and professional regulations in the majority of countries. Despite the awareness of the importance of ensuring the quality of financial statements and all activities aimed at supporting this requirement, practical experiences with numerous financial scandals, accompanied by investor losses, have seriously shaken the confidence of investors and the accounting community in the quality and reliability of financial reporting. This has dealt a severe blow to the accounting profession, indicating that questions of the truth and reliability of accounting reports remain open. A common factor among the majority of financial scandals that have occurred in the past decades is that they arose and/or were accompanied by manipulations in financial statements, resulting from the intentional distortion of information or the exploitation of weaknesses in accounting standards and internal controls. They are characterized by various inadequate accounting techniques and by non-compliance with legal and professional accounting regulations.

When it comes to the relationship between financial statements as the ultimate product of accounting and fraudulent activities, financial statements, as well as accounting as a whole, can play a dual role. They can be used as a means/instrument for committing fraudulent activities, but they are also a very effective tool for the detection and prevention thereof. There are various types of fraud, and each of them leads to specific harmful consequences. Whether it is financial/material loss, a drop in stock

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prices, or the tarnishing of a company's image and reputation, these detrimental outcomes highlight the need to give special attention to fraud, particularly to the process of its timely detection and prevention. It should be emphasized that the exact amount of loss and the frequency cannot be precisely determined, because many frauds are not identified or detected.

The Association of Certified Fraud Examiners (ACFE) conducted a study and found that companies lose 5% of their annual revenues due to fraud (ACFE, 2022:4). The three key forms of fraudulent activities highlighted include embezzlement, corruption, and financial statement fraud (which could arguably be the most comprehensive classification of fraud in business). No company or country in the world is immune to any of these forms of fraud. In fact, within every company, regardless of its size, industry, or scope of operations, all three forms of fraud can occur and coexist. Financial statement fraud, also known as falsifying financial statements, is the most sophisticated and rarest form of fraud (around 9% occurrence), but simultaneously the most damaging. According to this research, as many as 12% of fraud perpetrators are employed in the accounting sector (ACFE, 2022:5).

The fact that financial statement fraud is the least detected highlights the importance of the process of detection and, particularly, prevention of this type of fraud, which individually causes the greatest financial loss. This is significant not only for business entities but also for the broader community of each country due to the potential spillover of financial losses.

The loss of trust from users of information and stakeholder groups presented in financial statements has immeasurable negative consequences on financial markets, the economy, and both the macro and micro levels of a country's economy. As a result, there is a need primarily for the state institutions, as well as professional organizations and institutions, to do everything in their power to prevent the creation and presentation of false financial statements to the greatest extent possible.

Purpose

In the light of pervasive accounting manipulations, it has become of paramount importance to develop effective tools for detecting potentially dishonest and unlawful practices in financial reporting. The far-reaching implications of accounting fraud have led to the need for increased protection of investors' and other stakeholders' interests, prompting the development of forensic accounting as a distinct type of accounting focused on preventing and uncovering fraud in financial statements.

Indeed, to overcome situations where suspicions arise about the presence of fraud in financial statements, the accounting profession and regulatory bodies have deemed it necessary to identify, investigate, and penalize all instances of fraud in financial reporting through the involvement of forensic accountants. The primary goal of forensic accounting is to employ legally permissible procedures and means to investigate, prove, and initiate the process of penalizing fraud in financial statements. The responsibility of a forensic accountant includes a thorough examination of suspicious transactions within a business entity and the collection of evidence that either confirms or refutes indications of fraud. Forensic accountants utilize various methods and techniques to successfully identify fraud and detect falsified financial statements.

Apart from the introductory and concluding considerations, the paper comprises three additional sections. The first section is dedicated to discussing the importance of financial reporting. Subsequently, in the second section, the focus will be on defining the concept and types of fraud that can occur in financial statements and accounting, accompanied by illustrating the most common manipulations of financial statements through creative accounting techniques and their basic consequences. The is-

sues of detecting and preventing fraudulent activities are addressed in the third section, within which forensic tools utilized in the investigation of fraudulent activities are explained, as well as the significance of forensic accounting as a distinct branch of accounting.

Importance of Financial Reporting

Financial statements, as the ultimate outcome of the accounting information system, serve a diverse range of users, including shareholders, managers, government entities, unions, creditors, lenders, and others. Users of financial statements expect the presented financial information to be comprehensible, trustworthy, comparable, and to accurately reflect the actual state of the reporting entity within a specific time period (Higgins, 2009).

Financial statements are prepared with the aim of providing information about the financial position (balance sheet and statement of changes in equity), operating results (income statement, statement of cash flows, and statement of changes in equity), and cash flows (statement of cash flows) to a wide array of different users. Financial statements also reveal how well management has handled the resources entrusted to them by shareholders. The foundation of financial reporting worldwide consists of the balance sheet and income statement as traditional reports. In Serbia, in addition to these two reports, legal regulations prescribe some other statements.[2]

The basic goal of finance, and thus of accounting, is to make all business transactions transparent and to express their consequences for the property, financial and profitability position of the company in a clear and objective manner in the financial reports. In other words, the main goal of financial reports is to provide accounting information about the entity's financial position, the state of assets and liabilities, and the success of operations, which can be useful to a large number of different users when making financial decisions. (Cvetković & Bošković, 2018: 78).

The quality of financial reporting necessarily relies on professional ethics and education within the accounting profession, specifically professional accountants. To cater to the diverse information needs of numerous users, financial statements must possess qualitative characteristics in accordance with the provisions of the Conceptual Framework for Financial Reporting by the International Accounting Standards Board (IASB).

All the qualitative characteristics of financial statements, which are the attributes that the information contained within them must have in order to be considered useful for decision-making, are classified into two categories within the Framework: " Fundamental qualitative characteristics, including relevance and faithful representation, and Enhancing qualitative characteristics, which improve the fundamental qualitative characteristics and include comparability, verifiability, timeliness, and understandability" (Dimitrijević, 2013: 29).

Based on the aforementioned, it follows that the fundamental purpose of financial statements is to provide understandable and relevant information to a wide range of users. They have become an important and indispensable source of information for numerous investors, creditors, employees, and governments in the process of making allocation decisions. The significance of financial reporting should be viewed from a broader economic perspective, i.e., from a societal standpoint rather than solely from the viewpoint of individual users. This suggests that financial reporting, in addition to

2 According to Article 29 of the Accounting Law, financial statements include: the balance sheet, the income statement, the statement of other comprehensive income, the statement of changes in equity, the statement of cash flows, and the notes to the financial statements ("Official Gazette of RS", nos 73/2019 and 44/2021 - official consolidated text).

other relevant factors, should serve the purpose of ensuring societal well-being as the primary goal of the community.

Design/Approach

Fraud – Term, Types and Manipulations Using Creative Accounting

Defining Fraud

Fraud includes a wide variety of manifestations characterized by deliberate deception or misrepresentation, all with the aim of obtaining illegal benefit for an individual or an organization, whereby the perpetrators of the fraud can be outside or inside the organization. The term 'fraud' describes actions such as deception, forgery, extortion, corruption, theft, embezzlement, misappropriation, providing incorrect information, hiding material facts, misrepresentation, collusion, etc., which result in material benefit for the perpetrator, organization or another, and to the detriment of the organization, individuals, community, etc. In practice and literature, the following terms are used for this and related phenomena: "fraudulent acts", "criminalization of acts", "criminal acts", "illegal activities", "malfeasance", "manipulations", "deceptions", "embezzlement and irregularity", etc. (Knežević, Mitrović & Cvetković, 2019: 102).

In the literature there are many different definitions of fraud. One of them states that "fraud is a fraudulent action in the business environment, intentional deception, misuse of company property or manipulation of its financial data in favour of the perpetrator". Fraud can also be defined as "an intentional act that results in a material misrepresentation (Knežević, Mitrović & Cvetković, 2019).

Frauds can also be defined as intentional acts committed by one or more individuals, including management, employees, or third parties, which result in the presentation of false information in financial statements and accounting records. The actions that qualify as fraud or related criminal activities include manipulation, forgery, or alteration of documents and records, misappropriation of assets, preventing or causing the misreporting of business transactions both in documentation and records, recording events that did not occur, and incorrect application of accounting policies. What is common in all these definitions is that the motive or intention of an individual in making accounting entries is not the primary focus.

A criminal activity refers to an intentional action involving the acquisition of unlawful gain and/or advantage through deception or misleading, carried out by one or more individuals from the ranks of management, supervisory board, employees, or a third party. Frauds appear in various forms and degrees of severity, and they always have a negative impact on all societies. The scale and intensity of fraud depend on the effectiveness of control mechanisms, the severity of prescribed penalties, and the ability to enforce them.

Types of Fraud

Each form of criminal activity harms or jeopardizes certain societal values. All of these values manifest through corresponding social relationships. For every type of delinquent behaviour, especially criminal behaviour, it is characteristic that it attacks specific social relationships, and by not sanctioning it, certain social relationships suffer damage, along with certain activities, processes, and values within them (Milošević & Cvetković, 2012). There are numerous classifications regarding what constitutes

fraud. An interesting classification is the one presented in a distinct format known as the "Fraud Tree," provided by the Association of Certified Fraud Examiners - ACFE. This model categorizes individual frauds into categories, subcategories, and microcategories. This division is performed through three main groupings that are further dissected. The three key groups/categories are as follows (Cvetković & Kešetović, 2018: 47):

- Corruption;
- Misappropriation of property;
- Fraudulent financial reporting.

Corruption

Corruption is a socially negative phenomenon that generally encompasses all criminal activities carried out for personal gain by abusing authority in both the public and private sectors. The term corruption (Latin) signifies spiritual and moral depravity, complete disregard for honour and dignity, offering or accepting money to neglect a duty or act against one's conscience.

Corruption often occurs without written traces in accounting and other business documentation that could provide evidence (Đurić, Cvetković & Đurić, O., 2022). According to the ACFE's "Fraud Tree," corruption can be further divided into: conflict of interest, bribery, illegal structures, and extortion. According to ACFE's research, corruption is involved in a third of all fraud cases (ACFE, 2022).

Misappropriation of Property

Misappropriation of property is this form of occupational fraud most commonly constitutes an internal fraudulent activity, carried out by employees within organizations, often in collusion with other individuals. Misappropriation of assets encompasses a variety of fraudulent activities falling within this category. A common characteristic is the theft of cash or other property from a company. The practice has shown that misappropriation of assets mostly includes: cash theft, false disbursements, inventory fraud, equipment and inventory schemes, fraudulent sales, and asset misuse. According to the ACFE's annual report, misappropriation of assets is by far the most common type of fraud, accounting for 86% of all reported cases.

All of the previously mentioned groups of fraud are subject to investigation by various forms of control (internal and external audits, forensic accounting, government tax authorities, etc.), and each form of fraud carries its own severity and resulting harm. However, within the scope of this work, greater attention will be directed towards financial statement fraud, as it is the most commonly investigated form of fraud.

Findings

Fraudulent Financial Reporting

Fraudulent financial reporting involves intentionally misrepresenting or omitting amounts or disclosures in financial statements to deceive users of the financial statements, which can result in administrative, civil, and criminal actions. False financial statements have existed as long as financial reporting itself. Frauds involving manipulative or false financial statements are not a recent phenomenon but a

longstanding issue that has escalated in recent times. Financial statement fraud, or the manipulation of financial statements, is the most sophisticated and rarest (about 9%) form of fraud, but it is also the most damaging. According to this research, as many as 12% of fraud perpetrators are employed in the accounting sector (ACFE, 2022:5).

According to international audit standards, financial statement fraud is a criminal act characterized by the intentional misrepresentation or omission of specific data or disclosures in financial statements (Škarić-Jovanović, 2011). ACFE defines financial statement fraud as "the intentional misrepresentation of material facts or accounting data that leads to incorrect decisions by users of financial information presented in financial statements" (Zabihollah, 2002:2). The American Institute of Certified Public Accountants (AICPA) defines financial statement fraud as "intentional inaccuracies or omissions of amounts or disclosures in financial statements to deceive users of the financial statements" (Dimitrijević, 2015:139).

In this type of fraud, financial statements are not presented fairly and accurately in accordance with the generally accepted accounting principles and the framework for financial reporting. Financial statement fraud can involve the following situations (Soltani, 2009:534):

- Manipulation, forgery, or alteration of accounting records and supporting documentation on which the preparation of financial statements is based.
- Misrepresentation or intentional omission of business transactions or other significant information in financial statements.
- Intentional misuse of accounting principles related to amounts, classification, presentation, or disclosure.

Financial statement fraud is most commonly committed by managers within organizations in both the public and private sectors, often in collusion with other individuals. Therefore, the responsibility for preparing false or fraudulent financial statements lies with the organization's management.

The objective of financial statement fraud is to deceive users of financial statements and gain benefits for the company at the expense of investors, creditors, and other users of the financial statements by presenting inaccurate financial and performance positions of the company. In other words, financial statement fraud occurs to achieve financial gain, concealment, or improper appropriation of funds or to satisfy stakeholders' interests under various circumstances.

From the perspective of researching financial statement fraud, special importance lies in the concept of "creative accounting", which represents another side of accounting. Creative accounting involves the use or abuse of accounting techniques and principles to present financial results that intentionally deviate from a fair and truthful representation (Oregan, 2006).

In practice, creative accounting generally carries a negative connotation: "ironing out" taxes, "window dressing" profits, "falsifying" financial statements, "cosmetic" accounting, or financial engineering (Knežević et al., 2013). The term "creative" is used to highlight the opposite of "consistent" and "conservative" in accounting principles, often used as a kind of cynical remark for managers who secretly enhance financial statements by not adhering to established accounting practices and norms (Ling-Feng et al., 2005).

It can be said that creative accounting involves practices and methods that utilize accounting knowledge from accounting standards and principles to manipulate balance sheet positions and their values as presented in financial statements in order to achieve various objectives. As a result, there may or

may not be a violation of legal and professional regulations. If there is a violation of legal and professional regulations, then we can say that creative accounting evolves into financial statement fraud.

The intention to deceive users of financial statements, primarily existing and potential investors, creditors, and the government, in order to influence decisions that benefit the management and the company while being harmful to those stakeholders, is carried out by the management through presenting false or, more commonly, manipulated financial statements. The techniques used for manipulating financial statements are collectively referred to as "creative accounting," and in the literature, they are described as follows (Belak, 2011:146):

a) Earnings Management involves actively manipulating earnings to achieve a predetermined and desired amount set by the management, based on predictions provided by managers, accountants, or analysts, in order to maintain a sustainable trend in earnings.
b) Aggressive Accounting involves the deliberate selection and application of accounting principles and procedures to achieve a desired outcome, usually the presentation of higher earnings, regardless of whether these procedures comply with standards and professional rules. A significant portion of aggressive accounting falls within the realm of financial statement fraud. Common practices of aggressive accounting include aggressive capitalization and overstated revaluation. Additionally, this category may encompass tactics such as inflating expenses by offsetting fictitious items on the debit side, reducing reserve items to boost income, and fictitiously offsetting customer and supplier accounts without a basis in actual business events.
c) Earnings (Income) Smoothing involves manipulating earnings to achieve consistent profit amounts across consecutive time periods. This is achieved by not recognizing a portion of profits in profitable periods, instead deferring them as latent reserves to be used and distributed in periods when desired profits are not achieved.
d) Fraudulent Financial Reporting involves intentionally misrepresenting or omitting amounts or disclosures in financial statements to deceive users of financial statements, potentially resulting in administrative, civil, and criminal actions. Examples of fraudulent financial reporting can include creating false invoices, off-the-books sales, charging expenses to assets or inventory, fictitious sales to related entities, falsifying expense reports, hidden profit distributions, misusing company funds for personal purposes, and more.

Fraudulent financial reporting is often manifested in the following five interconnected forms (Wells, 2004:359): fictitious revenues; false timing differences; concealment of liabilities and expenses; improper disclosures; and other techniques of fraudulent financial reporting.

Recognizing the use of inappropriate procedures in the preparation of financial statements requires both understanding their nature and their interconnectedness. While all practices of creative accounting ultimately result in inaccurately presenting a company's net assets and results, some of them could be considered less harmful, even benign, while others constitute actual fraud.

Manipulation of Financial Statements Using Creative Accounting and Its Consequences

False financial reporting arises as a result of inaccurately presenting data in financial statements. Past practices have shown that most manipulations in financial statements occur by manipulating expenses and revenues in the Income Statement and manipulating liabilities and assets in the Balance Sheet. Through false financial reporting, management can influence (Dimitrijević, 2013:69):

- the amount of reported profit, i.e., the income statement;
- the amount of reported net assets, i.e., the balance sheet;
- the amount of reported net cash from operating activities.

False financial reporting can manifest in two directions: presenting a worse asset-financial position and a lower financial result, or presenting a better asset-financial position and a higher financial result.

The basic forms of accounting manipulation are:

1. Revenue recognized before service is provided; revenue recognized before the customer confirms receipt of goods; revenue recognized even when the customer has no payment obligation; sale of invoiced goods to a branch; offsetting an obligation with a customer and booking the offsetting entry as revenue.
2. Cash received from credit recorded as revenue; investment gains recorded as revenue.
3. Boosting profit by selling undervalued assets; including investment gains as part of revenue; reducing costs by showing investment gains; creating profits by rearranging balance sheet positions.
4. Segmenting normal operating costs; changing accounting policies to show current costs as prior-period costs; slow amortization of costs; avoiding writing down value or disposing of unused assets.
5. Omitting expenses and obligations that should be recognized; decreasing obligations by changing accounting assumptions; showing doubtful reserves as revenue; creating fake discounts; recognizing revenue when cash is received even though future obligations remain.
6. Creating reserves and showing them as revenue in the next period; improperly holding back revenue before finalizing an acquisition.
7. Inflating the amount of special costs; misrepresenting research costs related to restructuring the company.

The mentioned forms of fraud result in significant direct losses suffered primarily by investors, but also in an irreparable loss of trust, from which the accounting profession and the financial reporting system are still recovering. Regardless of the specific form of occurrence, fraud typically involves several essential elements:

1. Incorrect presentation of facts essential for making business decisions.
2. Awareness of individuals that the presented data is false.
3. Recipients of the information treating it as reliable and relevant for business decisions.
4. Occurrence of harm in business operations as a consequence of the above elements.

The application of creative accounting almost always leads to a decrease in the market value of the business entity. The damages arising from presenting false financial statements encompass losses due to misguided decisions and a loss of trust from investors, creditors, and other users of financial statements. Possible negative implications include (Petrova, 2008):

- Reduced reliability, quality, transparency, and integrity of the financial reporting process.
- Risk to the integrity and impartiality of the auditing profession, auditors, and auditing firms in particular.
- Diminished confidence of the capital market in the reliability of financial information.
- Decreased credibility of the capital market.
- Negative impact on national economic development and prosperity.
- High legal costs.

- Ruined careers of individuals involved in false financial reporting.
- Bankruptcy and significant economic losses for companies engaged in false financial reporting.
- Need for regulatory intervention.
- Disruption of normal operations and activities of accused companies.
- Serious doubts about the effectiveness of financial statement audits.
- Diminished public credibility and trust in the accounting and auditing profession.

The fact is that false financial reporting, although less frequent in terms of cases, inflicts disproportionately greater damage on users compared to those caused by misappropriation of assets. It harms investors, creditors, lenders, and society as a whole by eroding trust in financial reporting, thereby increasing the cost of capital, slowing the development of financial markets, and consequently impeding overall economic growth.

In the previous discussion, the use of financial statements and accounting as a means of perpetrating and/or concealing fraudulent activities (such as falsifying financial statements and misappropriating assets) was presented. In the upcoming section of the paper, financial statements and accounting documentation will be demonstrated as an effective tool in detecting fraudulent activities.

Discovery and Prevention of Fraud – Forensic Accounting Aspect

Forensic Tools in Fraud Detection

In response to the numerous accounting frauds and their consequential impacts on enterprises, companies, and society as a whole, forensic accounting has emerged as a distinct branch of accounting. Various instances of financial scandals in the past have highlighted the deficiencies and limitations of traditional auditing in detecting fraudulent activities, thus necessitating the adoption and further development of forensic accounting. This expertise has become crucial in the investigation and discovery of various forms of fraudulent activities. The main reasons contributing to the emergence of forensic accounting are the protection of existing assets and the identification of methods used in committing criminal acts. It is evident that forensic accounting has evolved as a separate discipline in response to various historical instances of fraud.

Forensic accounting involves the application of accounting expertise to prevent and uncover various forms of fraudulent activities within businesses, as well as to gather evidence that will be admissible in legal proceedings. The evidence is collected through forensic analysis in such a manner as to be acceptable in court for prosecuting offenders. As a result, forensic experts and their specialized knowledge become an integral part of enhancing and making the fight against financial crime even more effective.

Among the various definitions existing in the professional literature focused on forensic accounting, the most widely accepted and comprehensive is the one endorsed by the Association of Certified Fraud Examiners (ACFE). According to ACFE, forensic accounting entails the use of accounting skills in actual or potential civil or criminal litigation, including the application of generally accepted accounting and auditing principles, to determine lost profits, income, assets, or damages, assess the effectiveness of internal controls, uncover fraud, or perform other activities that require the integration of accounting expertise into the legal system (Čudan & Cvetković, 2019:43).

Detecting false financial reporting can be challenging but not impossible. While prevention of fraud is undoubtedly a better solution, it is important to consider appropriate activities and measures that

can aid in uncovering such fraudulent activities. During the investigation of potential fraud, forensic accountants are confronted with a vast amount of data that needs to be collected, compared, and analysed. Forensic accountants leverage their accounting knowledge along with audit techniques, investigative skills, and other expertise to detect fraud.

During the investigation of possible fraud, forensic accountants employ various techniques to analyse the relationships among elements of financial statements. These analyses are used for a more in-depth examination of business transactions if the initial analysis of financial statement elements indicates the possibility of fraud. Analytical procedures in forensic accounting are typically applied in phases, ranging from the most general to the most direct. Each segment of analysis has its specific objectives, such as (Grupa autora, 2021:24):

- *Preliminary Analytical Procedures*: These are the most general procedures used to identify areas of high fraud risk, gain insights into the nature and timing of manipulations, and assess the level of necessary forensic procedures for their substantiation.
- *Independent Analytical Procedures*: These procedures are used to gather evidence through comparisons and reconciliations of specific data, verifying the credibility (accuracy) of documentation, bookkeeping, and calculations.
- *Final Analytical Procedures*: These are the most direct procedures used to draw conclusions about the impact of problematic transactions on financial statements.

Detecting financial manipulations represents a complex challenge, which has led to the development of various models and methods for identifying potentially dishonest practices in financial statements. The most common techniques employed by forensic accountants are based on different financial analysis or data analysis techniques presented in financial statements, such as:

- Horizontal Analysis: This method involves comparing items in financial statements from the current period to the same items from the previous period.
- Vertical Analysis: This approach compares the percentage shares of individual items in financial statements.
- Comparing Detailed Items: Forensic accountants compare specific items in financial statements to the same or similar items from previous periods.
- Ratio Analysis: This technique involves analysing financial statement ratios in areas such as profitability, liquidity, solvency, activity, and value creation.

Forensic accounting, in addition to the mentioned techniques of traditional accounting used in the process of investigating fraud in financial statements, also extensively employs specific techniques:

- *Benford's Law*: This law demonstrates the likelihood of a specific digit appearing in the correct position within a number. The essence of Benford's Law is that certain digits occur more frequently than others in datasets.
- *Beneish Model:* This model is used to assess the potential degree of fraud in financial statements based on eight variables (indexes). The model measures the probability that a company manipulated reporting by calculating various indexes that indicate the degree of change between different positions in financial statements. A higher M-Score value indicates a higher likelihood of financial statement manipulation.
- *Computer-Assisted Audit Techniques (CAATS)*: CAATS represent the practical application of information technology in forensic audit tasks related to financial statements.

- *Data Mining Techniques:* These techniques are designed to automatically search through large volumes of data to find information that aids in fraud detection. By utilizing data mining techniques, forensic accountants can conduct in-depth examinations of irregularities within all data, not just samples.
- *Ratio Analysis:* Ratio analysis plays a significant analytical role in forensic investigation. Each ratio serves as a reliable clue in uncovering potential fraudulent activities. Ratio indicators from different reporting periods visible in the balance sheet and income statement can signal potential issues. The results pinpoint areas where the most likely problem lies, making ratio analysis useful for detecting fraudulent activities in financial statements.
- *Altman Z-Score Model:* This model combines multiple financial indicators to assess the likelihood of a company's bankruptcy. Although different from the Beneish M-Score model, both models share the common goal of identifying potential risks based on financial indicators.
- *DuPont Analysis***:** DuPont analysis breaks down the overall return on equity into various components to identify key factors contributing to financial performance. This method can help uncover inconsistencies and potential manipulations in financial statements.
- *Statistical Methods*: Statistical methods, such as anomaly detection and regression analysis, are also used to detect potential financial manipulations. These methods can identify irregularities in relationships between different financial indicators.
- *Accounting Audit Procedures:* Accounting audit procedures, including trend analysis, ratio analysis, and testing for materiality, are part of the standard procedures employed by accounting auditors to identify potential manipulations.

The approach to investigation and the selection of forensic tools and techniques depend on whether it is a preventive investigation or an investigation into an already detected fraud. In the former case, forensic experts conduct proactive examinations to uncover possible irregularities. If unusual trends are identified through a general review, the forensic analyst proceeds to test suspicious balance positions and conducts detailed investigations to gather relevant evidence that would support or dismiss suspicions of fraud. On the other hand, investigating suspected fraud entails a more direct approach, focusing immediately on searching for evidence in a precisely defined area.

It is important to note that forensic methods and financial statement analyses, by themselves, do not incriminate anyone or prove the existence of accounting fraud and manipulations. They merely serve as indicators of potential financial irregularities in one or more business areas. They are not definitive proof of manipulation; instead, they provide indications of potential fraud in financial statements.

Fraud Prevention

Fraud is best detected in details, as it exploits vulnerabilities in the organization's control systems. Therefore, the serious impact of fraud on profitability, corporate reputation, and ethics requires the identification and implementation of effective mechanisms to eliminate such fraudulent practices. The goal of every mechanism for fraud prevention is not only its detection, as most experts in the field of fraud research agree that, in the long run, preventing fraud in financial statements is a better solution than detecting it. While detecting fraud is important, it is evidently better to mitigate or minimize fraud – in other words, to prevent it to the greatest extent possible. Detection is inevitably linked to fraud prevention, and both aspects together provide a system for fraud control. To aid in preventing fraud in financial statements, top management should establish a positive control environment.

Studies have shown that organizations with a strong control environment are less susceptible to false financial reporting.

To establish such an environment, members of the board of directors and the audit committee need to express and communicate the correct attitude toward internal control and the financial reporting process, including demonstrating high integrity and positive ethical values. This also requires active involvement in the company's day-to-day operations and frequent meetings dedicated to reviewing ongoing activities and the company's performance. An effective system of internal control implies, or includes, a reliable accounting system, adequate control policies and procedures, and policies to ensure proper asset protection. It also requires well-defined accounting and financial reporting policies (Stefanović, 2000:9).

Completely eliminating or even reducing to an acceptable level all risks of criminal activities might necessitate implementing extensive or complex controls, which could be unjustified in terms of costs or hinder smooth business processes (Đurić & Cvetković, 2022). The most common forms of control used by internal control in its work are: preventive control - focused on safeguarding the company's assets and financial data in an attempt to prevent fraud; investigative control - aimed at investigating fraud as soon as possible; corrective control - includes activities aimed at finding a solution to detected fraud to prevent future fraud. The effectiveness of internal control depends on several factors, the most important ones being: a developed control environment, a developed accounting system, control activities, regular monitoring, and a developed system of communication among employees.

The control environment is established by the management through its authority, organizational capabilities, and communication with employees, and it represents the overall image of the company. This component is crucial in establishing a good system of internal control. One of the elements of preventing fraud in business is creating a so-called fair business environment, in which employees adhere to ethical principles, where the company's objectives, not personal ones, are the priority for the management, and where employees' work is valued and respected, with constant monitoring of their work and behaviour.

Creating a business environment that prevents fraud begins with establishing policies and procedures within the company. Based on these policies, internal control is set up in the company, and it is established which actions and transactions are not ethical.

Continuous training of employees about the dangers of fraud is also an important preventive component, primarily aimed at developing employees' awareness of what is considered acceptable moral behaviour and what is unacceptable. Employees, especially those working with financial information, need to be trained to recognize signs of possible fraud and know how to act in such situations. Employees should be familiarized with types of fraud, fraud indicators, methods of preventing fraud, and reporting detected fraud. The goal is to raise employees' awareness of the negative repercussions of fraud and to make employees understand that preventing fraud is important for them as individuals as well as for the company as a whole.

In addition to the aforementioned general preventive measures to prevent fraud, many organizations also employ other specific preventive measures, such as video surveillance, continuous monitoring, legal/disciplinary procedures, conducting frequent and unannounced audits (e.g., independent audit of financial statements by authorized auditors provides an additional layer of credibility and helps detect potential fraud), background checks, and more (Singleton et al., 2006:186).

Conclusion

The aim of preparing, presenting, and auditing financial statements is to provide clear, understandable, reliable, and comparable information about the financial position and performance of a company, primarily to protect the interests of investors and creditors. Despite continuous efforts at both domestic and international levels, the possibilities of fraud committed through financial statements and accounting have not been completely eliminated.

Fraudulent activities such as corruption, misappropriation of assets, and falsified financial statements exist in all countries. Factors such as underdeveloped financial markets, inadequate institutions for overseeing the quality of financial reporting, and low living standards largely contribute to the prevalence of these types of fraud.

Corruption, often referred to as the "cancer of society," and a phenomenon that directly hampers a country's development, usually does not involve financial statements. Financial statements and accounting can only provide indications that corruption may exist, but complete transparency in a company's operations, which accounting certainly contributes to, can influence its reduction.

Misappropriation of assets, the most common form of fraudulent activity, is often concealed with the help of financial statements and other accounting products. At the same time, financial statements, as the primary output of accounting, serve as a powerful tool for detecting misappropriations. Given that this form of fraud primarily harms the company where the criminal activity occurs, management and owners have a strong motivation and interest in establishing proper organization that prevents conflicts of interest, timely prescribed procedures for all activities, a well-developed quality internal control system, and careful employee selection to minimize or eliminate this type of fraud.

False financial reporting is a significantly less common form of fraudulent activity, as shown by ACFE research, but the damage to stakeholders is disproportionately greater compared to misappropriations. False financial reporting causes harm not only to the company engaging in creative accounting, but also to investors, creditors, lenders, business partners, and the society at large. This type of fraud leads to a loss of trust in financial reporting, which raises the cost of capital, hinders the development of financial markets, and consequently slows down overall economic growth. As a result, preventing and detecting financial statement fraud is imperative for regulatory bodies, professional accounting and auditing organizations at the national level, as well as various international organizations.

Financial statements are crucial tools for detecting fraud in business. Although the statements themselves cannot directly uncover fraud, they can provide indications and warnings about potential irregularities that might signal fraudulent activity. They serve as forensic tools for identifying suspicious activities or irregularities, and it is necessary to conduct detailed analysis and additional forensic accounting procedures to confirm suspicions and provide evidence of fraud. In such cases, the involvement of forensic accountants can be extremely useful in identifying potential fraud.

Based on the above, it can be concluded that financial statements and accounting can have a dual role. On one hand, they can be used as a means of executing and/or concealing fraudulent activities (falsifying financial statements, misappropriation of assets). On the other hand, they can be used as effective instruments for detecting fraudulent activities (financial analysis, Beneish's model, Benford's law, Altman Z-Score model, etc.).

In general, financial statements represent a snapshot of a company's health. They showcase the company's ability to grow and continue its operations successfully. Simultaneously, they highlight areas of

concern that require specific business decisions to overcome challenges and achieve business goals. They also serve as a valuable resource in the fight against financial manipulations. Hence, further research and enhancement of forensic models and techniques are needed to contribute to more precise detection of financial manipulations. Transparent financial reporting and the active application of such tools can significantly contribute to protecting investors and upholding the integrity of the capital market.

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POLICE PROFESSION NOWADAYS

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Nowadays police as one of the primary state bodies that strive to enforce law and ensure civil order, safety and to prevent crime, face many challenges. Modern society is characterized by change. Multiple crises: health crisis, economic crisis, war in Ukraine, energy crisis, migrations and climate disasters shape the present of humanity (Лукнар, 2022: 3). Technological development has made changes in almost every sphere of human existence.

Current social reality is dynamic and requires flexibility of the police. Traditional forms of crime have acquired technological component. Crime with a digital component is growing (Luknar, 2020a). Police around the world have struggled to find adequate policy regime and to harmonize the laws that are dealing with this issue. In such dynamic conditions a lot of questions are raising.

Introduction

The paper deals with the analysis of the police profession in modern conditions and the various challenges that exist in the time in which we live. Structurally speaking, the paper consists of four sections: 1) About police in general; 2) Community policing; 3) Policing and technology; 4) Smart policing. In the first part of the paper some basic principles are reviewed, as well as the values and goals on which police work is based today. The second part of the paper indicates the basic principles and values that the police in the community understand. The third part points to the challenges that modern technology poses to the police and society in general, to new forms of crime that are conditioned by technological changes and the ways in which the police today face such challenges. Finally, in the fourth part of the paper there is an is analysis of Smart policing as a concept that builds on modern technological changes in which the police also have opportunities to improve their work. The purpose of the paper is to provide insights into the police profession in nowadays world, as well as the challenges. The greatest value of the work is reflected in the fact that it sheds light on some current issues of importance for understanding the police profession today.

About Police in General

Police traditional work is to respond to crime. Regardless of various changes in modern world, police job is based on police doctrine. This doctrine is embodied in nine principles (Table 1). Nowadays police still keep primary characteristics and doctrine, but they have also improved and changed the ways of fighting against modern crime.

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Table 1 *Police Doctrine - Robert Peel's Nine Principles*
(Lee in Buerger, 2000: 452)

1.	The basic mission for which the police exist is to prevent crime and disorder as an alternative to their repression by military force and severity of legal punishment.
2.	The ability of the police to perform their task is dependent on public approval of their existence, actions, behaviour, and on the ability of the police to secure and maintain public respect.
3.	The police must secure and maintain the respect and approval of the public as well as the cooperation of the public in the task of observance of laws.
4.	To recognize always that the extent to which the cooperation of the public can be secured diminishes, proportionately, the necessity for the use of physical force and compulsion for achieving police objectives.
5.	To seek and to preserve public favour, not by catering to public opinion, but by constantly demonstrating absolutely impartial service to law, in complete independence of policy, and without regard to the justice or injustice of the substance of individual laws; by ready offering of individual service and friendship to all members of the public without regard to their wealth or social standing; by ready offering of sacrifice in protecting and preserving life.
6.	To use physical force only when the exercise of persuasion, advice and warning is found to be insufficient to obtain public cooperation to an extent necessary to secure observance of law or to restore order; and to use only the minimum degree of physical force which is necessary on any particular occasion for achieving a police objective.
7.	To maintain at all times a relationship with the public that gives reality to the historic tradition that the police are the public and that the public are the police; the police being only members of the public who are paid to give full-time attention to duties which are incumbent on every citizen, in the interests of community welfare and existence.
8.	To recognize always the need for strict adherence to police executive functions, and to refrain from even seeming to usurp the powers of the judiciary or avenging individuals or the state, and of authoritatively judging guilt and punishing the guilty.
9.	To recognize always that the test of police efficiency is the absence of crime and disorder, and not the visible evidence of police action in dealing with them.

The main forces that have changed the police are: professionalization, globalization and technological development. Hall (1968) proposed five distinct professionalism criteria:

1) Organization functioning as a major *referent* for guiding ideas, standards, and judgments;
2) *Belief in public service*, most visible in a conviction that their services are indispensable for societal well-being;
3) *Belief in self-regulation* also is a requisite because it evinces the mentality that only colleagues possess the intellectual tools and expertise to judge the merits of their work;
4) The fourth requirement is a *sense of calling* so intense that it commits to a lifetime of devotion without regard for benefit;
5) The last one, *autonomy* — the freedom to make decisions without interference from others — is a hallmark of professionalism.

Police job is restructuring in accordance to social change. Globalization process pushed working and social interactions on transnational level. Police became more global in nature due to globalization. Police job go beyond local/national law enforcement and crime control. Nowadays policing place is within a broader context of international security. "Policing in many global

environments appears to be continually negotiated and reconstituted in a changing social and political environment with rapidly shifting policing requirements and priorities. Crime control and law

enforcement may be a low priority in environments that lack basic security, political order, social stability, and a functioning legal system" (Murphy, 2005:139).

Globalization brought many changes to police. Hackman and Oldham developed the Job Diagnostic Survey (JDS) tool that is "designed to be of use both in the diagnosis of jobs prior to their redesign, and in research and evaluation activities aimed at assessing the effects of redesigned jobs on the people who do them" (Hackman & Oldham, 1975: 159). This tool provides information about core job dimensions and may help us to better understand changes of profession. It is applicable on any given job (Figure 1). For the purpose of this paper, it can be applied for better understanding of nowadays police.

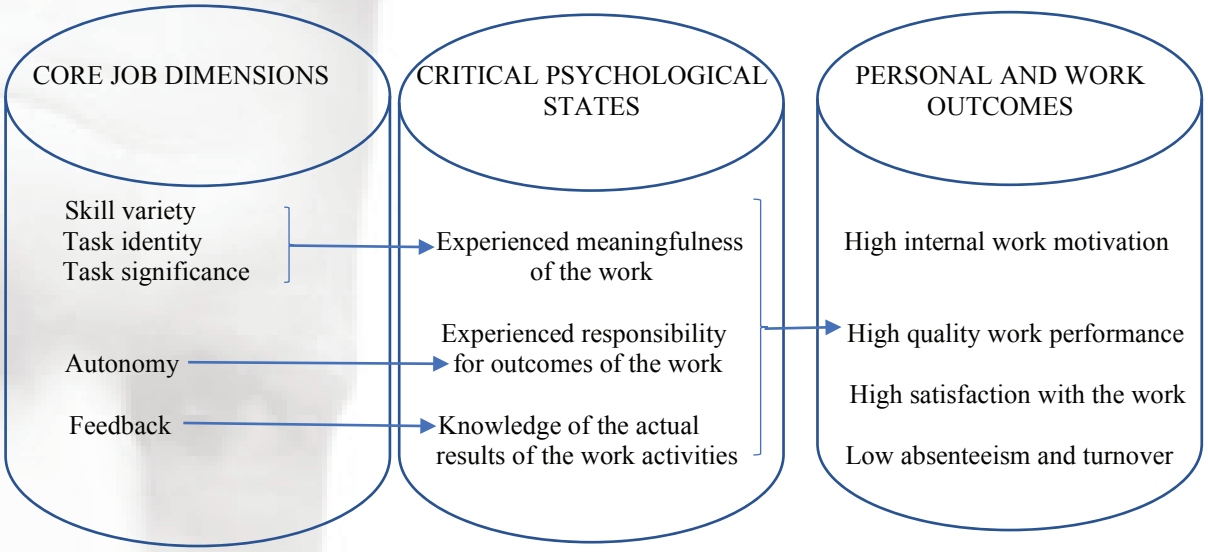


Figure 1 *Job Diagnostic Survey*
(Hackman & Oldham, 1975)

Regardless of social changes, there are basic settings of police profession that may help to better understand police philosophy and practice. The main characteristics of police profession are:

- Responsibility - The police are expected and encouraged to take responsibility not only for the fight against crime, but in facilitating information sharing protocols within the police organization, community and "key stakeholders in order to gauge local issues and their effects on the local area" (Luknar, 2017: 152).
- Relative autonomy – A police officer deals with complex tasks that requires juggling between a focus on process and a focus on outcomes. Apropos, the focus on process is largely determined by characteristics of police organization, commitment to organizational command-control, law enforcement and efficiency. If the process is efficient, it will bring proper outcomes. While the focus on outcomes requires some degree of freedom from organizationally defined controls.
- Stress - Police officers encounter with eminent danger on a daily basis, which associated with police work and unpredictable external work environment is source of considerable stress. Studies have found and confirmed stress among police officers (Zhao, He & Lovrich, 2002: 56). Various stressors have been identified by police officers: workplace mortality rate, such as "the violent death of a partner or having to take a life in the line of duty" (Coman & Evans, 1991; Violanti & Aron, 1994), the bureaucratic nature of police organizations (Violanti & Aron, 1995). Although the police work environment is inherently stressful, "police officers can handle their

jobs effectively due to good training, effective support and counselling, and careful selection of qualified candidates" (Zhao, He & Lovrich, 2002: 56). Also, "it seems that the work environment in law enforcement is not as highly dangerous as commonly believed because the use of deadly force and the incidence of highly dangerous situations are rather infrequent in most jurisdictions, although the media tend to portray police work as dangerous" (Zhao, He, Lovrich, 2002: 56). Virtual reality provides many training opportunities - police officers nowadays have the opportunity to improve performance and resiliency under simulated stress and scenario-based training (Martaindale et al., 2023).

Also, better understanding of nowadays police profession may help organizational culture and organizational clime of police. The organizational culture makes police recognizable in comparison with other professions. Professional subculture is made of certain norms that serve to ensure behaviour that is aligned with the police profession goals and to ensure harmony between the police and the community (Subošić, Krstić, Luknar, 2017). Organizational climate presents reliable and valid indicators of relatively stable personality traits of police officers. "Many factors can affect the organizational climate in the police. They can be divided into two groups:

1) constant - those factors come from the nature of the organization and its goals;
2) current - possibilities, social conditions or situations which can affect the police profession" (Лукнар 2017: 467). Source of authority also influences police behaviour.

Traditional model of police could not respond to new modern challenges. Besides police traditional work, nowadays police are focusing on community needs and solving recurring problems. Also, nowadays police deal with new forms of organizational crime and crime with digital component. Nowadays police training is extended to new knowledge and skills that can meet requirements of modern fight against crime. Globalization and technology growth have pushed a step further in police international cooperation in detection of secret labs for drugs production (Otašević, Kolarević & Radovanović, 2019), human trafficking (Luknar & Životić 2022), etc. Contemporary police rely on the cooperation with the community in maintaining public safety.

Community Policing

The relationship between police and community is very important in nowadays society. Police serve to ensure safety and order in the community. In their work police officers rely on the support and cooperation of citizens. As we know, citizens serve as the primary source of information in the examination of crime as eyewitnesses, bystanders, victims or informants. Significant part of nowadays police is "philosophy or a strategy of the police" (Wisler 2008: 428) known as community policing. "Community policing demands that the officer establishes trust, communication and ultimately, a problem-solving partnership with the citizens" (Nowicki in: Palmiotto, Birzer & Unnithan, 2000: 8).

Community policing is a strategy through which nowadays police could reduce various types of crime. There are several primary mechanisms through which community policing may work. The first mechanism is based on tendency to improve willingness of citizens to report crime. This may be achieved through committed police-community cooperation and partnership. Continuous work on improving perceptions of police legitimacy among citizens is significant mechanism for successful implementation of community policing strategy. In Western democracies it is closely related to the police promotion. Studies have confirmed enhanced citizen cooperation with the police and obedience to the law because they accept police legitimacy and believe it is the right behaviour (Mazerolle et al., 2013; Hinds & Murphy, 2007).

Community policing might be "useful in the short term to identify the reality of policing, how security is produced in various contexts, and the concrete daily interactions between civil society and the state" (Wisler, 2008: 429). Wisler noticed that some community police initiatives come from and they are controlled by the state (top-down), while others derive from and are controlled by civil society (bottom-up). Further, Wisler (2008) mentioned distinction between two main patterns of community policing (Figure 2).

<table>
<tr><td colspan="5">State</td></tr>
<tr><td colspan="5">Top-down</td></tr>
<tr><td rowspan="2"></td><td>Normative CP
Chinese style</td><td>Problem-solving
Zero-tolerance
Moral police</td><td>Social behaviour</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="2"></td><td>Vigilantism
Gated communities</td><td>Militias</td><td>Control of Criminality</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Bottom-up</td><td colspan="2"></td><td></td></tr>
<tr><td colspan="5">Society</td></tr>
</table>

Figure 2 *A Typology of Community Policing*
(Wisler, 2008: 430)

Scholars mentioned that citizens' views of police as legitimate are not permanent. They can be fleeting and quickly erode especially when police use unnecessary or excessive levels of force in encountering the citizens (Hickman et al., 2020: 269; Shjarback & White, 2016; Gau & Brunson, 2010). Practice have shown that it is not easy for police to maintain long-term public trust (Hickman et al., 2020: 269).

Training and education are mechanisms of great importance as they make police better fit into a community. Their effectiveness is better if the training includes a wide range of situations where problems may occur. Scholars suggested three basic premises that any community policing should be based on:

1) Police officers should possess a sense of social history.
2) Police officers should be inculcated with a sense of society and community.
3) Police officers should be equipped with the skills and knowledge for incorporating community policing into their work" (Palmiotto, Birzer & Unnithan, 2000: 13-14).

Scholars mentioned three key elements, "community collaboration, problem solving, and organizational transformation", which distinguish community policing from other policing approaches (Cordner in: Munchow, 2023: 5). Successful implementation of community policing strategy means to embrace it as a part of the police professional culture that will guide police operating and services to the community. Also, it is very important to have and maintain so-called 'line policing' and police cooperation between local agencies, as well as with other bodies and institutions in the fight against crime in nowadays community (Nikač & Leštanin, 2021: 246). Beside cooperation at the local level, international cooperation and following international trends in police work are also needed (Luknar & Životić, 2023).

Contemporary world is characterized by multiple crises, risks and uncertainty. Intelligence-led policing (ILP) is "a unique policing philosophy" (Carter & Fox, 2019) that emerged due to increase of terrorism threat and uncertainty in present world. Scholars described IPL as "the collection and analysis of information related to crime and conditions that contribute to crime" (Carter & Carter, 2009: 317). The purpose of the ILP is to get a beneficial intelligence product that is useful to develop tactical responses and strategic plan, law enforcement related to various threats. Community-oriented policing and intelligence-led policing are conceptually distinct philosophy (Carter & Fox, 2019: 55). Both of them provide support in nowadays police work and their implementation is recommended.

Policing and Technology

Technological progress has made changes in almost every field of social existence. "It is no difficult to predict the future of humanity will be dominated by interactive technologies, where the virtual and the physical realms will converge" (Luknar, 2020b: 37). Various types of crime have been created with the use of information and communication technology. Technology growth will continue to provide use of new technology by criminals. Further, this leads to an increase of crime with digital component. What to do to improve the existing and build more secure cyber space and digital infrastructure? These activities can be taken to ensure multilevel security of cyber space:

1) Conscious use of the internet
2) Conscious implementation of new digital technology
3) International monitoring, judicial cooperation
4) Multilevel transnational cooperation
5) Reducing dark number
6) Law enforcement responses
7) Improve cybercrime policing
8) Dedicated well trained police personnel" (Luknar 2020a: 624-626).

Application of new modern technology tools and techniques in police job have changed the situation worldwide. Such situation brings to the table various issues to the police, such as: technological equipment, investments, organization, police officers training, law regulation, etc. The rise of technology generates disproportion among police forces in countries with different level of development. Nowadays police forces are in a race to catch up the current key techniques and tools, to make organizational changes in accordance with modern society.

Police struggle to incorporate new technology effectively in theirs work. Information and communication technology improve police efficiency. Computing allows police officers to search large amount of information related to cases. Mobile devices improve the conditions for dispatchers. However, nowadays police still do not rely entirely on technologies. A researcher found that "expectations about information systems are low among police. Police information systems are not viewed as critical success factors or as means of decision support. They are viewed primarily as mechanisms for handling the demands for reports and other paperwork" (Rocheleau, 1993: 126).

Technology is applied very little to assist officers in the field while they are doing job. This is affected by the stage of country development, police equipment and training, investments in the police as well as rights. The process of use of certain modern technology in police is not so fast and easy. For example, "the application of thermal imaging cameras in crime detection has raised the question of the

legality of their use, as well as the procedural value of thus obtained information" (Kesić & Bjelovuk, 2019: 997). Also, "automated ballistic imaging technology is a potentially effective tool for improving the investigation and prosecution of violent crime involving guns" (Maguire et al., 2016: 199). But, its improvements and limits are still under consideration.

Smart Policing

Technology is significant source of innovation in police work. It makes police work more technically efficient with lower costs, maximizing outputs in a short time. Nowadays police focus on "working smarter, not harder" while addressing criminal threats in the community (Carter & Fox, 2019: 46). Prevention is important aspect of police work today. Contemporary police focus on specific issues that concern the community rather than wait for small problems to turn into larger.

On a daily basis police deal with high-stress and high-demand tasks, which imply real-time assessments and tactics. Smart policing appears as new police paradigm, which appears as a result of striving to improve the outcomes of police operations in nowadays society. Technology and problem-solving approach play key roles in nowadays police paradigm.

The problem-oriented approaches are widely adopted in nowadays police work as part of proactively addressing and dealing with crime. "Police remain challenged in optimizing the potential of problem-solving, and sustaining problem-solving as an organizational priority" (Bond-Foetier & Nader, 2023: 56). Smart policing appeared due to growing use of smart technology and focusing on certain crime "hot spots". This police approach showed significant success in crime control (Braga & Schnell, 2013). "The user experience with smart policing services is considered to be different from their experience with traditional policing practices that have been criticized as ineffective and inflexible in addressing different issues faced by residents, instead increasing tension and distance between the residents and the police" (Ekaabi, Kamarudin & Preece, 2020).

Smart policing implies knowledge and improvement of police work through training of best practices, use of data and evidence bases to improve the outcomes of police work. "Smart Policing Initiative (SPI) provides police departments with funds to collaborate with academic researchers to analyse recurring crime problems, develop innovative responses to targeted problems, and evaluate the impact of implemented programs" (Braga & Schnell, 2013: 340). This leads to reaffirmation of the relation between the police and academia. Also, "smart policing means that a jurisdiction must not only learn about the nature of their crime problems but also learn how to adapt successful programs to their specific issues" (Joyce, Ramsey & Stewart, 2013: 361).

Martaindale suggests training law enforcement officers, because short training "can greatly improve their decision-making when identifying the presence of a firearm" (Martaindale 2021: 123). Technology brought some law changes and modern police need knowledge not just to fight against crime, but also to prevent modern crime. Technological progress caused numerous changes in Serbian police as well (Zekavica & Krstić Mistridželović, 2022: 276). The police in Serbia practice training and exchange of experiences with the experts from European countries in order to adapt police work to new demands of modern society.

Conclusion

this paper indicates that nowadays police face many challenges that come from contemporary society dynamics. All the challenges in modern society, like multiple crises and technological developments influence the course of development of police profession and performance of police activities. Modern changes in society require changes in police skills, professional ethics, as well as in education and training. Technological growth set the conditions to open police to public and community. Innovations, smart policing and community-policing are some of the current trends of policing. The paper provides sufficient information about the current characteristics of police profession and its development trends for the coming time. As a result of these efforts nowadays police have come a long way but this study shows the need for further research and understanding of current issues that are highlighted in this paper. Also, it is recommended to link theory and practice as a necessary precondition in creation of the good foundation for police development.

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REFLECTIONS ON THE LIMITS OF THE HUNGARIAN PLEA AGREEMENT

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Introduction

The new Hungarian Criminal Procedure Act (Act No XC of 2017 on Criminal Procedure, hereinafter: "CPA") was designed to speed up criminal proceedings, as investigations and court proceedings had become very lengthy in previous years. The CPA introduced several legal measures to meet these objectives, which were expected to speed up the completion of criminal cases. Some of these are related to cooperation on caseloads. A codification aim was to broaden the possibility for the accused to cooperate with the authorities in the design of the legislation in order to make criminal proceedings more efficient and to redress the victim's grievances effectively. (Vida, 2023)

The accused cooperates with the authorities to make a confession; consequently, some legal institutions allow for a quicker conclusion of the criminal proceedings. In return, the accused can expect to receive discounts and lighter sentences. According to the general justification of the CPA, "by the principles of timeliness and economy of litigation, most European States have come to recognise that pragmatic considerations make it worthwhile to treat cases in which the accused confesses differently from those in which the accused must be proved guilty." (Bill T/13972 on Criminal Procedure. General Explanatory Memorandum) The confession of the accused creates an opportunity for the prosecuting authority to cooperate with the accused. All parties to criminal proceedings have an interest in this. Cooperation saves time and money for the authorities, reduces the penalty for the accused and ensures reparation for the victim. It also sends out the message that the perpetrator of the crime will indeed be brought to justice.

In the CPA, admission and cooperation by the accused can lead to two types of agreement. One form of agreement is a written agreement made before the indictment at the investigation stage. Under a plea agreement, the accused admits guilt of the offence committed in exchange for the prosecution applying the sentencing concessions for plea agreement in Act C of 2012 on the Criminal Code (hereinafter: CC). After the indictment, there may also be room for cooperation in the preparatory procedure (type 2 cooperation) if the accused admits guilt. It is an "implicit" agreement which, integrated into the criminal procedure, enforces the principle of simplicity, the agreement with the prosecutor and the admission of guilt. (Budaházi & Fantoly, 2023)

This paper presents the plea agreement reached during the investigation, highlighting its potential and limitations.

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Purpose

The paper aims to show Hungary's legal institution of the plea agreement and its limitations. Another aim is to show the characteristics of plea agreements in other European countries and how they differ from the American plea bargain.

Design/Methods/Approach

The paper reviews domestic and foreign literature and analyses domestic legal norms. It also illustrates the application of plea agreement through practical experience.

Findings

In Hungary, the plea agreement will be applied with the entry into force of the new Criminal Procedure Act in 2018. The plea agreement has been introduced into the practice on the Slovenian model. The legislator would expect this legal instrument to speed up criminal proceedings on a broader scale. In contrast, the number of criminal cases in which the legal tool is used is below 1%. The many limitations of plea agreement mean that it is rarely used at the investigation stage. This paper describes these constraints on the side of the prosecution, the accused, the defence and the judge. The legal instrument of plea agreement itself is good in criminal proceedings, but its current practice in Hungary needs to be changed to make it more common. The paper also presents practical solutions that the prosecution uses instead of a plea agreement but which fulfil its purpose.

Originality/Value

The paper could contribute to changing the application of plea agreement. The monitoring of changes could be the subject of further papers.

Cancellation of the Hearing

Before the new CPA came into force, the Hungarian criminal procedure used the predecessor of plea agreement, the trial waiver. The waiver of the trial was regulated by the Hungarian CPA 1998 (Act No XIX of 1998 on Criminal Procedure, hereinafter: 1998 CPA). The purpose of its introduction was the same as that of plea agreement: to speed up proceedings and reduce the burden on the courts. The legislator aimed to conclude cases as quickly as possible (Nagy, 2007). Nevertheless, the prevailing prosecutorial view was that waiver of trial should not be widely used. (Juhász, 2017) The narrow application resulted in a low take-up: between 2013 and 2017, the number of defendants who waived trial before indictment was between 0.09 and 0.20%. (Attorney General's Office, 2018) If the accused had made a confession of guilt and waived his right to a trial before the indictment, the court could, on the motion of the prosecutor, by a judgment handed down in open court, find the accused guilty of the same offence and the same charge as the indictment, and impose a sentence or measure. When imposing a custodial sentence, the more favourable sentence determined under CC section 82 (2), (3) was applicable, as it is now in the case of a plea agreement. A lighter penalty was also available for a co-

operating defendant if the offence was committed by a criminal organisation and he or she cooperated significantly with the prosecutor or the investigating authority during the investigation, contributing to the proof of the case or other criminal cases. One of the reasons for this rare application was that it could only be initiated by the accused or the defence and only within 15 days of filing the charge sheet. The short time limit and difficulty in setting a starting date also contributed to the rarity of the application. A further problem with the instrument was that it was only used in cases that had been investigated and were already at the indictment stage, at which point the prosecution had no interest in adopting it. It was mainly used when the case was not sufficiently proven: the prosecution brought charges without doubt about the sentence the court would impose based on the evidence. For example, the prosecution had to consider the risk that if a witness were swayed during questioning at trial, the court might acquit the accused. The fact that there was a defence lawyer who was not interested in a speedy conclusion of the case because of the remuneration he received, and therefore, the defence did not exercise its right of initiative, also favoured the institution. (Szaktor, Turi & Budaházi, 2022)

The principle of waiver of trial was examined by the Constitutional Court, and in its decision 422/B/1999 AB, it ruled that waiver of trial (along with the rules ensuring a fair trial) is a suitable instrument to contribute to the reasonably prompt adjudication of the state's criminal claim and the efficient operation of the judiciary. On this basis, with appropriate guarantees, no constitutional concerns can be raised against either the speeding up or shortening of proceedings or against encouraging the accused to confess or waive trial. (Vida, 2023)

Plea Agreement and Other Countries

The term plea bargaining is an umbrella category in the United States of America, encompassing several different plea bargaining solutions per state and author. It is generally agreed that the process can be broken down into two major stages. On the one hand, there is the unregulated plea bargaining between the prosecutor and the defence, and on the other hand, the guilty plea is the admission of guilt before the court. Foreign authors categorise the content of plea bargaining, and some views distinguish three broad categories. According to these, "charge bargaining" is a type of plea bargain where the defendant pleads guilty to another, less serious crime and the prosecutor charges the defendant with a less serious crime than the original charge (e.g. pleading guilty to the misdemeanour of theft instead of the felony of theft). "Count bargaining" is the plea bargaining of specific charges. The defendant is charged with three counts of burglary and pleads guilty to one, while the prosecutor waives the other two. Sentence bargaining means a discount on a specific conviction or sentence. For example, probation or a lower sentence may be granted by the prosecutor. (Pápai-Tarr, 2011)

In the codification of the CPA, the waiver of trial was restructured, and a plea agreement was introduced as a new legal instrument, but different from the US plea bargain. The model used in the codification was the Slovenian plea agreement, which had several differences from the waiver of trial. It was hoped that the plea agreement, which had proved its worth in Slovenia, would also contribute to speeding up criminal proceedings in Hungary and the speedier conclusion of criminal cases.

A Slovenian plea agreement can be proposed by the accused, the defence and the prosecutor. The Hungarian CPA also takes it over. The prosecutor has to inform the suspect in writing of the facts of the offence, which is the subject of the plea agreement and of the legal classification. [Slovenian Criminal Procedure Act (Zakon o kazenskem postopku or ZKP, hereinafter: "ZKP") section 450a (1)]

If the parties agree to enter into a plea agreement and the accused does not have a defence counsel, the court shall appoint a defence counsel on the prosecutor's motion. If a plea agreement is concluded, the assigned defence counsel shall perform the defence functions until the conclusion of the criminal proceedings. The defender's appointment is withdrawn if the prosecutor informs the court that the plea agreement has not been successful. [ZKP 450a (2)] In Hungary, too, a lawyer is required to conclude a plea agreement, but if the accused does not have an authorised lawyer, the prosecution makes the appointment instead of the court. Like the Hungarian practice, the Slovenian practice allows the prosecutor to negotiate only with the defence counsel if the accused consents [ZKP section 450a (3)]. In such cases, the accused does not participate in the conciliation. As in Hungary, a plea agreement in Slovenia is concluded in writing and must be signed by the accused, the prosecutor and the defence. The document is attached to the indictment. [ZKP section 450a (4)] If they do not reach an agreement, i.e. they do not reach a plea bargain, the documents relating to the negotiations will be excluded from the case file. [ZKP section 450a § (5)] (Budaházi & Fantoly 2023) Thus, the unsuccessful plea agreement procedure is not brought before the court and does not influence the court in its judgment.

The state prosecutor and the defendant may agree on the following in Slovenia:

- punishment or an admonitory sanction and the manner of executing the punishment;
- the state prosecutor's withdrawal from criminal prosecution of the defendant's criminal offences, which are not included in the admission of guilt if the injured party agrees to this;
- the costs of criminal proceedings;
- Fulfilment of another task.

These also apply in Hungary, but in Hungary, the victim's consent is not required.

The subject of the plea agreement cannot be:

- legal definition of a criminal offence;
- precautionary measures when these are mandatory;
- confiscation of proceeds of crime, except the manner of confiscation. (*https://www.dt-rs.si/pre-trial-proceedings*) In Hungary, the facts and legal classification are non-negotiable.

The Slovenian law does not limit the conclusion of the agreement to certain criminal offences; however, the agreement is usually concluded in more challenging cases and especially when the agreement:

- significantly shortens criminal proceedings;
- encourages the defendant to submit evidence for another more serious criminal offence which was committed by another person;
- enables the victims and sensitive witnesses to be exempt from testifying at the main hearing. (*https://www.dt-rs.si/pre-trial-proceedings*)

The last point is not specific to Hungary.

The institution of plea agreement appears in the practice of several European countries. In England, the indictment is read out at the trial, and the judge then asks the defendant to make a statement that he or she will plead guilty before the jury is empanelled (plea of guilty). The judge will decide without a jury if he or she pleads guilty. Here, the agreement nature of the proceedings is that this confession may be preceded by a statement by the prosecutor waiving certain charges (in the end, therefore, he/she confesses in the hope of a lesser punishment). The defendant confesses in the hope of a lesser punishment. However, unlike in Hungary, in the English judgment agreement, the prosecutor has no role in determining the amount of the sentence. The plea agreement also exists in Scotland. There, the

defendant can make a written offer to the prosecutor on which charges he or she is willing to testify in case of a waiver. (Farkas & Róth, 2004) In Italy, it is not possible to make a plea agreement for any crime. The prosecutor and the accused can agree on an offence punishable by up to three years' imprisonment. Together, they ask the court to impose a specific sentence. The court in Italy has no discretion as to the severity of the sentence. The court can either impose the proposed sentence, which ends the criminal proceedings, or the case can continue without a plea agreement. (Herke, 2021)

In Spain, the prosecutor sends the accused and the indictment, the proposed sentence and its level, which since 1989 has been up to 12 years of imprisonment (Farkas, 1992). Suppose the accused accepts the sentence offered by the prosecutor or enters into a plea agreement and, as a result, agrees with the prosecution. The court will impose the sentence without further evidentiary proceedings in that case. The institution of simplified negotiation has been introduced in Denmark. If the accused has confessed, the trial is conducted by a single judge without a jury, and the prosecution is not represented by a prosecutor but by a police officer. (Herke, 2021) In France, there is a correctional institution: if the accused confessed, the prosecutor could classify the crime as a misdemeanour so that the district court, rather than the jury, will have the power to adjudicate it. (Vókó, 2003)

The Plea Agreement Process in Hungarian Practice

A plea agreement is a procedure in which the court has no role. It occurs between the prosecution, the suspect and the defence during the investigation phase. It is an indispensable part of a plea agreement, as it requires a full confession, considered the critical evidence in the case. (Szaktor, Turi & Budaházi, 2022) Under the CPA, a plea agreement can be used in any case and for any crime. The Hungarian plea agreement is not the classic American plea bargain, nor is the Slovenian one, which serves as a model.

Unlike in Hungarian practice, in English criminal procedure, the prosecutor does not influence the type or the sentence level and cannot submit any motion. Thus, the plea agreement process is limited. (Gácsi, 2018) In Hungary, the classification of the offences with which the accused is charged and the case facts cannot be negotiated. In the investigation, the plea agreement is made up of three parts. (Fantoly & Budaházi, 2018) Hungary's investigation is divided into an investigation phase and a discovery phase. The investigation ends with the suspect's identification and interrogation. The discovery phase follows this. In the investigation phase, the prosecution examines whether a plea agreement can be initiated. If, during the investigation, the person who is not yet suspected (the person reasonably suspected of having committed a criminal offence) or his or her defence counsel would like to initiate a plea agreement with the investigating authority, the investigating authority will inform the declarant that he or she can initiate the plea agreement after the police officer has communicated the suspicion, preferably after the police officer has questioned the suspect. In other words, no formal initiation of a plea agreement can occur during the suspect's questioning at the end of the discovery phase. If the prosecution does not agree with the suspect's or the defence counsel's initiative, it will inform them without a written decision.

If the prosecutor, the accused, or the defence initiates a plea agreement, this is followed by conciliation. All three shall participate in the conciliation. The conciliation may take place on several occasions. The CPA does not set a time limit for the meeting. (Novoszádek & Szegő, 2021) Under the CPA, the facts and legal classification of the offence cannot be the subject of the meeting, which is a matter for the prosecution to decide. The prosecutor, as the prosecution's representative, does not dispute whether the classification of the offence is correct from a substantive criminal law perspective, for example. (Szabó, 2018) Suppose the prosecution and the suspect have agreed on the content of the

plea agreement. In that case, the prosecution will warn the suspect of the consequences of the planned plea agreement during the suspect's interrogation. The prosecution shall record the plea agreement resulting from the agreement in the record of the suspect's interrogation, which shall be authenticated jointly by the prosecutor, the accused and the defence.

The plea agreement describes the offence and its classification under the CC. In the plea agreement, the suspect must admit and agree to plead guilty. It also includes a definition of the punishment or measure to be applied independently and its specific type, level and content. [CPA section 410] The plea agreement may (but is not required to) include provisions such as a collateral sanction, a measure that may be imposed in addition to the sentence or measure, or the payment of or exemption from criminal costs. In the plea agreement, the suspect may also undertake, for example, to cooperate substantially with the prosecution or the investigating authority in order to contribute to the proof of the case or other criminal case, to compensate the victim for the damage caused within a short time or to participate in mediation. [CPA section 411]

If the accused and the prosecution have reached an agreement during the investigation, the prosecution will prosecute on the same facts and charges as the agreement on the record. The prosecutor's office shall submit the record of the plea agreement to the court together with the indictment. In such cases, the prosecution makes three motions in the indictment: to have the court approve the plea agreement, to impose a sentence (or measure) that corresponds to the content of the plea agreement, and to take further measures corresponding to the content of the plea agreement. By charging the offender, the court will know all the evidence obtained to make an informed decision to approve or reject the plea agreement. This real choice guarantees that the judicial procedure in the case of a settlement is not just a formality (Fantoly & Budaházi, 2018).

If the conditions for approving the plea agreement are met, and there is no room for refusing to approve it, the court approves the plea agreement in the preparatory session. There is no right of appeal against the court's order approving the plea agreement. The court shall base the guilt of the accused on the admission of guilt, the approval of the plea agreement and the case file. [CPA sections 735, 736] There is no problem with the regulation of plea agreements in CPA. Everything would be in place for it to be used more often. The only regulatory problem is that if the court does not approve the plea agreement, the criminal proceedings cannot continue with an investigation but will continue with a trial. Therefore, even if the court does not support the plea agreement in the preparatory session, the evidence required for the trial would be sufficient.

A Plea Agreement in the Numbers

In 2018, there were 67195 prosecutions in Hungary. The possibility of plea agreement was introduced after 1 July 2018 with the entry into force of the Criminal Code, which is one of the reasons why the prosecution submitted only 34 cases (0.05%) to the court based on a plea agreement during that year. (In 2019, 91 cases (0.1%) out of 68127 indictments were submitted for indictment by plea agreement (Prosecutor General's Office, 2020). In 2020, 58 cases (0.1%) out of 54401 indictments were submitted for indictment by plea agreement (Prosecutor General's Office, 2021).

In 2020, the prosecution entered into plea agreements with 122 defendants; the court referred only seven defendants for trial. In the remaining cases, the plea agreement was approved (Prosecutor General's Office, 2021). The approval rate of the plea agreement was 94.37%.

The figures show that the number of cases in which a plea agreement is reached is relatively small, with rates similar to those of the waiver of trial legal instrument (between 2013 and 2017, the use rate was between 0.09 and 0.20% of the number of indictments). While the waiver of trial legal instrument has had 15 years to increase its use rate, the plea agreement legal instrument has been available in criminal proceedings for four years. As the years go by, the rate of use may increase. However, it will not reach the high rate of plea agreement in the Anglo-Saxon world: in US federal criminal cases, the plea bargaining rate is around 97%, and in state criminal cases, 94%. (Zottoli, Daftary-Kapur, Winters & Hogan, 2016)

Problems with the Plea Agreement

Initially, the legislator intended the plea agreement for cases that had previously been decided by a court of first instance and were of a less complicated nature. The legislator expected that many cases could thus avoid a trial, as plea agreement cases could be concluded during the preparatory hearing. The legislator's optimism has proved to be exaggerated, as no mass of plea agreement cases have been brought. In the meantime, the prosecution has also addressed the issue of plea agreement, pointing out in principle that a plea agreement should take into account that, although it can be used in any case, for any offence, it can be a means of speeding up and increasing efficiency in cases that are not easy to judge (Vida, 2023).

The problem is that the plea agreement process is time-consuming, requiring multiple meetings between the prosecutor and the defence. It is administratively burdensome for the authority, which is why there are times when the prosecutor verbally agrees with the defence and in the context of an informal plea agreement that if the suspect confesses, he will make a so-called 'moderate' proposal, i.e. he will propose a lesser sentence in his indictment. It is also common practice for the authorities to make an investigative deal rather than a plea agreement. In exchange for information (evidence) about the case or another case, you may become a cooperator and receive benefits in your criminal case.

The defence may also be the reason for the infrequent use of plea agreement. It is only sometimes worthwhile for the defence to enter a plea agreement. In the case of a plea agreement, the accused will receive some sanction, i.e. the proceedings will not be terminated, or an acquittal will not be granted. The practice that the prosecution does not usually deviate from the mean when determining the sentence for the accused is not favorable to the prosecution. The median is half of the sum of the upper and lower sentences. Thus, the median is five years for a sentence of two to eight years. Even without a plea agreement, Hungarian courts usually impose the sentence based on the median. For this reason, it is not very advantageous to enter into a plea agreement if the sentence is not lower than it would be without a plea agreement. (Szaktor, Turi & Budaházi, 2022)

One of the reasons for the infrequent use of plea agreement is that the practice of plea agreement prior to 2018, when it was a legal instrument for waiving trial, has not changed and is only used for more severe offences. Prosecutors' experience shows that more plea agreements could occur than at present if the investigating authority were more active in examining the willingness to enter a plea agreement during the discovery phase of the investigation and informing the prosecution if it is likely.

The rule of thumb is that a plea agreement can only be initiated in the case of an established case after the investigation phase has been fully completed (Szaktor, 2020). If the plea agreement fails or the court does not approve the plea agreement, there is a high chance of an acquittal at trial due to the unavailability of evidence. If the court does not approve the plea agreement, or the accused does not

plead guilty before the court following the plea agreement and / or waives his or her right to trial, the Hungarian CPA does not allow the case to be returned to the investigation stage so that the investigation can continue and evidence can be obtained.

There is a problem that the plea agreement risks convicting the innocent, or that it gives an unfair advantage to the accused who cooperates with the authorities over his non-deciding accomplices, as those who adhere to the due process of law under constitutional law receive a heavier sentence than their counterparts who enter into a plea agreement. However, the plea agreement is often not effective enough. As a result, a lower sentence has a lower deterrent effect. Substantive truth is rarely established: the plea agreementer often tries to avoid a heavier sentence by making false statements. In a plea agreement, too much depends on the person and professionalism of the defender, and there is a risk of judicial and prosecutorial bias and possible revenge. (Fantoly & Herke, 2023) There was an instance of this in one case where the first defendant challenged a plea agreement made by the second defendant. The first defendant referred to another criminal case to explain why the second defendant testified against him. (Debreceni Törvényszék, 17.B.37/2020/151/VI)

However, there are also many arguments in favour of a plea agreement. One such argument is that the sentence is handed down very quickly, which helps ensure the trial's economy. The accused receives a lighter sentence, thus eliminating the risk of a disproportionate sentence being imposed in a public trial. However, neither the prosecution nor the defence feels like a loser at the end of the proceedings. A cooperative defendant may also facilitate the early prosecution of other alleged perpetrators, thus rewarding the cooperation of the accused with real concessions. (Fantoly & Herke, 2023) In one of the cases, the defendant who made a plea agreement refused to testify in the court of first instance. According to the Metropolitan Court of Appeal, he could do so because, in the plea agreement, it is only an option and not an obligation that the suspect may agree to cooperate substantially with the prosecution or the investigating authority in proving the case or other criminal cases. (Fővárosi Ítélőtábla, 6.Bf.175/2021/10.) If the trial is held for other defendants, the court can question as a witness the defendant who has made a plea agreement. He refused to testify as a witness in that case.

Although the victim's identity does not increase or decrease the number of settlements, it is worth considering what the settlement means for the victim. The victim may benefit from the fact that, if a plea agreement is reached, he or she will not be questioned again by the court at trial. This may be an important aspect in cases of sexual offences, so that the victim does not have to relive the unpleasant experience (Herke, 2008). In this way, the state is also spared the recovery of a civil claim. The parties may also decide to bear the costs of the criminal proceedings, which may be borne in whole or in part by the State.

For the victim, a disadvantage of a plea agreement is that the accused is likely to receive a lighter sentence or measure from the court than if no plea agreement had been reached.

Conclusion

A plea agreement is one way for the authorities to shorten the criminal proceedings. The plea agreement mainly exonerates the court because if the agreement is concluded at the investigation stage by the accused, the defence and the prosecutor, and approved by the court at the preparatory meeting, or if the accused waives trial, there is no trial and no second or third instance trial. The case will end at the court's preparatory session. In Hungary, the plea agreement has a history of 5 years, and its application rate is less than 1% of cases, which is low. Reasons for this may include the administrative

burden on the authorities, the multiple occasions of negotiations leading to the conclusion of a plea agreement, the lack of openness to the plea agreement on the part of the investigating authority, the prosecution, the accused and the defence. It could become more frequent if it were more worthwhile for both the defence and the authorities to conclude a plea agreement. The study has shown that, in addition to the United States, the plea agreement is used in many European countries, with some variations. A common feature of a plea agreement is that it is negotiated between the defence and the prosecution and typically requires a confession from the accused to obtain a benefit in return. In current Hungarian practice, a plea agreement is used in several criminal cases, which have attracted much media attention. It has brought both simple and more complex cases to a swift conclusion. In Hungary, it is mainly up to the prosecution to decide how the number of plea agreement cases will develop, and if there is a will to use it more often, its use will increase. It would be worthwhile to allow the Hungarian CPA to return the criminal proceedings to the investigative stage if the court does not approve a plea agreement. It would avoid the authorities needing to collect more evidence than required for a plea agreement. It would also help make plea agreements more common if they were used more frequently in more cases, including those for less severe offences. In Hungarian practice, it is more often used for more serious offences.

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THE CAUSES OF THE EMERGENCE OF FAILED STATES

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Introduction

The end of the Cold War and the emergence of the New World Order at the end of the 20th century were greeted with a lot of optimism. The ideological confrontation between East and West ended, the threat of superpower nuclear war disappeared, the "evil empire" (as the former Soviet Union was called in the West) collapsed, and communism in Eastern Europe collapsed. All this fueled the post-Cold War hopes of humanity entering a period of a brighter future. It was expected that the new stage in the development of international relations would be based on democracy, human rights, prosperity and peace. However, very soon events in parts of the Third World (Global South), then the Balkans and the Caucasus (civil wars, mass suffering of the civilian population, terrorism, hunger, poverty, epidemics of infectious diseases, crime, etc.) will undermine the optimistic expectations that a world of prosperity, without conflicts and wars is on the horizon. Soon, academic circles will identify a new threat to international peace and security - failed states. For them, they are a new source of evil, black holes of globalization, a safe haven for terrorists, a haven for drug and arms dealers, etc. Because of what is happening in these countries, many authors in the last three decades define international relations as "coming anarchy" (Kaplan, 1994). Military interventions in failed states can generally be divided into those from the nineties and interventions after September 11, 2001 terrorist attack on USA. The first were justified by preventing the suffering of the civilian population in failed states, and the second were justified by defense against international terrorism. High officials of the State Department after September 11, 2001 have been continually repeating that a turning point has occurred in the perception of failed states from a humanitarian to a strategic problem. States that do not control their territory and no longer have strong state institutions are threats to their population, their neighbors and the international community. The Western understanding of the security threat has changed in the following direction: the danger no longer lies in the strength, but on the contrary in the weakness of states.

Today, states are in a situation where they share their traditional sovereignty in politics, security and economy with state and sub-state entities - international organizations, multinational corporations, non-governmental organizations, powerful individuals, etc. The weakening and transformation of nation states did not produce the same consequences for all states. Stronger and more developed countries have largely remained immune to this phenomenon, or have been slightly affected. However, a part of weak states evolved into failed states, which manifested itself through: extreme weakening of state institutions, inability to provide basic social goods to citizens, strong growth of corruption and poverty, and in the worst case, through a bloody civil war with great human casualties and material destruction that have led to the disintegration and disappearance of certain states. Failed states did not

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appear on the international stage for the first time with the end of the Cold War, but it is characteristic that the scale of their appearance, as well as the dramatic consequences caused by their appearance, surpassed earlier eras. Failed states are given enormous importance today, both in academic and political circles. When it comes to politics, it should be emphasized that the strategic documents in the field of security of the Euro-Atlantic countries and international organizations necessarily treat failed states as security threats.

It is difficult to obtain precise data, but the security implications of the emergence of failed states are measured in millions of human victims, tens of millions of refugees and displaced persons, and even more those who do not have living conditions worthy of a human being. However, the security threat caused by failed states has spread over time from the local to the regional and finally to the global level.

The Emergence of Failed States

The end of the Cold War and the beginning of the process of intensive globalization confronted the state with many challenges that will weaken its power and threaten its position as an indisputable subject of international relations. Individual states were not able to cope with those challenges, and their weakness was manifested by the emergence of civil wars, mass suffering of the population, weakening of state institutions, impoverishment of the fragile economy, loss of control over state territory, strengthening of parastatal entities, etc.

Weakening and Transformation of the State After the Cold War

In the post-Cold War era, the nation-state will face serious challenges that tend to transform its traditional role in the political sphere. Some authors believe that the state has changed through historical epochs, so even today the state is being transformed by adapting to global changes.

Martin Shaw believes that the traditional form of state form (Westphalian) is not and will not always and necessarily exist as such. The shape of the state form is transformed over time and right now the historical transformation of statehood is underway. He further points out that in ancient Greece and Europe in the early modern era, cities were also states, while many would agree that the European Union (EU) has an increasing number of state attributes. These examples tell us that the levels of state power have changed over time through: city, nation and international organization. City-states in Europe in the early modern era paved the way to the nation-state (Shaw, 2000:189). The transfer of political power from the nation-state to international organizations is underway, which leads to the weakening of the state.

Under the pressure of supranational powers, a new political challenge will appear for the state in the form of attempts at its transnationalization, which implies that the state will be in the function of various international organizations (UN, EU, IMF, etc.). William Robinson believes that national states, as an integral element of a transnational state, perform three essential roles: adopt fiscal and monetary policies; they ensure the basic infrastructure network for global economic activity (airports and seaports, communication networks, educational networks, etc.) and ensure social order, i.e. stability, through the apparatus of state coercion (Mathews, 1997). In this way, the national state increasingly loses its independence and becomes an executive apparatus for supranational powers.

The nation-state in the modern age is also challenged in the economic sphere. The system of sovereign states is still the most important on the world stage, but that system is under attack from both above

and below. It was especially attacked by the so-called non-territorial actors (transnational organizations, multinational companies and non-governmental organizations), and since the state is a spatial phenomenon, it is unthinkable for it that the territory is not important (Robinson, 2004:125). Nye argues that non-state actors have made the most progress compared to states in terms of economic power. Power is less and less in the hands of nation states and is moving more and more towards other actors and entities. National governments have not only lost their autonomy in the globalized economy, but are sharing power with transnational companies, international organizations and numerous non-governmental organizations.

Change of State Sovereignty

Sovereignty represents supreme power over the state territory and population, independent of any other government and limited by the rules of international law (Avramov, Kreća, 2001:93). International political practice increasingly shows that the sovereignty of national states is no longer "inviolable" and that the Westphalian concept of sovereignty was seriously undermined. There is a growing number of predictions that the modern world is moving in the direction of post-sovereignty, where legitimate and absolute power no longer rests on territorially determined state units. Such changes, to varying degrees, deny the dominant and irreplaceable role of states in both international and domestic life.

The sovereignty of national states as their basic feature in the period after the Cold War came under the impact of globalization, supranational integration and unipolarism in the form of humanitarian interventions aimed at protecting human rights. This impact was first of all felt by small and weak national states. Conventional sovereignty presupposes a world of autonomous, internationally recognized and well-governed states. In the future, the better performance of domestic government in poorly managed, failed and occupied states will require overcoming the adopted rules, including the creation of joint sovereignty in some special areas. Krasner (Krasner, 2007:205-206) relativizes and distorts its very essence, not only the state, but the entire centuries-old conception of international relations is called into question.

Donald W Potter considers sovereignty from the aspect of the state's responsibility, not its right as the traditional approach. He proposes the introduction of a model of state responsibility, according to which states could be defined and classified as weak and failed, and can serve the international community to determine which states need international support or intervention in order to fulfill the obligations arising from sovereignty. A sovereign is a responsible state that has institutions capable of providing social goods for its population: security, health care, education, economic opportunities, good governance, legal order and basic infrastructure requirements (transportation and communications). The state becomes a failure when it can no longer, or does not want to, provide these goods. Potter points to alternatives to the classic definition of state sovereignty through the assessment of the quality of domestic institutions: If states were defined according to the quality of domestic institutions, not all of today's states would be recognized. Some would have to be subject to international supervision, until they meet certain requirements of the international community (Potter, 2004:8-9). However, there is no provision in international law that would allow a state to threaten its sovereignty due to the poor quality of domestic institutions. In this way, an attempt is made to relativize the sovereignty of weak and underdeveloped states and enable the interference of external factors. The relativization of sovereignty did not end with theoretical considerations. The concrete actions of the international community in the last three decades have shown that the sovereignty of the state is not what the UN Charter envisages.

Robert Jackson distinguishes between positive and negative sovereignty, depending on the functionality of the authority over people and territories. Failed states have negative sovereignty. Due to the existence of negative sovereignty in certain states, he is an advocate of redefining traditional sovereignty, all with the aim of enabling external intervention that should provide "necessary assistance" to such states. Jackson believes that the biggest obstacle for more active involvement of the international community and assuming greater responsibility in solving the internal problems of failed states is precisely international law. According to him, key actors in the international community should act more decisively when it comes to the limitations contained in international law on the issue of sovereignty: If failed states threaten the international order, then there are no legal limits to intervention, because the great powers are responsible for preserving international peace and security in in accordance with chapter 7 of the UN Charter (Jackson, 1984:4).

The UN itself, taught by unilateral military actions, will begin to take certain steps to redefine and limit sovereignty after several serious cases of violations of international law in this area. Humanitarian interventions, undertaken by certain parts of the international community in the post-Cold War period, are trying to be incorporated into international law through the UN system. One of the most serious attempts was the report of the International Commission on Intervention and State Sovereignty (ICISS - International Commission on Intervention and State Sovereignty) known as "Responsibility to Protect". It refers to the responsibility of states towards their own citizens and the international community in the event that the state fails to fulfill its obligations regarding the protection of human rights. The real goal of this concept is to provide a legal and ethical basis for humanitarian interventions. This can be concluded not only from the content of the report, but also from the time when it was created (in 2001) after the aggression of the NATO alliance on the FRY. The Commission unanimously agrees that in the current international system there is no other body and higher authority than the UN Security Council to authorize intervention. However, the task is not to find an alternative to the UN Security Council, but to ensure its greater efficiency and more favorable conditions for decision-making than in the past. That is why they believe that any call for military intervention should also formally request a decision of the UN Security Council (Savić, 2007) on the conflict, and shortly thereafter, referring to this resolution, they will vote a new 1706 authorizing the deployment of the UN forces in Darfur, Sudan (UN).

Typology of States

Depending on the level of provision of key social goods for its citizens, Robert Irwin Rotberg distinguishes:

3. Strong states
4. Weak states
5. Failed states
6. Collapsed states (Rotberg, 2004:3-9).

Barry Buzan views the strength of a state through its ability to ensure security within its borders. However, he expands the concept of state security and introduces the term "security of human collectivities", and the state is only one of them. Other collectivities can be: ethnic and religious communities, classes, etc. The ideal type of state is when ethnic and cultural boundaries coincide with political ones, but in many cases the nation and the state do not. The security of human collectivities includes five elements: military, political, economic, social and environmental security (Buzan, 2007:37-38). By analyzing national security, we come to the conclusion whether a country is strong or weak. Strong

states have a high degree of social-political cohesion and the ability to provide social security on their territory. Weak states are those with weak social-political cohesion that do not provide security for society (Buzan, 2007:93). It should be remembered here that according to Bazan, the strength of the state does not depend on nor is it mutually related to power.

The concept of legitimacy as a key measure of state strength was developed by Kalevi J. Holsti. Legitimacy is reflected through the attitudes of citizens, whether they reject or approve the right to rule over themselves by those who do it in the name of the state. He distinguishes two key aspects of legitimacy: vertical - loyalty to the ideas of the state and its institutions, that is, the extent to which the official power is confirmed by the electoral will; and horizontal - which refers to the degree of unity, mutual respect and tolerance of different communities (ethnic, religious, class, cultural, etc.) within the state.

For Holsti, modern states have some common characteristics: defined territory, symbols, membership in international organizations and internal characteristics, but they differ considerably in terms of horizontal and vertical legitimacy. According to him, states that have complete horizontal and vertical legitimacy are strong, and these are primarily the developed states of the West. Weak states lack not only legitimacy, but also the institutional strength to improve the situation. A weak state is caught in a vicious circle. It does not have the resources to create legitimacy through the provision of security and other goods for the population. Finally, for Holsti, horizontal and vertical legitimacy has completely collapsed in failed states (Holsti, 1996:102-103).

Concept and Typology of Failed States

In the period after the Cold War, failed states came into the focus of interest in politics and political science of Western countries for humanitarian and security reasons. Humanitarian motives for dealing with them were reflected in the concern of the international community for the suffering of the population in failed states. To illustrate, Western interventions in the civil wars of the 1990s were motivated by humanitarian reasons (at least that is what they officially declared). Jakub Grygiel says for the interventions in Bosnia and Herzegovina, Somalia and Haiti that they were initiated when public opinion in the West was shocked by images of suffering and bloodshed, and not because of the feeling that failed states will directly threaten the US national security. He further concludes: "The attack on the USA on September 11, 2001 changed the perception that failed states in terms of security can be ignored" (Grygiel, 2009). Failed states suddenly became a security threat, not just a place of humanitarian crisis. Security motives related to their own protection after the terrorist attacks on the USA in 2001. The proclaimed reasons for the intervention of the US and its allies in Afghanistan were of a security nature and essentially boiled down to the claim that failed states with their weak institutions provide refuge to terrorists who threaten the security of distant regions and countries.

For Rotberg, the key element for classifying a certain state in the failed category is its ability, that is, its inability to provide social goods for its citizens. The social goods that the state should provide to its citizens are: security, rule of law, political rights and freedoms, health care and physical infrastructure (Rotberg, 2004:2-4).

Rosa Ehrenreich Brooks defines failed states in a similar way as Rotberg. However, she tries to systematize the challenges that arise from failed states in three groups, namely: humanitarian - poverty, disease, violence, refugee movements and dependence on foreign aid; international security - especially after the terrorist attacks on September 11, 2001, failed states were recognized as fertile ground for extremism and an ideal place for organized terrorist groups; and legal challenges - given the existence

of poorly functioning states in the world, an international order based on state sovereignty is problematic. Such governments cannot enter into treaties, cannot participate in the dense and growing network of international trade, sign environmental and human rights treaties, and cannot enforce treaties between their own citizens and foreigners (Brooks, 2005).

Gross gave one of the most comprehensive definitions of a failed state, that is, he defined the criteria according to which a state could be classified as a failed state: the government does not exist, or it exists, but cannot fulfill the state's international obligations; the government cannot ensure public order in the entire territory of the state, or in its larger part; public order in a significant part of the country's territory is disturbed to the point where personal safety is seriously threatened and all or most forms of constructive, social and corporate activity are prevented due to insecurity and violence; this situation is not the result of transient phenomena (famine, flood, etc.), but reflects a permanent systemic problem or problems that are unlikely to be solved by limited conventional measures, such as reforms at lower levels of government, new financial structures supported by international institutions or donations from donor countries (Gross, 2004:3).

Bearing in mind the theoretical points of view presented in this paper, a failed state means a state that:

1) Lost physical control over a large part of its territory or monopoly over the legitimate use of force,
2) Is incapable of providing and relatively fairly distributing social goods for the population (safety from political and physical violence, supply of basic life needs of the population, political rights and freedoms, rule of law, independence of the judiciary, infrastructure, efficient health and school systems),
3) Is unable to enter into relations with other countries as an equal member of the international community
4) Is unable to provide legitimate authority for making collective decisions.

There is no official international institution competent to define a state as failed, or to indicate the existence of serious problems that could lead to the collapse of the state. However, there are non-governmental organizations that are engaged in researching the weaknesses of states.

The Causes of the Emergence of Failed States

Each country that is faced with the possibility of becoming a failure has its own specifics in terms of: history, internal structure, social cohesion, development of institutions, geopolitical position, democratic traditions and level of economic development. Accordingly, there are a number of causes having influence on the collapsing of the state and its institutions to the point where we can consider them to have failed. The causes of the emergence of failed states can be classified into five groups:

1. **Colonial legacy** - In the period after the Cold War, the most failed states were created in Africa, namely in its sub-Saharan region. For Holsti, the colonial legacy is the main cause of the emergence of weak and failed states in this part of the world through:
   1) Territorial inheritance - which meant that the newly independent states should simply transform from territorial creations called colonies into modern states.
   2) The nature of colonial political institutions, their bureaucratic structure. Colonies were not created on the principles of participatory democracy. The most important decisions were made in the colonization centers.

3) The bureaucratic structure, namely, the colonial staff was not trained to be accountable to the local population and their interests, but to rule from the top down. Colonial authorities often favored certain groups at the expense of others, as in Rwanda, forming ethnic elites to rule over those deemed less valuable.
4) Separation of military and police forces from the rest of society.
5) Through the absence of vertical legitimacy (Holsti, 1996:99-100).

2. **Global changes in the international system** - One of the biggest changes in the international system in recent history is the end of the Cold War. This global change in international relations will bring the following: the disappearance of bipolarism and the emergence of unipolarism in the world (the dominance of the only remaining superpower - the USA), the disappearance of the socialist social order in Eastern Europe, the united Germany, the thawing of relations between Moscow and Washington and the collapse of the Soviet Union and the SFRY and the creation of many new states in Europe and Asia. The end of the Cold War brought on the soil of Europe one of the bloodiest conflicts at the end of the 20th century. The SFR Yugoslavia disintegrated in a multi-year civil war, experiencing in the worst way the tragedy of a failed state. Its disappearance did not stop the process of creating failed states in these areas. Bosnia and Herzegovina was a failed state at the time of its creation, that is, when it became a member of the UN in May 1992. The southern Serbian province of Kosovo and Metohija, which a small part of the international community recognizes as an independent state, is a failed state. The disintegration of the SFRY is the result of several factors, but one is decisive - the end of the Cold War. One of the most serious analyses of the disintegration of the SFRY was given by Professor Dejan Jović. He claims that there are eight causes of state collapse, each of which is significant and carries a certain weight. He calls the factor of global change in the international system the "argument of international politics" and says, among other things: "Yugoslavia was maintained thanks to the balance between the two military-political blocs". Its non-aligned policy of equidistance towards those blocs, and the geographical position between them was, if not the main, then certainly a very significant reason for the survival of Yugoslavia as a united country" (Jović, 2003:68). According to him, it is completely clear that the end The Cold War destabilized the former Yugoslavia, because the external enemies, who until then had marginalized internal problems making them secondary, disappeared.
3. **Absence of legitimacy** - Legitimacy is the ability of the political system to arouse and maintain political beliefs that the existing institutions are the most relevant and appropriate for society. Holsti talks about how the state can lose its legitimacy: "Practices and policies that undermine the legitimacy of the state arise when it fails to guarantee security to citizens, when the economic dimension of legitimacy is violated, when there is a lack of social consensus on the political rules of the game, in cases appropriation of the state by individuals, families, groups or communities, when alternative concepts of governance and mass corruption appear." (Holsti, 1996:104)
4. **Globalization** - represents a universal process that includes the economic, technological, political, idea-cultural and military connection of people, nations and states according to the model of the Western civilizational paradigm. It becomes more and more intense and spreads to almost all spheres of human civilization. Due to its contradictory effects, an increasingly serious dilemma arises - does globalization create conditions for comprehensive peace and balanced development in the world or does it bring new serious threats to humanity. After the initial euphoria and optimism regarding globalization and its identification with the future planetary paradise, there are more and more serious warnings about the multitude of risks and dangers it can cause. Globalization caused the emergence of failed states through its socio-economic and political form, as well as a new round of military interventionism.

5. **The disappearance of bipolarism in the world** - The post-Cold War era in international relations, especially its beginning, was characterized by the complete dominance of the USA. The traditional balance of power in the international system has disappeared. America's power in the world had no one to restrain it, which produced negative consequences for the countries that got in the way of its interests. The end of bipolar competition has drastically reduced the motivation to use aid and trade as political instruments to win allies and keep them in power. What happened was that the superpower withdrew with its financial and military support, relying on the governing capacity of the domestic government. Regimes that did not develop their own domestic capacities, but were dependent on foreign aid, experienced a sudden collapse when that aid disappeared. Somalia is one of the most famous examples of state collapse after the Cold War, which was caused by the disappearance of the bipolar division of the world.

Conclusion

In the last three decades, there have been major changes in terms of the importance, place and role of the state both in the domestic sphere and in the international system. The process of intense globalization continues to transform and weaken the national state, the global economic process based on the neoliberal model has carried out a redistribution of power in international relations to the detriment of states, while supranational centers of power threaten to change the essence of sovereignty as one of the basic features of the state. Sovereignty in the economic sphere states share with international organizations and multinational companies, sometimes on a voluntary basis, and often forced. The collapse of sovereignty in the political sense was not a matter of choice, but imposed by the neoliberal elite through its military-political lever of power - the NATO alliance. The combination of weak state structures and external pressures caused by changes in the international system led to the loss of the basic functions of individual states, which were given the attribute of failure. Soon after the end of the Cold War, these countries were marked as one of the main sources of security threats.

The causes of failure are specific to each country, so there is no universal pattern for the emergence of failed states. Global changes in the international system led to the disintegration of communist federations, and that led certain newly formed states to a bloody civil war. When the state is not able to guarantee the safety of its population or a certain part of its ego, then it loses the legitimacy of ruling and endangers its citizens. The process of intensive globalization will weaken a large number of countries through its various forms, and some countries will become direct victims of this process. The most brutal form of globalization is the new round of military interventionism with the proclaimed goal of imposing democracy, human rights and a neoliberal form of economy. With the disappearance of the bipolar division of the world, a part of the states will lose the support of the great powers, which will lead to serious problems in the functioning of the state, and in an extreme case to collapse. The above-mentioned causes, individual or multiple, can weaken the state to the point of failure. Therefore, the international community should actively participate in their recovery.

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MODEL OF FIELD TRAINING REDESIGN AT THE UNIVERSITY OF CRIMINAL INVESTIGATION AND POLICE STUDIES BASED ON STUDENT EVALUATION

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Introduction

At the beginning of the 21st century, evaluation and quality of the teaching process grew into significant policy issues in education around the world while acting as powerful governance mechanisms at the national and transnational levels (Anđelković-Pešić et al., 2012; Gurova et al., 2015). According to Holland (2005), enhancing the quality of primary, secondary, and higher education is becoming increasingly crucial by fully implementing internal and external control strategies and regularly monitoring and evaluating all aspects of the educational process.

The evaluation of the educational process represents a specific pedagogical phenomenon (Matijević, 2005; Španja, 2019). There are numerous definitions, divisions, and evaluation models, so it is not easy to single out its unique conceptual definitions and modalities (Patton, 2002). Evaluation results from monitoring and research to understand teaching practice in the context of improving teaching to develop, change, adapt, improve, and achieve the desired results. Such evaluation can be considered one of the elements in the cycle of reflexive review, understanding, and changing practice (Gibbs, 1988). Also, we can say that evaluation is part of the teaching process that includes permanent, organised, and systematic monitoring and analysis of teaching in order to understand the process of teaching itself and the measure of achieving its achievements (Franceško et al., 2002), i.e., to change and improve teaching practice, to adapt teaching to the needs and capabilities of students, teaching performers and circumstances in the environment, then to achieve the desired long-term and short-term goals, to change the plan and improve the program, and for the performers of teaching to develop as teachers.

During class preparation and planning, formative and summative evaluations assess progress. Bearing in mind who performs the evaluation, we distinguish *internal evaluation and self-evaluation* – performed by the subjects of the teaching process and *external evaluation* – performed by someone not participating in the teaching process. Conditionally, these types of evaluation belong to the unified term *institutional evaluation*. Planning and organising a continuous process of institutional evaluation requires adequate preparation of the subjects of evaluation, development of instruments for conducting evaluation and collecting, processing, analysis, submission, and presentation of reports. Teaching evaluations are not commonly used to enhance institutions' teaching quality. We must recognise the

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value of these evaluations as they are an effective means of identifying areas of improvement. Ensuring their appropriate use is crucial. Often, teachers perceive evaluations as an administrative obligation, external control or formal care of the system instead of a way of improving quality. Evaluating teaching in Serbian universities relies solely on standardised student questionnaires. Unfortunately, these questionnaires contain questions that do not help improve the quality of teaching. The purpose of such an established evaluation is for the evaluated teacher to receive a "certificate" that he presents when choosing a vocation, whereby the criteria for the title selection do not give this data sufficient importance (Stančić, 2014).

Considering the evaluation cycle phases, we distinguish the following evaluations: *ex-ante evaluation* – before the implementation of the program/projects; *on-going* or *interim evaluation* or *mid-term evaluation* – during the performance of the program/project; *ex-post evaluation* – after the implementation of the program/projects (De Rijcke, 2016). At the program level, in addition to performance evaluations, other types of assessment are possible (thematic evaluations, strategic evaluations, evaluations of policies of common interest, theory-based performance evaluations, factual impact evaluations, meta-evaluations/evaluation evaluations), etc. (Tyler, 1989). Also, the term "diagnostic evaluation" is used to record the current state of teaching, especially before the introduction of any changes, so that evaluation experts know how to attribute the possible effects of these changes (Vizek-Vidović et al., 2003, p. 444).

Evaluation can also be seen from the aspect of its organisation and implementation in the formal (educational system) and informal teaching process (teaching in training according to vocational training programs) (Wills, 1994; Despotović, 2010). In both cases, multiple evaluation models determine differences in the evaluation processes.[2]

Scott (1998) and Herman et al. (1987) identified and categorised seven evaluation models concerning their orientation in the evaluation process – goal-oriented, decision-oriented, research-oriented, participant-oriented, free-oriented, alternative explanation-oriented, and stock-oriented.

After the introductory elaboration of the topic of evaluation, it is necessary to ask the question: What are the characteristics of evaluation in the national education space? Is it characterised by a need for more individualised and flexible approaches to teaching, especially in higher education? Accepting and introducing a modern didactic-methodical standard in the acts regulating the integration of higher European education resolved the earlier mismatch and dysfunctionality in the process and content of higher education teaching. This standard, among other things, is characterised by a new evaluation concept. In this regard, in order to increase the effectiveness and efficiency of the organisation in both teaching and management, it was necessary to enhance the reflection of transparency, interaction, and reflection of the newly established student-administration-teacher relationship, ensure the regularity of the evaluation process, the distribution of roles and profiling of the roles of the carriers of this process, as well as the model of communication between them (Handal, 2003).

2 Evaluating police training requires continuous planning and timely implementation to yield the expected information. Evaluation should occur throughout the training, at its conclusion, and upon participants' return to their work duties. Initially, participants' reactions to the new teaching content are assessed before the training commences. In the Ministry of Internal Affairs of the Republic of Serbia, evaluation typically occurs before training through a prior knowledge test, during training with daily and weekly assessments, and at the end of training via a comprehensive knowledge test (which provides comprehensive information on the progress made – measuring the attained change in knowledge, skills, and attitudes, crucial for the ongoing refinement of training). Additionally, evaluation is conducted upon participants' return to their workplaces, three to six months after training, measuring the application of acquired knowledge and skills in their professional roles. More on this: Regulation on vocational training and training in the Ministry of Internal Affairs: Official Gazette of the Republic of Serbia, 42/2017-5, 56/2018-11, 34/2019-10, 11/2020-9, 24/2021-34, 49/2022-18, 54/2023-5.

Academic quality refers to the availability of diverse learning opportunities and how much they assist students in achieving their academic objectives. It entails verifying the adequacy of conditions such as effective teaching, support, and various learning opportunities to ensure students receive the necessary guidance and resources (Castelluccio & Lanfranco, 2006). In higher education, fostering a quality culture and providing full support for quality assurance measures demands accepting students as complete and equal partners. In other words, the inclusion of students in the quality culture of a higher education institution proves to be very useful (Richardson, 2005; Bruce et al., 2007; Tot, 2013). Students can be the source of many creative ideas, but they should be allowed to express them (Jevremov et al., 2016, p. 293).

What is learned from students when examining their views on teaching are two different things. On the one hand, relatively objective information is obtained, for example, how often they attend classes, how many students regularly come to class, etc. On the other hand, obtaining subjective assessments and evaluations about students' personal experience in the teaching process and how students experienced a particular subject, content, specific teacher, and associate is essential. This situation should not be discouraged, and it is clear that students' subjective experiences are significant in the evaluation and quality control of teaching (Handal, 2003).

Hence, this paper presents the results of a study initiated to explore students' subjective experience of the quality of the teaching process at the University of Criminal Investigation and Police Studies, explicitly focusing on the unique forms of teaching field training that set the University apart from competing higher education institutions (Milojević, 2010; Milojević & Janković, 2012; Milojević et al., 2014). Namely, educating staff with university degrees to fill the Ministry of Internal Affairs of the Republic of Serbia is complex. Future police personnel, during their education, must adopt an extensive fund of theoretical knowledge and acquire a range of practical knowledge and unique skills that serve as a "professional tool". The training process, i.e., exercises with varying intensity and dynamics, enables the acquisition of these skills.

In its original form, field training constitutes fundamental police training conducted outside the headquarters of higher education institutions within the defence and security system. It follows a highly intensive and dynamic all-day program lasting several days. The plan and program of field training at the University of Criminal Investigation and Police Studies envision implementing an upgraded model of basic police training. This training focuses on operational police skills, fire training, and the tactical conduct of members of the police of general jurisdiction, followed by training members of police units with specific purposes.

The main objective of the field training is to directly connect the theoretical knowledge acquired at the University of Criminal Investigation and Police Studies with the practical actions of members of the police of general jurisdiction, i.e., to expand the existing theoretical knowledge and acquire new practical knowledge and acquire skills necessary for the execution of regular and extraordinary police duties and tasks. Field training also aims to enable students of the University of Criminal Investigation and Police Studies to acquire machine-built, morally-volitional habits and psychophysical fitness, as well as a more complete and comprehensive mastering and determination of specific teaching contents within the narrower professional subjects, thus acquiring fire, tactical and topographical competence for solving security tasks in urban and rural geospace, in order to better prepare for work in the Ministry of the interior of the Republic of Serbia.

Bearing in mind the above, the research in question used an evaluation model that belongs to the type of summative evaluation, the implementation of which investigates the level of assurance and quality development of higher police education in the part of unique forms of teaching – field training. This

research aims to determine the attitudes of students of the Belgrade University of Criminal Investigation and Police Studies sent for field training on the effectiveness of field training. To define research tasks, we can assess the following:

a) Assessing students' attitudes about the applicability of the content of field training in future work, its presentation, and the possibility for them to adopt it adequately;
b) Evaluating the impact of the realised program contents on changing students' training level from thematic units where they acquired practical knowledge and skills in operational police skills and police powers, from training in handling official weapons and police topography.

The obtained students' attitudes indicate their perception of the teaching process, as well as the level and structure of their agreement or disagreement with the projected current concept of teaching and possible problems in the realisation of teaching during field training. One can utilise these data in the general evaluation process, i.e., in self-evaluating the quality of teaching during field training and in the function of a positive approach in redesigning study programs for future generations.

By implementing this research, it is possible to come up with a modality of solutions for improving the didactic-methodical standard of higher police education (Milojković, 2001), thus raising the level and importance of the culture of responsibility of education for the police profession, i.e., considering the possibility of using the results of the quality assessment of higher police education in the development and implementation of functional education policy in national police education (Milojković, 2011).

Research Methods

Based on Donald Kirkpatrick's widely used model for assessing the effects of training, we designed the modalities for summative evaluation. His model observes four evaluation levels, from the participants' primary reaction to the training to the impact of the training itself on organisational performance. This model also examines what students learned in training and whether learning has influenced a positive change in their behaviour in the performance of functional tasks (Kirkpatrick, 1996, p. 54). In principle, when evaluating field training as a unique form of teaching, we measure the following parameters: completion of training, participants reactions or impressions, the effectiveness of knowledge and skills transfer during training, the potential for learning, post-training results, participant completion rates, and the successful transfer and acquisition of knowledge and skills (assessed through knowledge tests aligned with the learning outcomes). Ultimately, after completing the training, we evaluate the results. This assessment gauges the level of success and scope of the training. It measures whether and to what extent the trainees applied the acquired knowledge and skills in practice (assessing behavioural changes) and thus contributed to the benefit of the police organisation.

In this specific case, we assessed student satisfaction with the quality of teaching at the Mitrovo Polje field training centre of the Teaching Centre of the Ministry of Interior of the Republic of Serbia. We employed testing methods and utilised a survey technique with a concise questionnaire, a standard approach for evaluating students after field training sessions, especially when anticipating a high student turnout. To meet these criteria, we integrated short questionnaires into the evaluation to assess the quality of teaching, a method endorsed by many researchers (Byrne & Flood, 2003). Short questionnaires offer benefits such as reducing resistance, minimising fatigue, boredom, and effort, and positively influencing the subjects' motivation to participate in the study. They also lead to higher voluntary participation rates, increasing the potential for generalising the results. Another specific advantage lies in their facilitation of repeated measurements. However, for short questionnaires to be

effective, they must meet specific requirements regarding reliability and validity (Mužić, 1999). It is important to note that they are suitable only for situations where we need to assess a group phenomenon (Ziegler et al., 2014). This aligns directly with evaluating teaching quality in student assessments (Jevremov et al., 2016, p. 493), the approach employed in this research.

Accordingly, we examined the essential aspects of student assessment of the quality of teaching in-field training. This assessment focused on evaluating the organisation and implementation of teaching, the quality of teaching content, and the pedagogical competencies of the teaching performers in training (Biggs & Tang, 2011). Additionally, it explored the relationship between students' academic characteristics and the evaluation of specific aspects of teaching quality. Previous research investigated the impact of gender structure, study method (on budget or self-financing), field training year, and academic achievement, as these characteristics were identified as significant factors influencing teaching evaluations (Jevremov et al., 2016, p. 495).

Instrument and Scope of Research

A short questionnaire was created based on the available examples from previous research (Milojević et al., 2011; Milojević et al., 2013) and a one-year pilot test in 2015 that corrected its metric characteristics. It consists of three groups of closed questions and one open-type question necessary to achieve a higher-quality instrument. The respondents rated their responses on a three-point rating scale (3 – satisfactory, 2 – I cannot assess, and 1 – not satisfactory). More specifically, students evaluated the following aspects: the didactic-methodically shaped teaching contents studied in field training (engaging, appropriate, purposeful, complex, demanding, oversized); whether the organisation of all-day life and work in field training adequately accommodated teaching activities, extracurricular activities, and security services; the quality and quantity of the equipment they used in field training; the quality of accommodation conditions in the field training; the quality and quantity of nutrition in the field training; and the work and commitment of responsible task holders in field training (teachers, instructors, management and logistics staff).

We use a 1 to 5 scale to assess student achievement scores. The students assessed their knowledge and skills in the subjects of Police Tactics, Police Topography, and Armament with Shooting Classes, as well as their overall impression of Field Training. Following this, they had a section where they could provide suggestions and remarks based on the aforementioned quantitative-qualitative characteristics of field training. Before completing the questionnaire, we gave students comprehensive introductory notes explaining the evaluation's significance and purpose, which enabled students to recognise that their evaluation could impact the redesign of field training for future generations.

Consequently, they perceived the potential for achieving its goal and were thus motivated to complete it. Additionally, we ensure that students can access and complete the survey questionnaire openly and honestly while maintaining anonymity. Between 2016 and 2019, we conducted the research with 416 third-year undergraduates of academic studies in Criminology, constituting 75% of the population sample.

Results and Discussion

Four hundred sixteen students participated in the study. Males (229) were statistically significantly higher ($\chi 2=4{,}240$; df=1; p=0.039) than females (187). The students stated that the didactic-methodically shaped teaching contents studied at the Field Training were interesting (398), appropriate accord-

ing to the actual actions of the police (397), purposeful for performing police tasks (398), complex to understand (16), demanding in psychophysical terms (28), oversized by teaching (thematic) units that are realised in field training (95), oversized by time dynamics for realisation in-field training (134). The organisation of all-day life and field training work was good in the implementation of teaching activities (358), extracurricular activities (359), and the performance of security services (360). The quality and quantity of equipment we have longed for in-field training was satisfactory: less in the segment of uniform (250), personal gear (251), and armaments (250). The conditions of accommodation and food at the field training were satisfactory: in the segment of accommodation (326), in the quality of nutrition (199), in the quantity of nutrition (199); the work and commitment of the responsible task holders were satisfactory: teachers with UCIPS (411), instructors from the Ministry of Interior (412), leadership (407), logistics staff (408). Students rated the level of acquired knowledge and acquired skills as very good (3.73±0.68). The best rated were Armament with shooting classes (3.77±0.73), followed by Police Topography (3.73±0.73), and Police Tactics (3.68±0.72). The overall impression of field training was an excellent 3.68±0.67 (table 1).

Table 1 *Gender Difference in the Assessment of the Level of Acquisition of Knowledge and Acquired Skills and the Overall Impression of Field Training*

	Males‡		Females‡		Total‡		
	Averange	SD	Averange	SD	Averange	SD	Signifi-cance#
Police tactics	3.66	0.73	3.70	0.70	3.68	0.72	0.603
Police topography	3.70	0.71	3.75	0.74	3.73	0.73	0.477
Weapons with shooting classes	3.71	0.74	3.84	0.73	3.77	0.73	0.057
Level of acquired knowledge and acquired skills	3.69	0.68	3.77	0.69	3.73	0.68	0.266
Overall Impression of Field Training	3.65	0.66	3.72	0.68	3.68	0.67	0.274

#t-test; SD- Standard deviation; ‡ Single-factor analysis of variance ANOVA

Female participants rated the level of knowledge acquired better (3.77±0.73) than males (3.69±0.68), but the difference was not statistically significant (p>0.05).

Table 2 *The Way of Studying in the Assessment of the Level of Acquisition of Knowledge and Acquired Skills and the Overall Impression of Field Training*

	Regular‡		Self-funded ‡		
	Averange	SD	Averange	SD	Significance #
Police tactics	3.86	0.70	3.54	0.70	p<0.001
Police topography	3.89	0.71	3.60	0.71	p<0.001
Weapons with shooting classes	3.90	0.73	3.67	0.73	p<0.001
Level of acquired knowledge and acquired skills	3.89	0.67	3.60	0.67	p<0.001
Overall Impression of Field Training	3.83	0.67	3.56	0.65	p<0.001

#t-test; SD- Standard deviation; ‡ Single-factor analysis of variance ANOVA

The formation of an assessment of the level of acquired knowledge and acquired skills and the overall impression of field training statistically significant (p<0,001) has a common influence on the way of studying and years of training. Full-time (budget) students (Table 2) and students who underwent field training in 2019 received significantly better grades compared to students from the previous three years (Table 3). Females gave better scores than males in all rating segments, but the difference was insignificant (p>0.05). Students with a higher average score rated the level of acquired knowledge and the overall impression of field training significantly better.

Table 3 *Time of Training in Assessing the Level of Acquisition of Knowledge and Acquired Skills and the Overall Impression of Field Training*

	2016[a]		2017[b]		2018[c]		2019[d]		
	Averange	SD	Averange	SD	Av-erange	SD	Averange	SD	Signifi-cance[#]
Police tactics	3.62	0.71	3.47	0.68	3.67	0.67	4.23	0.57	d/a,b,c***
Police topography	3.63	0.69	3.54	0.72	3.72	0.69	4.29	0.55	d/a,b,c***
Weapons with shooting classes	3.66	0.71	3.52	0.67	3.82	0.69	4.42	0.55	d/a,b,c***
Level of acquired knowledge and acquired skills	3.64	0.70	3.51	0.69	3.74	0.68	4.31	0.56	d/a,b,c***
Overall Im-pression of Field Training	3.60	0.65	3.50	0.67	3.70	0.64	4.16	0.51	d/a,b,c***

[#] Single-factor analysis of variance ANOVA; ***p<0.001

The method of studying (Beta=-0.197; p=0.000) of the training period (Beta=0.265; p=0.000) (Table 4) has a common influence on the level of acquired knowledge and acquired skills.

Table 4 *Multivariate Regressive Analysis*

	Beta	p	R	R^2
Level of acquired knowledge and acquired skills			0.329	0.108
Way of studying	-0.197	0.000		
The period of realization	0.265	0.000		
Overall Impression of Field Training			0.374	0.140
Way of studying	-0.208	0.000		
The period of realization	0.314	0.000		

Among the results obtained, full-time students who conducted field training in 2019 gave the highest average grades for the acquired knowledge and skills and for the Overall Impression of Field Training.

The distribution of the relative frequencies of the most common open response groups expressed through concrete proposals and remarks is: 82 students had no objections to field training (19.7%), 59 students praised the training (14.1%), 38 students especially praised the leadership and teaching staff

(9.1%), for the longer duration of the training declared 124 students (29.8%), objections to poor personal equipment were given by 70 students (16.1), objections to poor food were made by 60 students (14.4%), 58 students suggested more practical exercise (14%), 34 students suggested only morning work (8.1%), 30 students suggested introducing new technical means of police (7.2%), 21 students proposed preparatory training in Belgrade (5%), 19 students proposed to increase training in the natural environment (4.5%), the development of field training manuals was proposed by 13 students (3.1%), 13 students proposed a larger fund of classes in the subjects Police Tactics and Police Topography (3.1%), 10 students declared that the training was too intensive and complex (2.4%), 9 students suggested a higher number of shootings from official weapons (2.1%), 8 students declared that the training was complex and psychophysically demanding (1.9%), 7 students stated that training participants should change more in command roles (1.6%), 8 students suggested to once again participate in field training in the final year of study (1.4%), 5 students suggested hiring a more significant number of instructors from the service (1.2%), 3 students declared that they expected more from field training (0.8%), while only one student replied that he was not interested in field training (0.2%).

The students expressed overwhelming satisfaction with their teaching contents' engaging, appropriate, and purposeful nature. They found the material easy to comprehend and noted a sense of relaxation regarding psychophysical demands, content, and timing. Additionally, they commended the well-organised structure of the all-day activities during field training. The extensive experience and dedicated efforts of those responsible for preparing, organising, and conducting the field training contributed to this positive feedback. A smaller group of 28 students pointed out that field training posed significant psychophysical challenges.

Furthermore, inadequate individual preparation for field training may account for approximately a quarter of the students finding the content and duration of the training overwhelming. The deterioration of the required equipment in the field and the inability to adequately replace it have led to its lower quality and quantity. The majority of students expressed contentment with the accommodation conditions during Field Training. However, nearly 50% of surveyed students believed that the quality and quantity of nutrition required improvement, likely due to the limited supply of food items in the camp room used by the University as an external user. Within this survey segment, students awarded high marks to those responsible for tasks in field training, reflecting their professional dedication and maximum effort. These findings align with the results of earlier research (Milojević et al., 2011; Milojević et al., 2013).

Improved collective and individual preparation, an innovative study program, the involvement of a more significant number of teaching contractors, and enhanced logistical provision of training may account for the fact that students assigned higher grades to the level of acquired knowledge and skills, as well as their overall impression of field training, compared to previous research (Milojević et al., 2011; Milojević et al., 2013).

The examined effects of the gender structure, the method of study, the years of implementation of field training, and academic achievement stood out as significant correlates of the evaluation of teaching, which was confirmed by many earlier studies (Franceško et al., 2002; Handal, 2003; Richardson, 2005; Milojević et al., 2011; Biggs Tang, 2011; Anđelković-Pešić et al., 2012; Milojević et al., 2013; Jevremov et al., 2016; De Rijcke et al., 2016). Statistical significance ($p<0.001$) undeniably confirms the influence on the formation of assessments regarding the level of acquired knowledge and skills. Regular (budget) students who attended field training in 2019 gave significantly higher grades on the overall impression of field training, with women consistently outscoring men in all rating segments. The joint influence on these ratings stems from the study method and years of training. However, the difference was

not statistically significant (p>0.05). Students with a higher average score rated the level of acquired knowledge and the overall impression of field training significantly better. The results indicate that it is impossible to ignore the effect of student academic and other characteristics when assessing the quality of teaching and study programs. In other words, "the curriculum can no longer be designed for the needs of a homogeneous population". The assumptions about the diversity of assessments of the quality of teaching depending on the academic and even sociodemographic characteristics of students are mainly based on theoretical determinations or attitudes according to which the quality of education and teaching is tricky to define and predominantly depends on who observes and evaluates the teaching (Jevremov et al., 2016).

Conclusion

Assessing field training at the University of Criminal Investigation and Police Studies is crucial for ascertaining whether participants have mastered the training, if learning outcomes have been achieved, and if adjustments are necessary to improve training for future generations.

The following factors influenced the results of the field training evaluation: the specifics of the organisation, temporal and geospatial conditions for executing the training, modern and well-structured teaching content, and the quality and motivation of both training participants and non-teaching staff responsible for its execution. Additionally, results were influenced by the trainees' psychophysical and moral-volitional characteristics, their acquisition and applicability of acquired knowledge and skills, and the quality and quantity of logistical support for field training.

The research revealed that regular students, those with higher average grades, and students who completed field training in 2019 gave the highest average grades for the studied teaching content, acquired knowledge and skills, and their overall impression of field training. Additionally, a significantly smaller number of students objected to the organisation and implementation of field training. The evaluating data thus obtained have become the starting point for the improvement and changes in the teaching practice of teaching performers in-field training. Based on the analysed evaluation results, it is necessary to redesign the field training study program in the upcoming school year, which should include almost all suggestions and objections of students. This means it is necessary to redesign program content, specific changes in the organisation, and implementation of teaching, as well as the work of students and teachers, management, and logistics staff.

The University of Criminal Investigation and Police Studies, based on the research results, initiated a redesign of the field training program. The redesign encompassed the following modifications:

- Increased of the duration of field training from 10 to 14 days;
- Introduced preparatory training in Belgrade at the University of Criminal Investigation and Police Studies for four days before the commencement of training at the Mitrovo Polje teaching centre;
- Increased the number of service instructors involved in field training from 4 to 9;
- Raised the budget for classes related to the subjects Police Tactics/Police Topography from the previous 75/16 to 96/31;
- Integrated all theoretical content into the preparatory training in Belgrade, eliminating the need for theoretical classes during the curriculum implementation at the Mitrovo Polje teaching centre;

- Expanded the number of firearm drills conducted during field training at the Mitrovo Polje teaching centre from 7 to 11, and
- Invested significant resources in procuring new work uniforms and associated equipment for students and acquiring modern technical resources utilised by the police.

In the upcoming period, we plan to:

- Develop a Field Training Manual, and
- Modify the study programs to facilitate field training twice during schooling instead of conducting it only once.

Maksimović and Cenić (2013) advocate for the continuation of this type of evaluation, which can benefit from insights gained through action research. Action research embodies a flexible process where we alternate between taking action (implementing change and improvement) and conducting research (acquiring understanding and knowledge) to enhance teaching practice and refine our comprehension. The consensus endorses this approach. The action's common elements across all provisions entail conducting research in an actual educational situation, setting practice as a research goal, and involving participants in that situation at all stages of the research.

In addition to the above methodological approach, it is necessary to make the evaluation results visible to students in the evaluation of the Field Training. Then, it is necessary to include in the future evaluation process the colleagues/instructors from the Ministry of Interior of the Republic of Serbia as actors of the teaching process, but also the colleagues from the Department of Criminology and the scientific professional public as critics, which would improve cooperation among various actors in the process of designing the evaluation process and considering its results.

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LAW ENFORCEMENT AND CRIMINAL ASPECTS OF ILLEGAL DUMPING IN HUNGARY

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Introduction

Sustainable and rational waste management has become one of our most pressing global environmental issues. The overuse of resources and the production of plastics are causing a worldwide crisis in waste disposal. Developed countries are notorious for producing excessive amounts of garbage and industrial waste, and their destruction ends up in ever larger landfills in some seas. The waste is often shipped to less developed countries. It is no coincidence that Denmark had the highest per capita municipal waste in the EU in 2019, followed by Luxembourg and Malta. The lower value in the Member States that joined in 2004 can be explained by lower consumption. Hungary's municipal waste per capita (387 kg/person) was 22% less than the EU average in 2019. Romania has the lowest value, 28% less than Hungary (URL1). China used to be one of the biggest waste importers, but nowadays, it is often destined for Black Africa and Bangladesh. Tragically, the developing world is forced to take on the environmental burden of processing the resulting waste and the ecological responsibility of producing fast fashion clothing. As well as recycling as much separately collected waste as possible, the aim is to prevent this type of waste from being made in the first place. More and more countries are recognising that waste from single-use plastics, fast-food packaging, excessive packaging, and cheap electronic devices is an extreme waste and a threat to people's quality of life (URL2). The rapid increase in waste is a result of our consumption and production. From a sustainability perspective, reducing waste, including household waste, has become a common challenge. Recent years have seen a shift from a linear economy to a circular economy, which requires destruction to be returned to the economic cycle (Németh-Mészáros, 2022). Of course, the problem does not stop there, as people often find waste dumped by unknown perpetrators under their windows, walking in the woods, or even piling up next to a waste collection island (URL3). Unfortunately, modern man considers as waste any material or energy that is no longer needed, and this interest-oriented perception is reflected in the language used, as we use the term 'collection' as opposed to the chiselled definitions of raw materials and resources (Molnár, 2015). There are many different classifications of waste, yet plastic waste is perhaps the most dangerous precisely because of its lowest recycling rate and longest-lasting environmental impact. Therefore, plastic pollution is undeniably one of the biggest global problems of our time. Most people are unaware of its magnitude and importance because they do not directly experience its consequences. But for animals and aquatic life in particular, there is a massive threat from every piece of microplastic lying in unimaginable quantities in the ocean depths. Researchers estimate that microplastic pollution exceeds 14 million tonnes (URL4). While an estimated 8,300 million tonnes (Mt) of 'virgin' plastic have been produced to date by 2015, around 6,300 Mt of plastic waste had been generated. Of this total plastic waste, 9% was recycled, 12% was incinerated, and 79% was landfilled or accumulated in the natural environment. There, they wait the few hundred years it takes to "decompose" in natural conditions. If current production and waste management trends continue, approximately 12,000 million tonnes of plastic waste will be landfilled or in the natural environment by 2050 (Geyer et

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al., 2017). The waste problem is closely linked to the global imperative of the transition to a circular economy. It is, therefore, a priority issue for the European Union, with directives and determinations setting criteria for Member States to meet, which also impose obligations on Hungary, which we have committed to meet. Such as the elimination of illegal landfills, stricter punishments for those who dispose of waste illegally, a redemption system, and an extended producer responsibility system have been created, as well as the legislative amendments for the rationalisation of waste economic activity, which contribute to protecting our natural environment and its values, and our treasures and let the country be clean (National Waste Management Plan, 2021-2027.).

The sensitivity of the topic is clearly shown by the fact that in less environmentally conscious countries and regions the illegal disposal of waste is not considered an essential form of criminal behaviour "for now". "*The environmental protection profession is not characterised by holistic thinking, even though by doing so, they would not only be able to manage their topic more effectively, but they would also be able to achieve a much greater impact on consumers through a systemic approach. They can easily and relevantly incorporate environmental protection and damage prevention tools. Adults like to shift the responsibility to their children by exclaiming, 'the future generation will solve it.'*" (Somfay, 2021, 100). This kind of attitude should be changed because residential or municipal waste disposal causes the most prominent environmental impact problem. This follows from the perspective of the population that the consequences of illegal dumping do not affect the individual but rather affect a larger group of people; that is, it is not considered a direct but a distant, often intangible danger. On the other hand, they assume that transportation and processing are basically the authorities' responsibility, and they do not feel their own responsibility. In the populist criminal policy, this characteristic attitude is well reflected, thanks to which the legislator assigns a relatively low social danger to such crimes. Although the situation is getting increasingly serious, there is growing pressure on local governments and law enforcement agencies, especially the police, from the local population. Illegal garbage dumping in Hungary has now increased to an extraordinary extent. At the same time, the criminal and law enforcement treatment of the problem must be applied as an "ultima ratio" solution, i. e. when other methods are not sufficient to protect against a phenomenon harmful to society (Amberg, 2020). Still, suppose the educational channels that strengthen prevention do not work satisfactorily, or the state and local government measures related to increasing the number of waste disposal sites are ineffective. In that case, the population rightly expects the sanctions to be tightened by official action. In the meantime, we are at a point where the legislation, professional preparation, law enforcement, and criminal training are deficient in dealing with this crime. Thanks to this, the public's response often appears ineffective or fake. Contrast all this with the rigour and effectiveness of police action and prosecution against drugs or violent crime. (Sivadó, 2012, 2016, 2017.) The area, therefore, faces significant challenges, the main characteristics of which I would like to describe below.

Methodology

Primarily, I considered the criminal law regulations affecting the subject area and the investigation findings of the investigative authorities to be of primary importance as I considered the processing of internal police materials to be of utmost importance. Thus, 1.7 of the National Police Headquarters (ORFK) professional task plan for 2021 analysis and presentation of the report on the implementation of the task "Risk factors of waste management and its criminal law aspects" defined in point 1, as well as the Methodological Aid prepared by the Criminal Department of the National Police General Directorate were used "to establish a uniform practice of waste-related measures". In addition, I also examined the statistical data on the crime of violating waste management regulations, such as the

number of registered crimes and the effectiveness indicators of the investigation and detection. Based on the findings, I searched for criminal and law enforcement-related indicators related to the crime which are essential from the point of view of taking action against illegal dumping. The premise of my research is that the March 2021 amendment of the crime of violating the waste management regulations did not bring a breakthrough in more effective action against corruption since it was a change in authority, just as there was no expansion of the organisation. There is still a need for more specific knowledge on the part of the police force, and the legal disadvantages imposed against crimes have not been significantly tightened. Moreover, this crime did not appear in the organisational efficiency measurement of the police. Hence, unlike other prioritised crimes, its prosecution is not a priority and emphasised task for individual investigative bodies. Nevertheless, there has been a positive shift in the criminal and law enforcement field, although faster and more effective decisions and actions are needed to speed up the process.

Hungarian Legislation on Waste Management Offences

The legal definition of the offence of violation of the waste management regime, as defined in Article 248 of the Criminal Code, has been extensively amended with effect from 1 March 2021. The scope of the Act CLXXXV of 2012 on Waste (from now Waste Act), which fills the framework definition, covers all waste, with the exceptions specified in this Act (e.g. sewage, animal by-products, etc.) and activities aimed at preventing the formation of wastes. In addition, the Government Decree No. 439/2012 (XII.29.) on waste management and waste management facilities and the registration and official licensing of waste management activities is significant. Still, essential provisions can also be found in the Law on the Environment and Nature Protection, as well as in the Government Decree No. 180/2007 (VII.03.) on the transboundary shipment of waste and the Government Decree No. 225/2015 (VIII.7.) on the detailed rules for certain activities related to hazardous waste - an essential provision of the Ht. Article 12 of the Act lays down the rules for waste collection. According to the framework legislation, the waste producer may collect waste generated on the property for up to 1 year without a waste management permit. On a property owned or used by a natural person, a maximum of 3m3 of waste was generated on the property and not covered by public waste management services, general waste management services, available waste management services not covered by public waste management services, and a maximum of 10m3 of construction and demolition waste generated on the property may be collected by Art. Article 86(16) of the Act on garbage collection explicitly states that the quantity of debris may be determined by dipping, calculation and technical estimation. The collection of garbage above the amounts provided for in the provisions of the Ht. constitutes a waste management activity which raises suspicion of a criminal offence of breaching the waste management regime contrary to Article 248(1) (a) of the Btk. The competent county government office acts as the waste management authority to ensure that the waste is removed. The owner or holder of the trash, or the owner of the property, shall be responsible for its disposal if this person is unknown.

Cases of public nuisance and administrative proceedings for illegal dumping of waste are distinguished based on the extent of the pollution and the circumstances of the removal. Disposing small quantities of debris (typically one by one) or contaminating public land with a substance is a misdemeanour. In contrast, the illegal dumping of large waste is an administrative offence. With the amendment to the Code of Laws that entered into force on 1 March 2021, the waste management authority will conduct administrative proceedings in the case of waste disposed of or abandoned on the property by another person without the property owner's consent in uncontrolled circumstances. According to Article 1(1) of Government Decree 124/2021 (12.3.21) on the designation of waste management authorities, the

Government shall designate the county government office and the department designated by the Minister responsible for waste management as waste management authorities to act as waste management authorities. The justification for the amendment to the law states that the police remain accountable for combating simple pollution but that illegal dumping of waste is punishable by administrative penalties. However, criminal proceedings are required for waste quantities exceeding 10m3 and 1,000 kg. The majority of waste-related reports are not criminalised for municipal waste, given the amount, so the investigating authorities forward the statements made to them to the government office, which is less successful in imposing the appropriate sanction and identifying the unknown offender.

The primary offence of illegal dumping of waste can be committed in one of two ways:

- under Section 248 (2) (a) of the Criminal Code, whoever disposes of waste in a place not authorised for that purpose by an authority in such a way as to endanger human life, physical integrity, health, land, water, air or their components or the individual of a living organism;
- under Section 248 (2) (b) of the Penal Code, who disposes of a significant quantity of waste not authorised for that purpose by an authority.

By introducing the quantity limit, the amendment to the law partially helped to take uniform action against the perpetrators of the crime of violating the waste management regulations. The correct interpretation of the new situation has caused problems in several places, as experts and authorities in different countries have different interpretations of the concept of hazardous waste.

Before the change in norms effective from March 1, 2021, the concept of waste in the Civil Code was narrower. The object of the crime could only be the waste capable of endangering human life, physical integrity and health, the earth, water, air or their components, as well as individuals of the living organism. The norm amendment eliminated the previous restriction and, at the same time, expanded the scope of application of the statutory facts. The Ht. based on its administrative regulations (registration, notification or waste management activities without a permit or exceeding the scope of the license), even without proving that the waste is hazardous [Btk. Section 248 (1) point a)] became punishable. In the same way, dumping waste without a permit is punishable if it is committed to a significant amount of waste. According to its interpretative provision, the Civil Code has a substantial amount of waste exceeding 1000 kg or ten cubic meters. The range of qualified cases has also been expanded in the case of waste, which only reaches a significant amount.

Violating the waste management regulations about crime was still carried out in many cases through the illegal disposal of residential waste. Unauthorised dumping and placement of municipal waste at the designated landfill site is primarily characterised by the fact that the perpetrator is not caught red-handed, the illegally deposited waste is mainly found, and the truth is reported to the police. It is also typical that the waste is transported to the place of commission by vehicle or motor vehicle due to its nature, volume or weight (URL5). It can be clearly stated that, with one exception, criminal proceedings initiated mainly for municipal waste, the demolition of motor vehicles, and the illegal placement of construction and demolition debris were committed by private individuals. It rarely happens that during construction, on the instructions of the contractor's representative, the customer, the generated waste is illegally transported and placed without a permit, or the ground is filled unlawfully with it. Among the perpetrators of illegal garbage dumping, the proportion of men is more significant than women, related to the specific features of the committing behaviours. (Tihanyi et al., 2020). The number one solutions of the waste hierarchy include prevention and increasing recycling (Bera & Mészáros, 2022: 82). The investigative authorities carry out prevention by conducting regular inspections with the involvement of the public order staff and installing surveillance cameras and wildlife cameras in cooperation with the municipalities (Pádár et al., 2023). Registers present the data

in which form an information chain can help in the identification and capture of persons who dump different waste (Nyitrai, 2021a, 2022.).These pieces of information, links and chains make up the so-called electronic investigation (e-investigation) (Nyitrai, 2020, 2021b)

Statistical Data of Crimes Related to Violation of the Waste Management Regulations in Hungary

The annual comparison of the national values for the examined crime, in terms of the number of registered crimes, investigation and detection effectiveness, is contained in Figure 1.

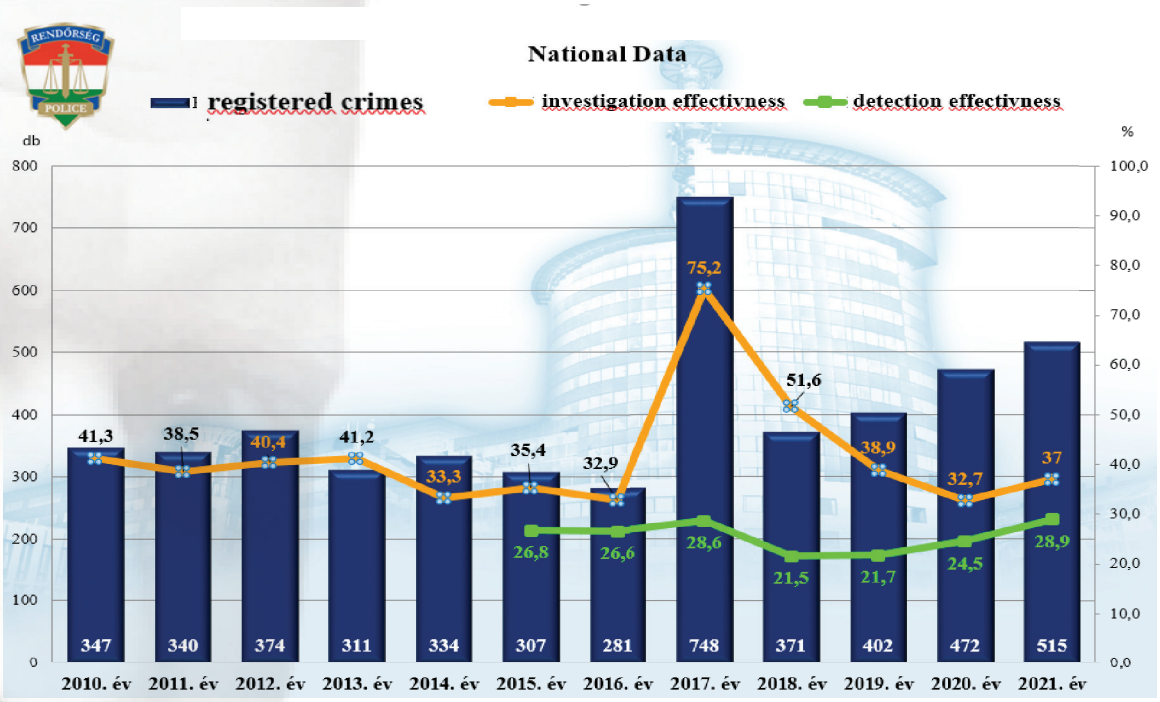


Figure 1, Source: Enyübs

Figure 1 *National Data Relative to Violation of the Waste Management Regulations in Hungary*

Based on the Unified Investigation Authority and Crime Statistics System (ENyÜBS) data in the figure, it can be established that the number of crimes against waste management varies between 300 and 500 cases per year. Increased circumstances can be linked to a more significant issue or the detection of a serial crime. As far as the investigated crime rate is concerned, the national value of the investigation success rate shows a decreasing trend, ending in 2020 with a discount of 32.7%. However, the investigation intelligence index shows an increase from year to year, although only by a few per cent. The indicator was 24.5% in 2020. The number of registered crimes in illegal waste disposal is only a statistical figure, not the actual waste piles. Of course, all of this is not the fault or deficiency of the investigative authorities/the justice system, as the latency is very high, not all illegal waste disposal is followed by official or criminal proceedings, and this only takes place when this behaviour comes into view (Garai & Molnár, 2021, 170).

I-IX of the year 2022. The data for the same period last year showed that the crime was most often committed on municipal solid waste, construction debris, batteries, electrotechnical waste, and industrial solid waste.

Findings and Recommendations of the Hungarian Police National Management for More Effective Action

As both a transit and destination country, Central Europe, including Hungary is increasingly affected by illegal waste shipments. In addition to the cover-up of green-listed waste shipments, hazardous waste may also arrive in Hungary for uncontrolled, unlawful processing and incineration. Another international trend is the proliferation of plastic waste fires. The background to these is the end of Chinese waste sourcing, which has reduced the scope for recycling. Fifty per cent of the international waste trade is shipped to China, with 7-8 million tonnes of plastic waste entering the country annually. China accounts for 95 per cent of EU plastic waste exports and 40 per cent of total US waste (URL6). Thus, the alleged illegal behaviour may represent a cheap way to eliminate accumulated waste. One study estimates that eliminating Chinese garbage imports will inevitably result in the displacement of 111 million tonnes by 2030, with nowhere to put it (URL7). It is thus more reasonable to assume that international organised crime trends will dominate in the next few years. Despite this, this crime is rated low on the police investigative authority spectrum, as the detection of these crimes is essentially the responsibility of local agencies. Very rarely, due to the speciality and complexity of each case, or in other justified cases, the investigation is carried out by the regional body or by a specialised unit of the National Investigation Bureau of the Police on Standby (from now on the KR NNI), if specifically designated to do so. An essential factor in combating illegal dumping is the mutual sharing of information, joint action by the authorities and the more precise delimitation of the activity. The police cooperate with government agencies, local authorities, notaries, civil guards, nature guards, fisheries guards, field guards, disaster prevention services, the National Tax and Customs Board and the National Food Chain Safety Office to ensure the most successful and efficient detection possible.

It is also essential to sensitise law enforcement personnel to the issue, to have a recurrent patrol presence, and to send information bulletins to public order/police departments, police stations on typical offence locations and methods. It can also be concluded that the reduction of this activity is possible mainly through the involvement of local authorities and NGOs, and the number of procedures initiated depends on the sensitivity of local authorities to the issue. The critical term is sustainability. In the field of waste management, the aim is to minimise waste generation. This can be achieved through a more efficient use of raw materials and a higher recycling rate. Waste generation can also be reduced by promoting the coordination of economic activities along material and energy flows, i.e. by ensuring that the waste materials and energy generated in one production process are inputs for the next (Waste Generated, 2022). It would be helpful to put up warning signs at illegal dumping sites, and some municipalities have already done so. And it is recommended that the public be informed of the damage that this could cause. An excellent initiative is introducing the so-called waste radar app, which has significantly contributed to the fight against illegal dumping (URL8). Facilitating the legal disposal of waste would help to discourage illicit activity, given that legal removal is sometimes more difficult and costly. There are municipalities where the population needs the possibility to dispose of their household municipal waste legally. In addition, the role of crime prevention and the media is highlighted, with the need to inform the public about landfill fees, contact details, exemptions and penalties.

There is a need for increased monitoring of signals received from local NGOs; data received by the administrative authority via mobile applications are not precise - for example, waste deposited in several instalments independently of each other is treated as one, thus exceeding the significant level for which the report is made. A practical problem is that, following a message or other sighting by a member of the public, the environmental authority describes the quantity of waste as "visual", which makes it unclear whether the quantity thus determined is above the criminal threshold and what exactly its

composition is. In the absence of these facts, an inspection is, in any case, necessary. In many instances, when the police arrived at the scene, the waste was no longer there because the local environmental authority had informed them that they were required by law to remove it immediately. This problem can be solved in close cooperation with partner bodies. Another challenge in the case of landfilling is that if you see that there is already rubbish somewhere, others will dump waste there too, making it difficult to distinguish between separate acts. In many cases, the perpetrator's identity can be deduced from the information obtained from the waste screening. Still, a common defence strategy is for those identified to claim theft of their documents (ORFK Task Plan, 2021).

Summary and Recommendations

Based on the above, it can be concluded that more effective policing and law enforcement of illegal dumping face significant challenges and obstacles, along with other countries in similar situations, such as Hungary. Without being exhaustive, these include the following:

- The rules of competence and jurisdiction of the police as an investigative authority. In reality, the jurisdiction rules relating to investigating a particular offence are more critical than the threat of punishment or the degree of social danger the legislator has assessed. The fact how the authorities respond is primarily determined by the resources available to prosecute the crime. "The special feature of the rules governing the powers of the investigating authority is that they divide the tasks relating to criminal matters partly within the police forces and partly between the police forces and other bodies also acting as investigating authorities." (Szabóné, 1974, p. 119). The legislator's modifications of powers and competencies are aimed to transfer priority category offences from one territorial body to another or from a central body to a territorial body. In addition, new priority or exceptional territorial bodies were created or renamed. Still, these did not significantly impact the number of offences assigned to local-level investigating authorities (Vári, 2019). It can be concluded that, until the jurisdictional legislation transfers the investigative tasks of waste management infringements to a higher investigating officer, at least at the territorial level, there will be no significant increase in the number of prosecutions, nor will the investigation or detection rate improve. This is primarily a matter of criminal policy, which means that a decision would have to be taken at the level of professional approach, which would automatically "upgrade" this crime. From then on, it will not be a senior management decision that will determine the allocation of powers. Still, a body with greater capacity and better detection capabilities will investigate such cases from the outset. It would be essential to increase the physical presence of police units in areas affected by illegal waste trafficking. Unfortunately, the physical availability of the police is not relevant to unlawful dumping. Responsiveness is more appropriate (Mátyás et al., 2019).

- Fragmented (difficult to interpret) legal environment. No doubt, this is the biggest headache for law enforcers. On the one hand, due to the nature of the waste management violation framework legislation, the offence is filled with several norms belonging to other branches of law. It defines elements challenging to detect, even factual conduct, without precise knowledge. We need only think about what is considered waste, how to distinguish between different types of waste, and what lawful and unlawful conduct in waste management is. It is entirely different depending on what we classify as waste at the time of detection or during official action. As an example, it is sufficient to mention the tasks related to the seizure of waste. This is because, by default, action must be taken by Article 3 of Joint Decree 11/2003 IM-BM-PM. If, because of its size, weight, nature, quantity, or the need for treatment or care, it cannot be delivered to the authority or the criminal records manager, or if its storage is not

possible, it may be handed over against payment, to the custody and care of an economic operator who can handle it professionally. If, however, it appears that the waste is hazardous based on its composition, particular care must be taken, e.g. safe sampling; removal with the involvement of the disaster control authority, given the nature of the material; disposal as a criminal offence in the case of excise waste, with the participation of the National Tax and Customs Authority. In other cases, the removal of waste is not the responsibility of the investigating authority. Still, it may be necessary, in the case of illegally transported waste that gives rise to suspicion of criminal offences, to seize the litter with the means of transport for confiscation and to landfill it at the nearest landfill site for inspection and proper disposal if there is a suspicion of a criminal offence, the Btk. Section 72 (1) a) of the Criminal Code was used or intended to be used to commit the crime. 73(c) of the Criminal Code, there is a case of compulsory confiscation for violating the breach of waste management.

- Multiple authorities with overlapping powers. In the context of illegal dumping, many authorities have partly overlapping capabilities. The possibilities for action lead to ambiguous situations, resulting in many cases of pointing fingers at each other, which should be avoided by following a strict protocol. The waste management authority of the competent government agency is obliged to provide all assistance to the police officers taking action, including informing the police body conducting the activity of the licensed waste management facilities in the vicinity of the action where waste can be temporarily deposited if necessary. If the police body detecting the offence initiates official proceedings with the waste management authority of the competent county government office or, in the case of infringements of the rules on international waste shipments, with the Pest County Government Office, which has national jurisdiction.

- A system of criminal sanctions that is not suitable for retention. As the statistics show, the number of 4500 or 5500 proceedings per year nationally could be more exceptional, especially when the number of landfills is considered. In addition, most cases will be unsuccessful, with a 30-40% prosecution rate and barely 150 claims being brought to court. Of the few issues that go to court with an indictment, 18 were prosecuted in the first half of 2021, compared to just 53 in the first half of 2022. A significant proportion of cases ended in a criminal conviction without trial, 53 in the first half of 2021 compared to 92 in the same period in 2022. The national trend shows that suspended imprisonment was considered the most appropriate sanction for offenders in 41% of cases, compared to fines in only 24% and community service in 18%. Probation was assessed for 9% of the accused, imprisonment was negligible, and prosecutors only proposed custodial sentences for offenders with a criminal record. In cases where the offence was committed during a criminal trial, this accounted for 7% of the accused (Garai, 2017). Consequently, there is no severe and substantial criminal threat from the sanctioning side either.

- Complexity and cost of proof. The offence is not in the class of simple and easy crimes. It requires a complex and multifaceted investigation, of which the involvement of experts is an essential element and entails considerable criminal costs. One need only think of the fact that the examination of the legal condition for establishing that an activity is likely to endanger human life, limb, health, land, water, air or their components or the individual living organisms, which is necessary to establish the criminal offence of environmental damage, is often another task for experts. The involvement of an expert significantly increases the cost of the procedures.

- Lack of professional competence of police officeres. In the case of controls on the transport of waste or the detection of illegal dumping, it is necessary to have considerable expertise to make the right decisions. Still, the police in public places need to have the required expertise. Neither do the members of the investigating authorities, mainly because very few such procedures are initiated; so, valuable expe-

rience has not been acquired and cannot be shared. The specialised expertise required for such investigations includes working closely with the partner authorities and experts involved in the offence under investigation and keeping abreast of changes in the legislative background for each type of waste. For each case, consultation with the authorities controlling the activity under investigation provides new information compared with previous issues, and knowledge of this information is a prerequisite for a practical analysis. The management needs to sensitise law enforcement personnel to the point, to have a regular patrol presence, and to send information to the public order/police departments police stations on the typical places of offences and methods (Methodological Guide ORFK, 2021).

It needs to be more relevant for the evaluation of organisational effectiveness. After the 2010s, solutions were found for the elements of organisational performance evaluation in internal regulations such as Regulation No.18/2012 (X. 12.). ORFK, followed by the BM Regulation 26/2013 (VI. 26.) on the procedure for rating and organisational performance evaluation, and the BM Regulation 36/2013 (XII. 21.) on the criteria for the assessment of corporate performance indicators are to be carried out in the framework of the organisational performance evaluation of specific armed forces under the control of the Minister of the Interior. These standards define which crimes are essential and serve as indicators to determine the focus of the police forces tasks. Not surprisingly, the offence of violation of the waste management order is not included among them. This offence is not interesting for the media either; it does not meet the criteria that would lead the media to present it more often, emphasising its danger to society (Vári, 2017). Even though illegal dumping is a highly irritating activity for the public, and more effective action against it can increase public satisfaction with the police, the latter is also significant in measuring the effectiveness of police work (Tihanyi & Vári, 2015).

- Asset recovery has yet to be extended to this area. As crime is not treated as a priority, its international and organised crime aspects should be emphasised, so the extension of asset recovery to this crime is extremely rare. It is, therefore, worthwhile to broaden the methodological spectrum in this direction (Mátyás et al., 2021).

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MISUSING THE FIGHT AGAINST TERRORISM – THE ANALOGY BETWEEN THE "WITCH-HUNT" AND THE "GLOBAL WAR ON TERROR"

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Purpose

In the scholarly literature, it is not uncommon for scholars to illustrate certain etymological and phenomenological aspects of contemporary crimes by relating them to the social phenomena that marked different historical eras. In this sense, some authors make analogies among different social phenomena (even those phenomena that do not belong to the same time period), with which they can indirectly conclude about one or more mutual characteristics. Therefore, the purpose of making the analogy is not aimed at exploring and presenting a certain phenomenon in its all aspects, but only in certain but very significant ones. Therefore, it is necessary to emphasize this limitation of analogy as a methodological tool. But despite that, it is not a rare case that authors who deal with the topic of terrorism and the fight against terrorism after September 11, 2001, do so in a way that links these topics to "witch-hunts" (Zulaika, 1991; 2016; 2018; Mahmood, 2001; Terkel, 2003; Thomas, 2003; Purdy, 2007; Rapley, 2007; Spens, 2014). With this analogy, they are practically trying to point out the possibilities or concrete examples of misuse of the fight against terrorism after September 11.

This position was further actualized by the United Nations Security Council Resolutions 2178 (2014) and 2396 (2017), which established a completely new category – foreign terrorist fighters (FTFs). With the introduction of the term FTFs, the paradigm of "global war on terror" has shifted, making analogy with "witch-hunt" even more significant and illustrative and primarily in the sense that it refers to the possibility of misuse of the fight against terrorism.

Some scholars point out that witches and witchcraft, coupled with wars, diseases, poverty and famine, represented one of the most dangerous threats in the Middle Ages and at the beginning of the New Century in Europe (Bartholomew & Wessely, 2002; Bailey, 2010). Witches and witchcraft were certainly something that people in the Middle Ages were very afraid of. A little later, even regulations were passed on the basis of which the ecclesiastical and, often, the secular authorities conducted trials and executions on accusations of witchcraft. If the authorities learned that there were witches in a town, they would form commissions and send their representatives (investigators/inquisitors) who conducted investigations, tried, and convicted people for witchcraft and almost as a rule carried out the death penalty in a very cruel way. Some of the most famous trials took place in the Spanish city of Seville in 1482, St Osyth in England in 1582, the German city of Trier between 1581 and 1593, the German town of Fulda between 1603 and 1606, and in several places in Basque between 1609 and

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1611,[2] the German cities of Bamber and Würzburg between 1626 and1631,[3] and the American town of Salem, in 1692.[4] It is believed that in various trials during the Middle Ages in Europe, mainly in the territory of the Holy Roman Empire (present day Germany, parts of present day France, Switzerland, Austria, the Czech Republic), including Spain, Portugal, Italy, France, Great Britain, present day Hungary, Poland, and other European countries, between 40,000 and 60,000 people, mainly women, and in some cases children, were accused and executed for witchcraft (Levack, 1995). According to other sources, about 35,000 people were convicted and executed for witchcraft in the Middle Ages in Europe, and a total of 80,000 people were prosecuted (Monter, 2002). In contrast to this, Emily Oster reports an unbelievable fact that "about a million people were executed for witchcraft in Europe from the 13th to the 19th century" (Oster, 2004: 2015).

In the early 1950s, a play called *The Crucible* was performed in U.S. theaters, which is a dramatized story of a series of hearings and prosecutions of more than 200 people accused of witchcraft and 19 of whom were executed by hanging for being witches that took place in Salem, Massachusetts, between February 1692 and May 1693. The play is set during a period known in American history as the Second Red Scare or the McCarthyism, a period in which Republican Senator Joseph McCarthy led a wave of demagogic and unsubstantiated accusations that discredited political opponents by discrediting their real or invented left-wing views exaggerated, and they themselves labeled as traitors, supporters of communism and "Soviet spies". During this anti-Communist persecution, thousands of American citizens were subjected to aggressive hearings by various congressional and/or senatorial committees. A large number of them lost their jobs, their careers were destroyed, and a number of people were detained.

Probably owing to this, the phrase "witch-hunt" is used today in the political discourse as a metaphor for the state of society when common sense and human rights and freedoms are overcome primarily by fear, including hatred, greed, ignorance, superstition, and the interests of the authorities and readiness to preserve the existing order at any cost (even by inventing enemies and planting evidence), while certain interest groups achieve their particular interests.

Contrary to this, terrorism has substantially changed modern societies, especially following the attack of September 11, 2001 on the United States by Al-Qaida. Responses to terrorism open up questions of proportionality, legality and ethics of counter-terrorism policies, which is why the ways in which the great powers fight against terrorism are linked to "witch-hunt".

The topic of this paper is related to the analogy between "global war on terror" (with a special emphasis on foreign terrorist fighters) and "witch-hunt", which as a social phenomenon shaped European medieval and early modern history. The idea of making this analogy may seem controversial considering that "witch-hunt" from a modern point of view implies the persecution of innocents as opposed to terrorists who are responsible for serious acts of violence. Terrorism and terrorists in the public discourse are considered the ultimate social evil, which often leads to misinterpretations and practices of human rights violations. However, the main idea of the work is to compare these two different phenomena from different historical and social contexts and to identify possible common characteristics. Therefore, the aim of the paper is not to shed light on all relevant aspects of counter-terrorism, but to primarily emphasize those related to the (possibility of) misuse of the fight against terrorism.

2 It is described as the largest trial against "witches", in which the Inquisition detained and often tortured about 7,000 people during a 3-year period, of whom about 1,500 were children aged between 7 and 14.

3 Where probably the cruelest witch trials were held, in which a total of about 2000 people were executed.

4 Salem is probably the most famous trial owing to Arthur Miller's 1953 play *The Crucible*, including numerous novels and films inspired by the events of this American town. For more details on these medieval witchcraft trials and the toll, see (Russell, 1972; 1981; Scot, 1989; Bailey, 2010).

Design/Methods/Approach

The research approach is tailored to the assumption that the analogy between "global war on terror" (with special reference to foreign terrorist fighters) and "witch-hunt" can be useful in identifying and understanding of some key phenomenological aspects of counter- terrorism. That is why the research approach included a few different techniques from literature review to analysis of documents and official announcements. The paper highlights the main features and key controversies related to counter-terrorism, but it also presents certain trends of contemporary terrorism and interprets it through the prism of the "witch hunt" to highlight the common traits of these two phenomena. A literature review was used in addition to identify the existing similarities between "witch-hunt" and "global war on terror" recognized by various authors, while other techniques were used in addition to identify some new similarities with the "witch-hunt" after the establishment of foreign terrorist fighters as a new form of this contemporary crime and the consequential paradigm shift.

The authors of the paper are of the opinion that the establishment of FTFs as a broadly defined contemporary crime additionally reinforces the need for making an analogy between "witch-hunt" and "global war on terror". The analogy can be useful in the recognitioning of similarities between these two phenomena, which in general facilitates the understanding of some phenomenological aspects of FTFs.

Findings

Foreign Terrorist Fighters (FTFs)

Since 2014, the "Global war on terror" has acquired a new dimension since the escalation of the crisis in Iraq and Syria and since the militant Islamic group called "Daesh" (Arab. داعش [dāʿish]), that is, the "Islamic state of Iraq and Levant/Syria" (ISIL/ISIS) managed to attract about 30,000 fighters from at least 85 countries who have joined the Islamic State of Iraq and Syria (ISIS) as of December 2015 (Benmelech and Klor, 2016: 1). While according to United Nations data, by 2015 approximately 40,000 individuals from over 120 countries had traveled to Iraq and the Syrian Arab Republic as fighters. An estimated 80 per cent of those migrated to join ISIS and live in the Caliphate, creating a combined force with local Syrians and Iraqis assessed at around 100,000 fighters (UNODC, 2019:15-6). Benmelech and Klor point out that although the great majority of ISIS recruits come from the Middle East and the Arab world, many foreign fighters also come from Western nations, including most members of the European Union, as well as the United States, Canada, Australia, and New Zealand, thousands of fighters from Russia and hundreds from Indonesia and Tajikistan have joined ISIS (Benmelech & Klor, 2016: 1).[5]

World's most developed countries have recognized a great danger in this recruitment of foreign fighters to join ISIS, because it has been estimated that these ISIS fighters, after returning to their state of residence/nationality, could pose a serious threat to the national security of their state of residence/nationality. As a result, the more powerful countries of the world, such as the United States of America, Great Britain, France, Germany, the Russian Federation and many others have undertaken a series of military, political, and legal activities to prevent possible later/subsequent negative implications for the existence of the Islamic State (ISIS). Only a certain number of these activities pertained to the

5 For more details on the transformation of the phenomenon of terrorism: from traditional to modern understanding of terrorism and understanding terrorism as a "global Jihadist movement" (as could be the case with Islamic States), see Šikman and Lalić, 2018.

political-legal paradigm shift where the Islamic State is designated as a terrorist organization,[6] while foreign fighters who fight on the side of the Islamic State are designated as "foreign terrorist fighters."

Such a paradigm shift in "global war on terror", where a completely new contemporary crime is actually constituted, was articulated through two resolutions of the United Nations Security Council. Resolution 2178 of September 24, 2014, with the aim to address the " acute and growing threat posed by foreign terrorist fighters recruited by or joining ISIL, ANF and all groups, undertakings and entities associated with Al-Qaida" (Resolution 2178 SC UN), defines "foreign terrorist fighters" as "individuals who travel to a State other than their States of residence or nationality for the purpose of the perpetration, planning, or preparation of, or participation in, terrorist acts or the providing or receiving of terrorist training, including in connection with armed conflict (UNSC Resolution 2178). This definition of "foreign terrorist fighters" was expanded by Resolution 2396, which was adopted by the UN Security Council in December 2017, to include "individuals of more than one nationality who travel abroad for the purpose of..." (UNSC Resolution 2396). In this way, individuals of more than one nationality, one of which is Iraqi or Syrian, are included, which can still make them "foreign terrorist fighters."

Specifically, FTFs go beyond the phenomenon of foreign fighters (individuals who participate in an armed conflict but are not of nationality of any warring party) because they also include "individuals of more than one nationality", one of which may be connected to the territory where terrorist acts are carried out (e.g., in the case of ISIS it can be the nationality/citizenship of Iraq or Syria). Also, FTFs go beyond the phenomenon of terrorists because, among other things, it does not only involve attending terrorist training, but also the training in connection with armed conflict. Given that this formulation "the training in connection with armed conflict" has not been operationalized in the UN resolutions, it remains unclear what else it could encompass – education at military and police academies, regular military service, training in sports shooting with firearms, training for responding to emergency situations, that is, evacuation and rescue in case of earthquakes, floods, etc., then training in first aid, which is all linked to the training in connection with armed conflict. It is also not clear whether this could also include trainings conducted in peacetime conditions, which may very well be of importance in armed conflict, such as radio amateurs in terms of communication (who were particularly important during the NATO bombing of the FRY in 1999), drone photographers who can also operate combat drones in the event of armed conflict, different types of engineering knowledge and skills, that is, training important for the maintenance and repair of tools, weapons and military engineering machines, including other trainings (in)directly connected with armed conflict.

What is also questionable regarding the definition of FTFs contained in the UNSC Resolutions 2178 and 2396 is the circumstance that it is not necessary for certain individuals to actually carry out any terrorism-related acts; it is sufficient that only they "travel" abroad with "the purpose of the perpetration, planning, or preparation of, or participation in, terrorist acts or the providing or receiving of terrorist training, including in connection with armed conflict. In this regard, there is another questionable circumstance – the person accused of being an FTF not only does not have to carry out terrorism-related offenses (perpetration, planning or participating in terrorist act), but does not even have to stay in the country where a terrorist organization operates (e.g., ISIS in certain areas in Iraq and Syria), because, according to the definition contained in Resolutions 2178 and 2396, it is sufficient only to "travel" to a foreign country, whereby the act of "travelling" is not operationalized in the two UN Resolutions at all. Therefore, it remains unclear when the travel would formally begin – does it begin when an individual leaves the apartment in his or her country of origin, buys a ticket or enters a passenger transport vehicle (a bus, a plane, or a ship), when he or she leaves his or her country of ori-

6 This is also a novelty in the fight against terrorism, since terrorist organizations are usually non-state organizations.

gin and enters the territory of a transit country or just enters the territory of a country where a specific terrorist organization operates!?[7]

It has already been noted that the world's most developed countries, which lead the "global war on terror" through the Security Council of the United Nations, constitute the phenomenon of foreign terrorist fighters as a contemporary crime, with the purpose of suppressing the travel of large numbers of individuals to foreign countries to fight alongside terrorist organizations and, even more importantly, subsequent problems for the national security of countries, when their citizens who participated in those "terrorist activities" return to their countries of origin. However, this overly broad definition of foreign terrorist fighters additionally reinforces the already elaborated analogy between the "global war on terror" and "witch-hunt", which is why in recent years parallels between these two phenomena have often been drawn in the statements given by politicians and media reports.

However, before looking more closely at the analogy between "witch-hunt" and "global war on terror" in the light of the newly established crime of foreign terrorist fighters, it would be useful to review the more specific effects of these two resolutions of the United Nations Security Council in line with "global war on terror."

The Effects of Constituting FTFs in Line with "Global War on Terror"

Although the global war on terror is an ongoing and complex process that can vary across different regions and countries it is possible to determine some specific activities encouraged by the UNSC Resolutions 2178 and 2396 in counter-terrorist fight on a global scale:

- *Raising Awareness and Cooperation* – by reaffirming that "terrorism in all forms and manifestations constitutes one of the most serious threats to international peace and security and that any acts of terrorism are criminal" and " that countering this threat requires collective efforts on national, regional and international levels" (Resolutions 2396).
- *Criminalization of FTFs in national legislation.* Regarding Resolutions 2178 and 2396, a large number of countries introduced or amended legislation to criminalize the activities of FTFs. That has enabled the prosecution and punishment of individuals involved in traveling to conflict zones to join or support terrorist organizations.[8]

Resolution 2396 states that FTFs "may be travelling with family members they brought with them to conflict zones, with families they have formed or family members who were born while in conflict zones", and the United Nations are "underscoring the need for Member States to assess and investigate these individuals for any potential involvement in criminal or terrorist activities, including by employing evidence – based risk assessments, and to take appropriate action in compliance with relevant domestic and international law, including by considering appropriate prosecution, rehabilitation, and reintegration measures" (UNSC Resolution 2396, 2017). Since this provision of Resolution 2396 primarily refers to women and children, encouragement, that is, the "UN underscoring the need for MS to assess and investigate (...) including the prosecution of" women and children, this segment of the fight against FTFs is often linked to "witch hunt", which is discussed below.

7 All of the above represents only a segment of legal ambiguities and uncertainties related to contemporary crime of foreign terrorist fighters. (For more details on the status, dilemmas and controversies regarding the definition of FTFs in the UNSC Resolutions 2178 and 2396, see Lalić & Lipovac, 2023).

8 It is important to note that many states that have amended their national criminal legislation on this contemporary crime, did not do so in full accordance with the extensive and undetermined formulation of FTFs from UN Resolutions. Rather, they specified certain terrorism-related offenses and prescribed new criminal offenses related to "participation in war or armed conflict in a foreign country" (in cases in which "foreign fighters" had not previously been prescribed as a crime).

All these activities in the "global war on terror" that are encouraged by the Security Council of the United Nations through these two resolutions really managed to achieve the key goal – to reduce, and later completely stop, the travel of individuals to the conflict zones where terrorist organizations operate (especially Iraq and Syria), since they can be prosecuted as foreign terrorist fighters and since members of their families (including their women and children) can be prosecuted as someone who is involved in criminal or terrorist activities. However, this key goal is not primarily aimed at establishing peace in the conflict zone where terrorist organizations operate but at preventing the return of foreign terrorist fighters to their countries of origin and consequently causing a threat to their national security. In addition to this, countries that lead the "global war on terror" have succeeded in achieving other goals in addition to this key goal, which is why counter-terrorism, especially the fight against foreign terrorist fighters, is associated with "witch hunts."

Foreign Terrorist Fighters and "Witch-Hunt"

In the already highlighted analogy between counter-terrorism and witch-hunt, numerous similarities have been observed that facilitate the understanding of certain phenomenological aspects of this contemporary crime. Numerous scholars have dealt with this analogy and drawn conclusions about terrorism and the fight against terrorism based on the similarities between this contemporary phenomenon and the historical phenomenon of "witch-hunt". The first and most general similarity between these two phenomena is certainly conceptual vagueness observed by Cynthia Mahmood, who stated that terrorism like witchcraft is characterized by "a lack of concreteness in its definition" (Mahmood, 2001: 521). This vagueness of the concept of terrorism is the basis for determining the similarity between terrorists and witches, that is, between counter-terrorism and witch-hunt. Because the vagueness of the concept of terrorism suits policymakers, that is, the most powerful states, because they have the possibility to arbitrarily (and in accordance with their needs) define terrorists, similar to how church authorities arbitrarily labeled some women as witches and conducted witch-hunts in the Middle Ages in Europe (Zulaika, 1991). Following 9/11 and the attacks on New York and Washington, the U.S. launched a "global war on terror", which many scholars also recognize as a modern version of "witch-hunt", because when they hear of accusations (false or not) that the governments of certain countries supported terrorism, the U.S. started wars in Iraq, Libya, Syria... the countries that are rich in oil and natural gas deposits, unlike, for example, the countries in Sub-Saharan Africa that do not have large natural resources, and which, according to the index values, traditionally have large problems with terrorism, and which, however, are not covered by direct military interventions within the framework of the "global war on terror." This tendency points to the similarity between counter-terrorism and a witch-hunt because those who have managed or now manage these processes (primarily) achieve their particular interests,[9] rather than exclusively and systematically suppressing the phenomenon in itself (once witchcraft, today modern terrorism).

The analogy between a witch-hunt and a "global war on terror" was also drawn in relation to the special measures taken by the US Government at the internal level. Based on the set of special measures applied on the basis of the USA PATRIOT Act against American citizens since 2001[10], which have gen-

9 The possibility that a political or other elite hides its particular interests behind some other phenomenon or social process is not a specific feature of any specific security threat, much less terrorism. These particular interests of political elites can often be hidden behind publicly proclaimed values, even behind something labeled as a national interest. There is also the possibility that the fight against terrorism, organized crime, and other security problems can be subsumed under national interests. For more details on the relationship between national interests and values and goals that can be achieved within them, see Lipovac and Dimitrijević, 2015; Dimitrijević and Lipovac, 2017).

10 Although the USA PATRIOT Act officially expired in March, 2020 without being reauthorized, federal law enforcement agencies in the US retain most of the authorities granted by this act until this day.

erated numerous controversies and accusations of violating privacy and constitutional rights of U.S. citizens, scholars have drawn an analogy between counter-terrorism and a witch-hunt (Purdy, 2007).

The adoption of Security Council United Nations Resolutions 2178 and 2396 and the introduction of the term foreign terrorist fighters not only strengthened and raised to a global level some existing similarities between counter-terrorism and witch-hunt, but it also created new ones. In particular, the special measures that have been implemented against U.S. citizens in the US since 2001 are now applied in almost all countries of the world. The UNSC Resolutions 2178 and 2396 created the obligation of UN member states to cooperate and exchange intelligence data in the fight against FTFs. Thus, through the G7, G20, the European Union, The International Monetary Fund and The Financial Action Task Force (FATF), the U.S. reaffirmed its support for the strategic priorities in policies to combat money laundering and terrorist financing and these standards are binding for all countries that belong to the so-called modern world. For example, certain special measures that have been prescribed by the PATRIOT Act in the U.S. since 2001 have become binding in Europe since 2015 on the basis of Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 (the so-called Fourth Anti-Money Laundering Directive), which are fully in line with the Financial Action Task Force's (FATF) international anti-money laundering (AML) and counter-terrorist financing (CTF) standards.

This EU Fourth Directive imposes, among other things, an obligation to store data on all transactions conducted by legal and natural persons for a five-year period, to the extent that, for example, the data from natural persons' ID cards, who exchange U.S. dollars in the Exchange office, is read and serial numbers from fifty-dollar and one-hundred-dollar bills are entered to record all transactions in U.S. dollars in Europe. Such measures certainly encourage numerous controversies and accusations of privacy and other human rights violations, which generally reinforces the analogy between counter-terrorism and witch-hunt and points to the similarity according to which fear of witches and fear of terrorists actually introduce and legitimize special measures which would probably not be possible under normal conditions.

The establishment of foreign terrorist fighters in accordance with UNSC resolutions widens the circle of individuals who can be suspected and prosecuted. However, this expansion of FTFs beyond the phenomenon of terrorists and foreign fighters opens up two new controversies and parallels that can be drawn in relation to witches and witch-hunts. The first similarity has already been discussed in detail in this paper and refers to the overly broad definition of FTFs, according to which individuals that are not connected with terrorist organizations but only travel to foreign countries and countries where terrorist organizations operate or can be linked to "the providing or receiving training in connection with armed conflict." Acording to alredy quoted United Nations data, by 2015 approximately 40,000 individuals traveled to Iraq and Syria as fighters (UNODC, 2019:15). Unfortunately, in open sources there are no exact data about the number of individuals that are accused of and/or convicted as FTFs; however, it is unquestionable that in this way almost everyone who set out on a journey or actually stayed in the countries in quetion could indeed be charged and convicted as FTF, just like anyone who lived in Europe in the Middle Ages could be accused of witchcraft. Another important similarity arising from the UN definition of this contemporary crime is a view according to which FTFs "may be traveling with family members they brought with them to conflict zones, with families they have formed or family members who were born while in conflict zones" and that the United Nations are "underscoring the need for Member States" to assess, investigate and prosecute these individuals for any potential involvement in criminal or terrorist activities (UNSC Resolution 2396, 2017). This tendency, according to which women and children are investigated and prosecuted for crime, just because their husbands and/or fathers were also investigated/prosecuted as foreign terrorist fighters, in

many ways resembles medieval witch-hunts, where almost anyone who had any connection with the individual who was accused of or executed as a witch, was later accused of or executed for witchcraft.

This analogy was recognized by some authors and illustrated with concrete examples when women and children were placed in prisons in Syria, Iraq, including European and American prisons, and investigative actions were taken against them and criminal proceedings were initiated just because their husbands and /or fathers were accused of joining or merely supporting ISIS.

The most famous case took place in early 2021 when information that there were six Danish-related mothers and 19 children in the two Kurdish led imprisonment camps Al-Hol and Roj in Syria (between 1 and 14 years old), whose fathers allegedly have ties to the Islamic State appeared in the Danish media. Given that the Danish Government deprived some of them of their Danish citizenship administratively and while others had been cut off from assistance from the foreign service, some commentators used this case to draw an analogy between the fight against terrorism and the witch-hunt to explain the legitimization of such harsh measures undertaken: "What drives the anti-radicalization industry is the states' construction of some people (including children!), as ultimate evil-doers having witchcraft-like possessions" (Christensen, 2022: 14). In late 2021, some of these mothers and children were repatriated (together with German mothers and children[11]) from the Al-Roj imprisonment camp and all three Danish mothers were immediately arrested and charged for "promotion of terrorist activities", as well as "entry and residence in a conflict zone" (Middle East Eye, 2021).

This case became famous because it was widely exploited in the Danish media in 2021 (even in the context of political elections). However, this case represents only "a drop in the ocean," since even today years after the declared victories over ISIS in Iraq and Syria, numerous international organizations have reported that tens of thousands of women and children are still in prisons in Syria and Iraq. According to the report published under Human Rights Watch, as of January 23, 2023, nearly 37.000 foreign nationals have been detained in two biggest Syrian imprisonment camps (Al-Hol and Roj) primarily holding the wives, other adult female relatives, and children of male ISIS suspects. Nearly 27.000 foreigners in the camps are from neighboring Iraq, while nearly 10.000 others are from about 60 other countries. More than 60 percent of the camp detainees are children and nearly 80 percent of the children are under the age of 12, and 30 percent are 5 years old or younger (HRW, 2022; Becker & Tayler, 2023). The Kurdish Red Crescent reports on the conditions in these prison camps and that just in al-Hol prison camp at least 371 children died in 2019 (Becker & Tayler, 2023).

The criminalization of FTFs in Denmark and the resulting atmosphere of persecution of Muslims and even women and children are unfortunately not an isolated case in Europe. Various cases of the persecution of Muslims were also recorded in the most developed countries in Europe. For example, in 2015 in Great Britain, precisely in the light of this paradigm shift in the "global war on terror" and the criminalization of FTFs, the new Counter-Terrorism and Security Act was adopted (the 11th law regulating the fight against terrorism since 2000), and to which numerous Imams, sheikhs, advocates, activists, community leaders and other representatives of the Muslim community in the United Kingdom reacted violently with the Joint UK Muslim statement to condemn "the ongoing demonisation of Muslims in Britain." In this statement, they strongly oppose "the exploitation of Muslim issues and the 'terror threat' for political capital, in particular in the run up to a general election" and "deflect attention from crises in the economy and health service, but are crude and divisive tactics, where the big parties inevitably try to outdo each other in their nastiness" (Joint UK Muslim statement, 2015). Given that the signing of this Joint statement was a reaction to the adoption of the new Counter-Ter-

11 Germany brought home eight women and 23 children, while Denmark repatriated three women and 14 children as part of the same operation, which was carried out with US military support. Six of the women were arrested immediately upon their return over alleged terrorism offences (Middle East Eye, 2021).

rorism and Security Act, which gives broad powers to state bodies and introduces completely new measures in the fight against terrorism, specifically in relation to early warning signs and the prevention of radicalization, the statement states, among other things, that: "The latest Act of Parliament, the Counter-Terrorism and Security Act, threatens to create a 'McCarthyite' witch-hunt against Muslims, with nursery workers, schoolteachers and Universities expected to look out for signs of increased Islamic practice as signs of 'radicalisation'. Such a narrative will only further damage social cohesion as it incites suspicion and ill feeling in the broader community" (Joint UK Muslim statement, 2015).

Regarding this public statement, Jahangir Mohammed, director of the Center for Muslim Affairs, told the famous British magazine Guardian that "counter-terrorism policies are flawed and alienating. This approach is not working and is actually backfiring. The entire Muslim community is being blamed for the actions of a violent few and as a result Muslims in Britain feel marginalized" (The Guardian, 2015). The words of this Muslim activist very clearly illustrate the atmosphere in which fear-mongering, the creation of media hysteria and legitimization of special measures can lead to the stigmatization of an entire minority group and its systematic persecution – the atmosphere in which cohesion will be broken and almost no one will feel safe in the end. The possibility of imposing special measures against almost anyone in Britain just because he or she is a Muslim is reminiscent in many ways of the 17th century when almost all inhabitants of some towns were eventually accused of witchcraft (such as several small towns in Basque between 1609 and 1611 and the German cities of Bamber and Würzburg between 1626 and 1631).

Similarly, a petition called "France's Islamophobic Witch Hunt" was launched in France in November 2021, which was signed by 34 civil society organizations, which requires the "EU Leaders to take a stand" because "France is engaging in a full-blown Islamophobic Witch-Hunt by targeting racialised communities and organisations in Europe. Over the past months, the French government has launched countless administrative procedures to shut down Muslim-led organisations, mosques, schools, and even Muslim-owned "snack bars". Despite a complete lack of evidence or judicial process, it did so by claiming "Muslim Brotherhood affiliations" (France's Islamophobic Witch Hunt, 2021).

Taking into account these two cases, it may be concluded that in the fight against terrorism, similar to the witch hunt in the past, it is possible to lose focus and things can get out of control or, as Mohammed says, "counter-terrorism policies are flawed and alienating" and even "backfiring", which can result in the Muslim community being equated with terrorist threat, that is, equating a town form the Early modern period with witchcraft (The Guardian, 2015). Contrary to this tendency, there are cases when the fight against terrorism can be used with a precisely defined goal which maintains the focus and targets a defined opponent, which some commentators use to draw an analogy with witch-hunts. It could be a policy in which the fight against terrorism is actually used to deal with and eliminate political enemies at home.

Accusations aimed at the domestic policy of Egyptian President Abdel Fattah El-Sisi point to this possibility. Egyptian coup d'etat that took place on July 3, 2013, when general El-Sisi (as Egyptian army chief) arrested (the democratically elected) Mohamed Morsi and Muslim Brotherhood (MB) leaders and proclaimed himself as a leader of Egypt. Then El-Sisi gave a famous speech urging people to take to the streets and call en masse for police and army powers to fight terrorism. Since then, according to critics, President El-Sisi has "continued to use this to legitimize abusive laws, and as Narratives portraying the MB as anti-Egyptian and as a terrorist group have generated a climate of intense political polarization, resulting in extreme mistrust and fear among the Egyptian population. This divisive approach has served to justify a witch-hunt against the MB and other political opposition, facilitated by large-scale rights abuses and a climate of lawlessness" (Saferworld, 2017).

Originality/Value

Towards the Analogy

Although not infrequently used in the papers of authors who dealt with topics related to terrorism and counter-terrorism, the analogy between "witch-hunt" and **fight against terrorism** may seem strange at first glance. However, when one looks at numerous examples of misuse of the fight against terrorism, the need to draw this analogy becomes more than logical and justified, because it enables the determination of relevant similarities, which sheds additional light on certain aspects of counter-terrorism in general, particularly regarding foreign terrorist fighters.

Even before terrorist attacks on New York and Washington in 2001, numerous **authors** emphasized the importance of drawing an analogy between the "witch-hunt" and counter-terrorism. However, it was not until the post 9/11 explosion of interest in terrorism that this analogy became almost commonplace. The reason for this should not be sought only in a large body of terrorism and counter-terrorism literature, but primarily due to frequent news regarding various forms of misuse of the fight against terrorism, meaning the expansion of the scope of investigative actions, human rights violations, the closure and torture of people without evidence, accusing and convicting innocent people, and even killing them. In some respects, this is similar to "witch-hunt" in the past.

When George W. Bush declared a "global war on terror" in 2001 and as the wars in Afghanistan, Iraq, Libya and Syria took place, what became more than obvious was the inconsistency of the great powers in the fight against terrorism, because, as a rule, great powers fight terrorism in countries that have huge natural resources (mainly oil and natural gas), as opposed to sub-Saharan African countries that do not have such natural resources but they have the highest index values in terms of threats posed by terrorism.

On the domestic front, the US Congress adopted the USA PATRIOT Act in 2001, which significantly expanded government surveillance power and enhanced data collection without adequate checks and balances and which encroach upon privacy rights and constitutional rights of US citizens. These activities were especially linked to the "witch-hunt" when in 2013 Edward Snowden leaked to the media classified NSA documents about intelligence activities and secret data collection on almost all Internet users in the US.

Furthermore, in accordance with the PATRIOT Act, it is possible to charge with terrorism and prosecute individuals who in fact have no connection with terrorism. One of the most famous cases is the Dr. Rafil A. Dhafir case, in which this US citizen of Iraqi origin was eventually sentenced to 22 years in prison, but not for financing terrorism (as he was initially charged with), but for several other crimes (money laundering, fraud, tax evasion and so on). This case was regularly labeled a "witch-hunt" in the U.S. media.

At that time, another important event took place, on the basis of which parallels were drawn and similarities were found between witchcraft and the "global war on terror". This event is related to U.S. Secretary of State Colin Powell's address to the UN Security Council, which contained half-information and serious but unfounded accusations against the regime of Iraqi President Hussein regarding alleged support for terrorism and the development of weapons of mass destruction, and pointing to the conclusion that the Iraqi regime is planning a terrorist attack with WMD. Given that in such statements given by the highest state officials there is a tendency to spread the fear of a great threat that can destroy innocent people based on manipulation and construal based on half-truths, some commentators use this example to draw parallels and highlight similarities between the spread of fear of witchcraft and fear of terrorism.

Probably the most indicative similarity between a "witch-hunt" and a "global war on terror" related to the treatment of individuals accused of terrorism, who were held or are still held in U.S. prisons outside the U.S. When reports about the systematic use of torture were published, including other cruel, inhuman or degrading treatment against hundreds of people, many of whom were unjustly accused of terrorism, in the American prisons in Guantanamo Bay (Cuba) and Abu Ghraib (Iraq), an analogy with investigative methods, torture, and coerced statement during "witch-hunts" imposed itself.

However, an analogy between analogies between "witch-hunts"and counter-terrorism, that is, "global war on terror", unfortunately, does not end here. Since 2014, when the crisis in Iraq and Syria escalated and when Da'ish, that is, the Islamic State, succeeded in gathering several tens of thousands of foreign fighters in a relatively short time, great powers led by the U.S. have taken a series of measures to raise the fight against terrorism, that is, the "global war on terror" to another level. Through two resolutions of the UN Security Council (Resolutions 2178 and 2396), a completely new contemporary crime is actually constituted: "foreign terrorist fighters." With this definition, the phenomenon of FTFs significantly surpasses both the phenomenon of terrorists and the phenomenon of foreign fighters, which is why the analysis of the etymological connection between these concepts cannot be particularly useful.

On the contrary, the establishment of FTFs unfortunately further reinforces the analogy between witch-hunt and counter-terrorism, which makes it possible to better understand certain aspects of the questionable concept of FTFs. In addition to the already established similarities between "witch-hunt" and the "global war on terror", by constituting the phenomenon of foreign terrorist fighters it is possible to make five more key similarities.

First, by constituting FTFs as "one of the most serious threats to international peace and security (...) that requires collective efforts on national, regional and international levels," which means "raising awareness and cooperation, and counterterrorism capacity building" (Resolutions 2178 and 2396), which in reality means, among other things, special measures at the global level, similar to the measures prescribed in the U.S. by the PATRIOT Act of 2001. For example, in Europe, only in the part related to trade and finance, Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 (the so-called Fourth Anti-Money Laundering Directive) imposes, among other things, an obligation to store data on all transactions of legal and natural persons for a five-year period. In this way, not only individual countries get the opportunity to monitor all financial transactions of their citizens, but also great powers that lead the "global war on terror" get the opportunity to monitor all financial transactions in other countries on the global scale through "counterterrorism capacity building, cooperation and intelligence sharing." Thus, special measures that would otherwise be unthinkable are introduced and accusations of privacy and other human rights violations are additionally strengthened, which overall strengthens the analogy between counter-terrorism and "witch-hunt."

Secondly, accordance to the UN Security Council's definition, not only can individuals linked to terrorism be accused of this crime, but also those linked to armed conflict in general, that is, who participate in armed conflict, and even to have "the training in connection with armed conflict" (Resolutions 2178 and 2396). The circle of potential suspected/convicted individuals for this contemporary crime is expanding due to the fact that, according to the UN Security Council's definition, FTFs also comprise individuals who have not actually committed any terrorism-related criminal acts, but it is sufficient that they "travel" abroad with "the purpose of" joining a terrorist organization or armed forces. In this way, almost anyone can be accused of being a terrorist, similar to accusations of witchcraft in the Middle Ages and the early modern period in Europe.

Thirdly, Resolution 2396 points out that the United Nations are underscoring the need for Member States to assess and investigate the family members (of individuals suspected of being FTFs) for any

potential involvement in criminal or terrorist activities. In countries where this provision of Resolution 2396 has been incorporated into national criminal legislation, there have been serious human rights violations, the prosecution and imprisonment of large numbers of women and children whose husbands or fathers have been accused of being FTFs. According to the data of relevant international organizations, tens of thousands of women and children (under the age of 14) from around 60 countries, whose husbands/fathers are linked to ISIS, are still imprisoned in two biggest Syrian imprisonment camps, namely Al-Hol and Roj. However, in Europe there are far more well-known examples of European citizens who have been deprived of their human rights on these grounds, have had their citizenship revoked, or have been imprisoned and prosecuted for terrorism. The most famous case refers to six Danish-related mothers and 19 children – some mothers were stripped of their Danish citizenship and are still imprisoned at these camps, while three mothers were repatriated, but immediately upon entering Denmark they were arrested and charged with the "promotion of terrorist activities", as well as "entry and residence in a conflict zone."

Fourthly, the amendment of national criminal legislation and the criminalization of FTFs in some European countries, at least according to critics, created an environment of moral panic, the breakdown of social cohesion, and even the "demonization of Muslims" in general. As a result, the Muslim community in the United Kingdom reacted in 2015 with a Joint statement to condemn the adoption of the new Counter-Terrorism and Security Act because it provides for new special measures, whose implementation "threatens to create a 'McCarthyite' witch-hunt against Muslims" in UK. Similarly, in France, in 2021, 34 civil society organizations signed a petition called "France's Islamophobic Witch Hunt" to condemn "the French government countless administrative procedures to shut down Muslim-led organizations, mosques, schools... by claiming "Muslim Brotherhood" affiliations."

Finally, the fifth key similarity between a "witch-hunt" and a "global war on terror" does not represent a complete novelty that arises as a consequence of the establishment of foreign terrorist fighters as a contemporary crime. However, the paradigm shift in the "global war on terror" brought about by the criminalization of FTFs gives this tendency far greater opportunities for the misuse of counter-terrorism for the sake of settling internal political enemies. Similarly, from the 11th to the 19th century, The Tribunal of the Holy Office of the Inquisition (Spanish Inquisition) conducted "witch hunts" in Spain, whose goals were also related to dealing with internal enemies, that is, preserving the existing ruling structures, strengthening the influence of the church, preserving political stability in accordance with Roman Catholic principles and weakening the influence of Jews and Muslims in Spain, thus counter-terrorism has been misused in different parts of the world to deal with political opponents on the domestic front. Except that now there arise new possibilities when calling for the "global war on terror" and the fight against FTFs. Calling for a "global war on terror" makes it easier to get international support, while calling for the fight against FTFs enables the expansion of the circle of potential political enemies who are dehumanized in this way and takes away any legitimacy and approves the most brutal means.

Such an example is related to the 2013 Egyptian coup d'etat when general Abdel Fattah El-Sisi has arrested (the democratically elected) Mohamed Morsi and Muslim Brotherhood leaders and proclaimed himself as a leader of Egypt. Opponents of the current Egyptian regime often stress that President El-Sisi cultivates a narrative in which he labels the Muslim Brotherhood as terrorists, polarizes society, seeks international support, adopts laws that legitimize special powers and measures and provokes political opponents to use force, so that the army may use it as a reason to use brutal force against his political opponents. Opponents of El-Sisi's regime describe this as measures aimed at justifying the "witch-hunt against the MB and other political opposition."

Conclusion

The analogy between "witch-hunt" and counter-terrorism, that is, "global war on terror" not only allows for determining the similarities between the two phenomena and seeing more clearly certain aspects of foreign terrorist fighters as a contemporary crime, but it also allows for better understanding why today the phrase "witch hunt" is used in the political discourse as a metaphor to denote a special state in society. A state in which common sense and human liberties are overcome primarily by fear, including hatred, greed, ignorance, superstition, the interest of the government and willingness to preserve the existing order at any cost (even by inventing enemies and planting "evidence"), while some elites achieve their particular interests. It is a state in which some "witches" are constantly persecuted, that is, some traitors, internal enemies or others who should be blamed for all problems that occur in that society and/or to achieve a particular interest, in this case those who lead fight against terrorism. This is the reason why the analogy drawn is primarily focused on presenting possibilities and highlighting examples related to the misuse of counter-terrorism, that is, the "global war on terror." In addition to previously identified similarities in the literature between "witch-hunts" and counter-terrorism, special emphasis is placed on FTFs and counter-terrorism policies related to them. In this regard and in addition to the previously observed selectivity of the great powers in the "global war on terror", we identified five more mutual characteristics between "witch-hunts" and FTFs: 1) the expansion of state powers and introduction of special measures that can be used indiscriminately; 2) a wide and insufficiently defined circle of persons who can be accused; 3) the investigation of family members due to a possible connection with terrorism, the imprisonment of women and children, a denial of family members' fundamental human rights; 4) the dehumanization of the enemy and justification of the use of inhumane methods, and 5) the misuse of counter-terrorism for the sake of settling internal political enemies.

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MECHANISMS OF PSYCHOSOCIAL PROTECTION AND SUPPORT TO PROTECTED PERSONS IN THE PROTECTION PROGRAM WITH REFERENCE TO FAMILY AND CHILDREN AS CLOSE PERSONS OF PROTECTED PERSONS

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Introduction

In the last twenty years, we ourselves have witnessed the increasing humanization of criminal procedural law and criminal justice. These activities were focused primarily on the position of the defendant in criminal proceedings, but also on the witness of the last decade. Namely, if the witness is not provided with adequate protection, and there are possible threats and intimidation, the witness could be liquidated before or after the trial. In connection with the above, criminal proceedings are proceedings for the smooth flow of which the police and judicial authorities (prosecutor's office and the police) are responsible, which should be conducted in accordance with the Code of Criminal Procedure in order to defend the social order from crime (Criminal Procedure Code "The Official Gazette of the Republic of Serbia", No. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014, 35/2019, 27/2021-decision US and 62 /2021-decision US). It enables the determination of responsibility for the commission of criminal acts, but also the punishment of those responsible for the commission of criminal acts, which means that punishment is the first form of adequate moral and material satisfaction for the injured or victims of crime (Dedović Adžajlić & Topić, 2016: 151).

The Concept of Psychosocial Support and its Practical Implications

Psychosocial support for vulnerable persons plays a key role in alleviating the emotional burden they may experience while testifying or participating in criminal proceedings. Some types of psychosocial support that can be applied are: a) providing information (providing witnesses with detailed information about the course of the criminal process and their rights can reduce anxiety and uncertainty; b) individual counseling (providing opportunities for individual sessions, counseling with a psychologist or therapist, which allows witnesses to express their emotions and receive support tailored to their needs);, c) access to experts (ensuring access to experts, such as psychologists or social workers specialized in working with victims and witnesses, can be essential to providing targeted and effective support; d) protecting privacy (ensuring the privacy of witnesses during the criminal process, if possible, can reduce feelings of vulnerability and fear), d) education about stress reactions (providing information about typical reactions to stress and trauma can help witnesses understand their feelings and respond to them at healthy way) (*https://www.cps.gov.uk/sites/default/files/documents/legal_guidance/best_evidence_in_criminal_proceedings.pdf*).

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Theoretical Foundations of Psychosocial Support for Witnesses

Some of the key theoretical premises often used in the development of psychosocial witness support programs include:

a) *Stress theory*- psychosocial support for witnesses is aimed at reducing stress and strengthening their coping capacities;
b) *Trauma theory* - investigates the long-term effects of exposure to traumatic events. Witness support programs often rely on the principles of this theory to understand and mitigate the negative effects of trauma;
c) *Attachment theory*- attachment theory focuses on the importance of interpersonal relationships and support in the process of coping with traumatic events. Providing a safe and supportive environment helps build positive relationships and foster emotional recovery;
d) *Theory of developmental approach* - focuses on changes that occur during the life of an individual and different stages of development. Psychosocial support is adapted to the specific *needs of witnesses at different life stages;*
e) *Theory of the therapeutic alliance* - emphasizes the importance of a positive relationship between the support professional and the witness as a vulnerable person. Building trust and cooperation is the key to effective support;
f) *Self-help theory* - encourages individuals to actively participate in their own recovery process. Psychosocial support programs can include training and resources that enable witnesses to develop self-help strategies (Ardito & Rabellino, 2011: 9).

Right of Witnesses to Protection

It is customary to observe the state of human rights and freedoms in criminal proceedings from the perspective of the defendant. It is only recently that witnesses are being observed, who also need to be provided with adequate protection. Namely, from their procedural role may arise a danger to basic human rights proclaimed in the most important international and constitutional documents (Brkić, 2005: 475). It is a great injustice to oblige citizens to cooperate with state authorities in combating crime and without providing protection to expose them to the danger of becoming victims of new criminal acts, thus the state somehow offends the principle of equality of citizens, because it protects some from crime and exposes others (Brkić, 2005: 476). Accordingly, national legislations should find acceptable solutions for harmonizing the possible conflict of interests between individual rights and the legal interests of society (Vulević, 2023: 170).

The subjective right to witness protection can be protected by various legal mechanisms. The first group of vulnerable witnesses involves various forms of legal responsibility and witness protection in criminal proceedings. However, in contrast to this protection, there is also non-procedural Program protection of witnesses, which is based on measures of a physical and technical nature (Brkić, 2007: 217). In this paper, we will focus on this type of protection.

Human society has always been confronted with the problem of correct identification of certain occurrences since their "object of attack" pose a danger to the vital values of a society. Modern forms of crime usually involve organised forms of manifestation (Vulević, 2020: 143). Organized crime in Serbia arose in the early nineties of the last century. First of all, this phenomenon did not interest the state or the professional public because it seemed like a phenomenon that was not socially dangerous.

A special problem for prosecuting authorities is still the collection of material evidence related to crimes of organized crime, war crimes, corruption and terrorism, all because of the authenticity of these particularly serious crimes (Vulević, 2017: 8). Organized crime, especially in connection with the criminal offenses of drug abuse, illegal trafficking in weapons and people, is on the rise. The number of the most serious crimes committed is growing, and the difficulties in discovering and proving the commission of those crimes and the perpetrators are very great due to the increasingly perfect organization of criminal associations. Therefore, the criminal law tried to find new ways to effectively respond to this growing problem and to bring the perpetrators of these crimes to justice. In this regard, a certain member of a criminal organization, a presumptive perpetrator of criminal acts, will be offered a waiver of criminal prosecution, or possibly a reduced sentence and the status of a protected witness for their testimony (Pajčić, 2005: 42). In parallel with the above, witnesses are increasingly being forced to enter the Protection Program for their own safety, but also for the safety of their loved ones, their families as close persons. Program protection treatment is necessary in order to provide and ensure the witness and victim in terms of bodily integrity, health, property and the safety of persons close to them (Vulević, 2017: 9).

Risks, Threats and Secondary Victimization

In the criminal proceedings of a number of countries during the last decade of the 20th century, considerable attention began to be paid to the victims of particularly serious crimes, which was also extended to witnesses. States around the world establish specialized departments for the protection of participants in protection programs in cases of prosecution of serious forms of crime, or when there are clear indications that the cooperation of a particularly vulnerable witness with state authorities, through providing information to prosecution authorities or testifying in court, will endanger the life of the witness themselves or members of their family (Vulević, 2022: 8). There is a probability that witnesses hesitate to provide information and provide evidence to judicial and prosecuting authorities due to actual intimidation or threats to themselves or their family members (hereinafter: close persons) by members of criminal groups and associates, members of the military, paramilitary formations, etc. Members of criminal groups strive to "eliminate witnesses" behind their activities with the aim of "making them disappear", and therefore an energetic reaction of state authorities is needed to find witnesses, to protect them, because the fear of retaliation is deeply rooted in the consciousness of potential witnesses (Vulević, 2022: 9).

Threatening and harming witnesses, as well as members of their families, comes from those who are particularly interested in preventing witnesses from testifying, because otherwise their status, financial and other interests would be damaged. Since such persons are a serious threat to members of criminal organizations, their security is continuously threatened and therefore it is necessary to provide them with serious protection by conventional security entities, which is, indisputably, the most comprehensive within the Protection Program (Marinković, 2014: 451). Specifically, as a result of intimidation, threats, coercion, various pressures on the witness who is not protected, there is a fear of testifying, the possibility of giving up the testimony, and even the possibility of giving a false testimony. According to the Directive of the European Parliament on the rights, support and protection of victims of crime, witnesses and victims of criminal acts should be provided with protection from secondary victimization, intimidation and retaliation, as well as appropriate assistance to facilitate their recovery and provide appropriate access to justice. Also, according to the same, it is necessary to provide measures to protect the safety and dignity of victims and their family members from secondary victimization, from intimidation and retaliation by the perpetrator of the crime (*https://eur-lex.europa.eu/legal-con-*

tent/HR /TXT/PDF/?uri=CELEX:32012L0029&from=SK). At the same time, the citizens of the state union rightfully expect a decisive and adequate response to the threats of modern forms of endangering security and basic freedoms and rights recognized by law. If such an answer does not come, we risk the trust of citizens and the foundations of democracy itself (Gligorijević, Pećanac, Vulević & Maksimović, 2020: 593).

As criminal groups and organizations become more sophisticated, organized, and refined in committing crimes, law enforcement agencies are having increasing difficulty detecting, solving, and proving particularly serious crimes. In order to be as efficient as possible and to avoid criminal prosecution, criminals join together in increasingly large organizations that can be so powerful that the measures that can be taken in national frameworks to suppress them often cannot disable their criminal activity. They are becoming more and more massive and have large capital that allows them to use modern means of communication in their criminal activities, use the services of experts in certain fields, prepare actions professionally (Marinković, 2013: 356). In the enormous area of lack of material evidence, and for the reason that the actors of criminal groups destroy it, the prosecuting authorities have to rely on personal evidence, the "living word" of persons who have knowledge of organized criminal activities, which is the main characteristic of serious crimes and at the same time the motive for the entry of witnesses into the Protection Program. It is for this reason that the most important evidence is the personal evidence of witnesses (Ilić, Majić & Nikolić, 2006: 14).

Converting Ordinary Witness - Vulnerable Witness - Protected Witness in Criminal Proceedings

According to the Criminal Procedure Code of the Republic of Serbia (CPC, "Official Gazette of RS", no. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014, 35/2019, 27/2021-Decision US and 62/2021-Decision US) Art. 91 Paragraph 1, a witness is a person who is likely to provide information about the criminal act, the perpetrator or other facts that are established in the proceedings. According to Art. 105 of the same law, if there are circumstances that indicate that the witness would expose themselves or a person close to them to a greater danger to life, health, freedom or property by giving a statement or answering certain questions, the court may approve one or more measures by a decision on determining the status of a protected witness special protection (CPC, "Official Gazette of RS", No. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013, 55/2014, 35/2019, 27/2021-decision US and 62/2021-decision US). According to the Criminal Procedure Code of the Republic of Croatia (Criminal Procedure Code of the Republic of Croatia, National newspaper, 2011/121/2386), Art. 249, Paragraph 1, a threatened witness is a witness who, by giving a statement or answering a certain question, would expose themselves or a person close to them to serious danger to life, health, bodily integrity, freedom or property of a larger scale.

This legal definition shows which goods are protected (life, health, bodily integrity, freedom, property of greater value of a witness or a person close to them), but the same definition does not precisely show from whom or what the danger threatens, who endangers those vulnerable witnesses, who intimidates them and in what way. Starting with the mildest methods of trying to bribe (which is not dangerous for the witness, but it is dangerous for the interest of the community and the criminal procedure), then intimidation with the aim of making the witness change their testimony (for example, they say that he does not know anything about the event or that they do not remember) until the physical elimination of them or persons close to them. After the witness has already given their testimony, retaliation is possible, which also serves as a prevention and warning to witnesses who have yet to testify (Pajčić, 2005).

Psychosocial Character Support to an Endangered Witness and Their Family in the Protection Program

Psychosocial support plays a key role in the recovery process of witnesses and victims of crime, providing support that helps them overcome trauma and rebuild their lives. This support often requires collaboration between different professionals, including psychologists, social workers, legal advisors and other experts. Psychosocial support of witnesses and victims of criminal offenses refers to the provision of emotional, psychological and social support to persons who are witnesses or victims of criminal offences. This support aims to help these people cope with the stress, trauma and emotional consequences that may arise from their experience. Here are some key aspects of psychosocial support: a) emotional support, which involves providing sympathy and understanding for the emotions a person is experiencing, enabling the expression of feelings without fear of judgment and encouraging the expression of emotions. b) psychological support, providing information about the course of the criminal procedure so that the person can better understand what is expected from them, c) ensuring the professional help of psychologists or counselors who can work with people who have gone through traumatic experiences, d) helping in the development of strategies for dealing with anxiety, fear and other emotional challenges. Then, social support involves encouraging connections with supportive friends and family *(https://tpocambodia.org/wp-content/uploads/2014/08/In-pursuit-of-justice-FINAL-web.pdf)*. The great stress of the witness from what they have experienced, the stress due to the fear of testifying, due to the great change in social life due to entering the Protection Program can lead to psychological problems. The fact that a certain person is included in the Protection Program leads, depending on the applied protection measures, to minor or major changes in their previous way of life, as a result of which it is necessary to provide adequate assistance to a certain person. Support of a psychological and social nature should help them face the new reality and successfully overcome the crises brought by an authentic life in the Protection Program, even if they have undergone certain traumatization and if they are afraid of testifying. Psychological support is not sufficient in itself for the successful implementation of the Protection Program. Accordingly, support to the witness must be accompanied by the provision of appropriate economic, social and even legal assistance that will enable the protected person to successfully integrate into the new environment.

Adequate application of a psychosocial approach in providing assistance and support to surviving victims and witnesses in the Protection Program can preserve their mental health and prevent retraumatization during testimony. The psychosocial approach implies a focus on both psychological and social processes. The witness, as well as the victim of the crime, is analyzed from the psychological, material and social side. In this regard, the existing resources that are involved in the application of the treatment of a protected witness, in addition to members of the protection unit, such as the judiciary, the prosecution, the police, and social protection institutions, should be used as adequately as possible, so that the witnesses are better prepared to testify and give the best possible testimony (Ibrahimfendić & Husić, 2018: 19). According to Art. 12. paragraph 2 of the Law on the Program for the Protection of Participants in Criminal Proceedings, the Protection Unit provides the vulnerable person with the necessary economic, psychological, social and legal assistance. According to Art. 12 paragraph 3 of the same law, all state bodies, organizations and services are obliged to provide assistance to the Protection Unit and, at its request, perform actions within their competence necessary for the implementation of the protection program. The aforementioned legal provision is in accordance with point 22 of the Annex to Recommendation 2005 (*https://www.coe.int/t/dg1/legalcooperation/economiccrime/organisedcrime/Rec%20_2005_9.pdf*), 9 which states that the main goal of the Protection Program must be to protect the life and ensure the personal safety of participants in criminal proceedings, i.e. vulnerable persons and persons close to them, in such a way that physical protection and appropriate

psychological, social, legal and financial assistance are provided (Ilić, Majić & Nikolić, 2006: 100). The psychosocial assistance provided to these persons is particularly important. More specifically, the psychological pressure of entering the program, changing residence, environmental changes, breaking up with the previous life, habits, friends, is so pronounced that the protected persons cannot bear all of this on their own.

Children as Close Persons in the Protection Program

Children who are included in the protection program, especially as close relatives of vulnerable persons as participants in criminal proceedings, deserve special attention and support in order to ensure their well-being and prosperity. Definition of children as close persons - In the context of physical and technical protection, children are often recognized as close persons if they are children who are witnesses of a criminal offense and if they are children of vulnerable persons who are included in the protection program. Regarding psychosocial support, children as close persons often go through emotional stress and trauma. Providing appropriate psychosocial support, such as counseling and therapy, can be critical to their emotional recovery. Children who are closed persons in the protection program have the right to safety, support and tailored assistance to ensure their healthy physical, emotional and social development. These measures help create an environment that supports children during a difficult time and allows them to build a positive path to recovery (*https://www.unicef.org/blog/strengthening-care-families-mental-health*). Despite the benefits for witnesses and their families, Witness Protection Programs cause far-reaching consequences for witnesses and enormous burdens for their children. When parents enter the Program, some bring their children with them, as close relatives, and some leave their children, e.g. with relatives (Mphaphuli, 2022:148). According to the United Nations Office on Drugs and Crime (*https://www.unodc.org/documents/middleeastandnorthafrica/organizedcrime/Good_Practices_for_the_Protection_of_Witnesses_in_Criminal_Proceedings_Involving_Organized_Crime.pdf*), children, as relatives of a vulnerable person, are difficult to adapt to a new environment and a new school environment, which to the feeling of isolation and loneliness. According to Demir, they live in isolation with a constant feeling of fear lest they say something they shouldn't by any chance, which could endanger the safety of the whole family (Demir, 2018). Separation and isolation exposes children to a life of stress and anxiety that could lead to long-term mental health problems if not dealt with properly (Hendrik, 2009: 18). Children admitted to the Protection Program had difficulty coping with isolation from family and friends. Such ways of separation resulted - in a feeling of loneliness. Some of the recorded behaviors include rebelliousness, arguing with parents, refusing children to go to school, running away from a safe space, and insisting on returning to regular life regardless of threats from criminal organizations. In addition, children who continued their regular life, outside the Program, e.g., if they stayed with their grandparents, often had difficulties, due to separation from their parents. On the other hand, protected witnesses were frustrated because their children were growing up apart from them, which, in some cases, led to witnesses leaving the Protection Program (Mphaphuli, 2022: 151). On the other hand, the protected witnesses were frustrated because their children were growing up apart from them, which led to the witnesses even leaving the Protection Program (Mphaphuli, 2022: 151). Children, although innocent, are often placed in the Witness Protection Program with their parents. For children, the inclusion of their parents in the same is fraught with difficulty and discomfort. In practice, children are unable to adjust to the Program after being suddenly excluded from their normal social life and familiar environment.

Children have to adapt overnight to a new social environment, which is very specific, then to a new school environment, a new society and environment because the curriculum and program differ from

what the child is already familiar with. Children become lonely due to distance from friends and family, and it is difficult for them to successfully establish and maintain new friendships due to the authentic rules of the Protection Program (Mphaphuli, 2022: 152). Kaur states that isolation results in boredom and loneliness (Kaur, 2011). Collet reveals that there is a direct link between social exclusion, stress and anxiety in children (Collet, 2020). He indicates that loneliness can cause health problems, both physical and psychological, but also an increased risk of depression and suicide in children. There is a correlation between childhood loneliness and challenges in child development, learning difficulties, low self-esteem, lack of optimism and poor health later in life (Mphaphuli, 2022: 154). Behavioral problems that have been reported include disruptive behavior at home, such as refusing to go to school, mood swings, and constant arguments with parents, siblings. It is also evident that the school performance of some children has declined since admission to the Witness Protection Program (Mphaphuli, 2022: 153). Kaur points to the impact of a vulnerable person's entry into the Witness Protection Program as the "rebirth" of witnesses and their close relatives, especially children, because they stop socializing with friends, their original identity is concealed, they get a new identity, they are placed far from home, in someone new unknown area (Kaur, 2011). In order to mitigate the impact of social uprooting and separation from social life on children, the interventions of social workers and emphasizing the necessity of enabling children to maintain contact with family members who are outside the Witness Protection Program are necessary. Psychosocial support is necessary to help children socially, emotionally, academically and in terms of adaptation due to difficulties and homesickness, where the emphasis is on developing their maximum potential. Such intervention may include counselling, therapy, access to health care, strengthening parenting competencies and establishing social support (Mphaphuli, 2022: 154). Children of witnesses and victims who experienced traumatic events in the war-torn area, and probably during the escape, are exposed to a high risk of developing serious cognitive-socio-emotional disorders. These risks are significantly more pronounced if parents are also affected, because parents who are traumatized by war are most likely not able to fulfill their parental duties (Fegert, Diehl, Hahlweg, Leyendecker & Prayon Blum, 2018: 2). In most cases, family dynamics have worsened because during the application of measures and treatments there is little privacy and private space, and the family's private space has been replaced by a safe space. Also, increased sensitivity is expressed through irritability, anger, fear, etc.

Comparative Legislation

The Witness Protection Program in South Africa and Family in the Protection Program

South Africa's Witness Protection Program, called the Office of Witness Protection, was established in 1999 under the Witness Protection Act 112 of 1998 (*https://www.gov.za/sites/default/files/gcis_document/202107/44799gon586t.pdf*). Witness protection plays a key role in the criminal justice system's efforts to fight crime, as witness testimony is a necessary part of the fact-finding process in court and links the perpetrator to the crime committed (Beqiri, 2018: 148). The aim of the Witness Protection Program was initially to look after the physical safety of witnesses in order to break up organized crime and little consideration was given to the impact of admission on witness children (Kiprono, Mwangi & Ngetich, 2015: 148). This resulted in isolation and separation of parents from children, as well as stress and anxiety in both parents and children. According to Coley and Kull, separation and social uprooting undermine emotional bonds, social skills, and cognitive, social, and emotional functioning, and also hinder children's success in school (Coley & Kull, 2016). It is very important that Witness Protection Programs provide support services that enable family preservation. The revised White Paper on Families (*https://www.gov.za/sites/default/files/gcis_document/202107/44799gon586t.*

pdf) emphasizes the importance of preserving the family through interventions that empower and strengthen the family, including ensuring that children are raised in a family environment. Families who are under protection and treatment in the Witness Protection Program receive psychological and social assistance in order to heal from the stress caused by entering the Witness Protection Program, from future witnessing or possibly from traumas acquired in the area affected by the war. The aforementioned assistance empowers witnesses to give effective testimony in court, avoids secondary victimization of witnesses by providing assistance and protection, reduces anxiety about participating in the trial, and finally works with the witness's family at home and in a safe space to ensure successful family reunification and integration in community when the witness finally leaves the Witness Protection Program (Dulume, 2017: 148). Such services include provision of psycho-social support and services, access to medical care and support for children's educational needs, skills development and rehabilitation, as well as assisting witnesses to prepare for court (*https://www.unodc.org/documents/middleeastandnorthafrica/organizedcrime/Good_Practices_for_the_Protection_of_Witnesses_in_Criminal_Proceedings_Involving_Organized_Crime.pdf*).

The Witness Protection Program in the Republic of Italy and Family in the Protection Program

In Italy, the Law on Justice Witnesses, no. 6 of February 21, 2018 (*Legge sui testimoni di giustizia della Repubblica Italiana*, n. 6 del 2018) considers the figure of witnesses of justice, i.e. those persons who, because of their testimony in the criminal procedure, especially organized crime, are in serious danger. Special protection measures are applied on a case-by-case basis, depending on the specific danger and the personal, social, economic, and family situation of justice witnesses and other protected persons. There can be no loss or limitation of the rights they enjoy except in exceptional situations, which makes this law an effective tool not only for the protection of justice witnesses but also their family nucleus (Russo, 2019: 189). Vulnerable persons who have provided information to the police or prosecution or testified at trial may be subject to a special Protection and Assistance Program intended for justice witnesses. However, it is not enough that the person in question (victim or witness) gave a statement, but it must have the character of "grounded internal reliability" and be relevant for conducting an investigation or for establishing relevant facts in a specific criminal proceeding. In addition, what determines the activation of the protective mechanism is the circumstance specified in the Law on the Witness of Justice is "a situation of serious, concrete and present danger, in respect of which the absolute inadequacy of the regular protective measures that can be directly adopted by the public security authorities is evident" (Russo, 2019 : 197). According to Art. 6 paragraph 1 of the Law on the Witness of Justice, the witness can stay in a safe space with their family if they wish, and their accommodation must be suitable to guarantee the safety and dignity of the witness (*Legge sui testimoni di giustizia della Repubblica Italiana*, n. 6 del 2018). Upon entering the Protection Program, data on their personal, family and property status is submitted to the Central Commission within 30 days, where the same commission then appoints a professional, specially trained person who is suitable to provide immediate and direct psychological support to the family, according to Art. 12 paragraph 3 of this law (*Legge sui testimoni di giustizia della Repubblica Italiana*, n. 6 del 2018).

Education and Training Regarding Psychological and Social Assistance

Education, seminars and trainings open up many issues related to providing assistance and support to witnesses, participants in criminal proceedings, finding the best ways to provide them with adequate assistance and psychosocial support. It is necessary to establish an institutional network to support the

target group consisting of witnesses, then surviving victims who live in their traumatic world, and on the other hand, professionals who work with them and whose mental health needs to be taken care of. First of all, it is necessary to create a more humane and efficient environment for providing assistance and support to protected persons (Ibrahimefendić & Husić, 2018: 15). Also, in order to see comprehensive psychosocial support and assistance to victims and witnesses, it is necessary to get to know all the services that participate in the application of trauma and stress treatment measures for them, if it is present. In addition, it is necessary to investigate the most effective ways of communication and ways of questioning protected persons in general, all in the interest of giving an accurate and complete statement before the judicial authorities and for the sake of elucidating the criminal offense and passing a conviction against the perpetrator of the criminal offense.

According to the Directive of the European Parliament on the rights, support and protection of victims of crime, every official participating in criminal proceedings who are likely to come into contact with victims and witnesses should be allowed to go training. Member States should provide training of this type for police and judicial officers. Likewise, training should be provided to lawyers, prosecutors and judges (*https://eur-lex.europa.eu/legal-content/ HR / TXT / PDF /? uri= CELEX :32012 L 0029&from = SK*). When it comes to special measures for the rehabilitation of victims and witnesses, according to the opinion of the Council of Prosecutors, there should be a sufficient level of material, human and financial resources to ensure appropriate protection and assistance to victims and witnesses. According to the Council, professional training is of key importance and should include experiences on good practices and exchange of information in cases of potential psychological and social implications, where different examination techniques are considered. (https://rm.coe.int/ccpe-opinion-no-9-serbian/1680a1e0a9).

Conclusion

The Unit for Protection of the Ministry of Internal Affairs undertakes measures of psychosocial protection, where it has an operational role, because it is specialized in the implementation of treatment and in performing other tasks related to the measures of the Witness Protection Program. Members of the same unit should undergo special training, specialized courses, where they would become more familiar with the psychology of the witness, their profile, the mandatory conduct of an interview when a vulnerable person enters the Witness Protection Program, their protection measures and the legal aspects of this issue. The lack of knowledge regarding psychosocial support for children automatically leads to the absence of necessary elementary interventions. On the part of the social worker and psychologist employed in the specialized unit of the police, it is necessary for them to have an understanding regarding the needs of children as close persons, who are inevitably affected by the entry of their parents into the Witness Protection Program, where the result would be the restoration, unification and preservation of the family.

Our Law on the Program for the Protection of Participants in Criminal Proceedings does not contain sufficiently elaborated provisions on the psychosocial protection of vulnerable persons and persons close to them, and it is necessary to amend the existing law or to pass by-laws that would regulate this area more closely. Witness protection has been reduced to only two articles of the Law on the Program for the Protection of Participants in Criminal Proceedings in the Republic of Serbia. The conclusion is that very little attention is paid to children, as close persons, both in legislative and internal acts of institutions working on this target group. We conclude that the admission of parents to the Program interrupts the normal functioning of a family, causes stress on the emotional relationships of family

members and therefore negatively affects children as close people. In this regard, *de lege ferenda*, it would be desirable for the legislator, during the procedural reform, to regulate in more detail the range of actions and dedication of full psychosocial support to witnesses in the Witness Protection.

Training participants would become more confident in the future in recognizing signs of stress, traumatization, anxiety, etc. after completing the education and seminars. They would carefully treat traumatized persons during the duration of their status as a vulnerable person in the Witness Protection Program and when testifying in court. Also, these trainings would have an impact on raising the awareness of the handlers, the head of the Unit and the employees in other services with whom they cooperate regarding the treatment of vulnerable persons in the Witness Protection Program. Perhaps the inclusion of support and protection in the earlier phase of the treatment of the protected person could even improve their mental state and stability, as well as promote more intensive cooperation of witnesses with the police and judicial authorities.

In addition, it is necessary to connect and coordinate other services with the Unit for Protection, given the fact that fear, stress are elements that affect the stress disorder of the protected person and those close to them, in whom stress intensifies. These psychological groups should be a means of helping to share feelings of loneliness, isolation and a sense of belonging. However, the greatest responsibility in witness protection rests with the state, which has the obligation to provide comprehensive assistance, and not only psychosocial but also medical, legal and financial assistance, because for the protected person's sense of trust in the state authorities, it is necessary to provide complete protection and support to the same, and all for the reasons investigation of the criminal offense and conviction of the perpetrators of serious crimes.

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ONE APPLICATION OF ANALYTICAL HIERARCHICAL PROCESS IN FORENSICS AS A METHOD FOR RISK ASSESSMENT

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Introduction

Forensic engineering, as an application of a wide range of scientific disciplines, skills, and methods, allows for obtaining answers related to establishing facts that may have legal consequences. The advancement of science and technology has contributed to the fact that certain criminal matters and undesirable events cannot be successfully illuminated and resolved without the application of specialized expertise. The use of new technical and technological systems by perpetrators of criminal acts necessitates the need to counteract even higher technical and technological systems and expert knowledge in order to achieve successful crime fighting. The utilization of advanced technological systems needs to be considered both in terms of responding to occurrences of undesirable events and the implementation of repressive measures, as well as from the perspective of preventive actions.

A forensic engineer, as a knowledgeable individual possessing specific skills and expertise, conducts the process of establishing facts and investigating physical causes of accidents and other undesirable events, aiming to prepare engineering reports, expert opinions, testimony in legal proceedings, as well as providing advisory opinions to assist in resolving disputes affecting life or property (Kenneth et al., 2001). Investigations and reconstructions of events, in this case fires, leading to loss of life and/or property damage, do not always have to be tied to legal processes; rather, they can be undertaken to determine causes in order to prevent the recurrence of such events.

Incorporating multidisciplinary knowledge and technical solutions is the foundation of forensic engineering, with the goal of uncovering causes and examining consequences of the events that materialize through elements necessary for law enforcement. Risk is present in all human activities and systems, as probability of expose (someone or something valued) to danger, harm or loss (Brown, 2014; Delić &

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Softić, 2014). Risk is an inevitable part of business, and in many fields, it is essential to confirm the implementation of appropriate systemic analysis processes, especially considering the extent of data that are collected and processed in business processes. The Analytic Hierarchy Process (AHP) method, as a multi-criteria decision analysis method might be used in group or individual decision-making support in cases where risk assessment has to be done. Different applications of AHP might be classified as applications based on a theme, specific applications, and applications combined with some other methodology (Vaidya & Kumar, 2006; Petrillo, Salomon & Tramarico, 2023).

Forensic risk assessment refers to the ability to calculate the probability of the occurrence of undesirable events, with the aim of timely identification of the need for preventive action or assessment of responses taken in the event of undesirable occurrences. Results can be directed towards preventive action, identifying individuals or circumstances that could lead to undesirable events such as fires (and pollution as their consequence), or discovering the causes of undesirable events and activities taken to mitigate the consequences. It can also contribute to planning and providing the necessary minimal resources for efficient and effective protection of the working and living environment. Forensic risk assessment is one of the fundamental elements of modern forensic practice in various fields, attracting the attention of the contemporary scientific community and ongoing research. Identifying static and dynamic risk factors and corresponding responses for their prevention is included in the risk assessment process (Brown et al., 2014; Vaidya & Kumar, 2006) that can be done by AHP method.

Methods of Risk Identification, Analysis, and Assessment

Risk identification is a process of identifying and documenting potential risks, i.e., potential hazards or threats that may result in undesirable events. Such identification involves the application of appropriate methods to identify risks and prepare information about all identified risks, forming the basis for problem/risk evaluation. Based on risk identification, all sources of hazards should be discovered and accurately described. The results of risk identification include: recognizing undesirable events; describing sources of hazards, risk factors, conditions of occurrence, and ways of development and consequences of undesirable events; preliminary hazard and risk assessments (Vaidya & Kumar, 2006; Mlađan et al., 2013; Petrillo, Salomon & Tramarico, 2023; Geng, et al., 2021).

Systematic risk analysis involves obtaining quantitative hazard assessments. It is a general methodology for researching systems with the goal of defining system problems and determining ways and paths of their resolution; defining system goals, constraints, available resources, functional interactions, and interactions between the system and the environment; indicating the information and data that need to be collected, processed, and used for understanding system characteristics or improving its functioning; pointing out methods for evaluating and verifying chosen solutions or decisions. Risk analysis includes considering all possible scenarios of occurrence, ways of development, and consequences of undesirable events; assessing the frequency and realization of each scenario of occurrence and way of development and consequences of undesirable events; examining fields of harmful factors arising from different scenarios of undesirable event development; assessing the impact consequences of harmful factors of the unwanted event on humans or other material objects, as well as the environment; calculating risk indicators (Mlađan et al., 2013; Islam & Gazder, 2023; Geng et el., 2021).

Methods used in risk assessment relate to the assessment goals, acceptable risk criteria, stages of object functioning, available resources for conducting the assessment, object type, information availability, experience and qualification of the assessor, etc.

Analytic Hierarchy Process (AHP)

The analytic hierarchy process method, developed by Thomas Saaty (Saaty, 1980), is a multi-criteria decision analysis method used in group or individual decision-making as well as researchers (Vaidya & Kumar, 2006; Petrillo, Salomon & Tramarico, 2023). The central part of AHP involves pairwise comparisons of hierarchy elements and forming corresponding local reciprocal numerical matrices from which weights of compared elements are determined using mathematical procedures. The matrices and calculated element weights carry information about decision-maker consistency, which can be measured in various ways, directly and indirectly. In the standard AHP, consistency ratio (CR) is used. If there are N decision-makers addressing the same problem, then at each level of the hierarchy, instead of one local matrix, there are N such matrices and the same number of sets of element weights. The AHP method is based on defining the hierarchy of a complex problem and Saaty's methods for determining the weights of all alternatives in relation to the set goal. The analytic part of this method represents hierarchical problem decomposition. The problem is broken down into multiple levels of decision factors among which a hierarchy is established. The method starts with defining the goal, determining criteria related to the goal, and if necessary, sub criteria. After defining the hierarchy, the decision-maker compares elements-criteria in pairs at the same level to establish their mutual priorities or rank criteria. Comparison is carried out based on the relative importance of compared elements, in relation to an element of a higher level of the hierarchy. Comparison is done using Saaty's scale (Table 1).

Table 1 *Saaty's Scale*

Definition	**Numeric value**
Equal importance	1
Weak importance of one over the other	3
Essential or strong importance	5
Demonstrated importance	7
Absolute importance	9
Intermediate values between the two adjacent judgements	2, 4, 6, 8

Comparisons in pairs are made based on Saaty's scale of importance (Table 1), by assigning values from the set {1/9, 1/8, 1/7, 1/6, 1/5, 1/4, 1/3, 1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9}. In this scale, 1 means that both factors (being compared) are equally important, while 9 indicates that the first factor in the pair is more important than the second factor. Pairs are compared relatively to each other, not in relation to a defined or imagined quality or quantity.

After the pairwise comparisons, the decision-maker calculates their relative weights with respect to the goal. They compare alternatives (in pairs) for each criterion and assign relative weights, thus creating a database of compared pairs.

The computational part of the AHP method is based on a reciprocal matrix, in which the elements of the upper triangle of the matrix are reciprocals of the corresponding elements in the lower triangle with respect to the diagonal, which is always 1. The general matrix for comparing n decision elements at a specific level of the hierarchy is expressed as ($a_{ij}=1/a_{ji}$, for each i and j; $a_{ii}=1$ for each i, $\det A \neq 0$).

$$A = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{n1} & \cdots & a_{nn} \end{bmatrix}$$

AHP compares pairs, taking into account the goal, criteria, and alternatives. The analysis of individual decision-maker consistency can be performed based on the calculated values for CR and ED (Eigenvector Discordance) for each comparison matrix. The vector weight of each criterion is derived from this comparison. The CR is calculated during the standard AHP procedure. First, the Consistency Index (CI) is calculated:

$$CI = \frac{(\lambda max - n)}{(n-1)} \quad (1)$$

where max is the maximum eigenvalue of the comparison matrix. Using this index and the Random Index (RI), which depends on the order of the matrix, the Consistency Ratio (CR) is obtained.

$$CR = \frac{CI}{RI} \quad (2)$$

The RI is determined from Table 2, where n is the rank of the matrix:

Table 2 *Values of Random Indexes*

n	1	2	3	4	5	6	7	8
RI	0	0	0.52	0.89	1.11	1.25	1.35	1.4

If the CR for the comparison matrix is found to be CR < 0.10, the decision-maker is considered to be satisfactorily consistent. In some cases, this statement may also hold if CR > 0.10 (Saaty, 1980).

Using the AHP method, it is possible to decompose any complex problem into multiple sub problems, and each level represents a set of criteria elements relevant to that sub problem. In this way, forensic engineering can define the causes of undesirable events using engineering knowledge as a series of criteria of the same or varying importance, or a sequence of influences that led to the unwanted state.

System Analysis and Risk Management

Due to the presence of risks in all activities and domains of life, as well as the high potential in terms of material, energy, and economic aspects of production systems, it is necessary to pay special attention to the areas of system analysis and risk management. Risk management is primarily oriented towards maximizing system stability and achieving gains while minimizing losses and the consequences of undesirable events. System analysis, as a general methodology for researching systems with the goal of defining system problems and determining ways and paths of their resolution, is focused on making decisions to analyze and thereby prevent undesirable events. Undesirable events can be viewed from different perspectives, through the analysis of events that have occurred, the analysis of current uncertain conditions, or the analysis of potential occurrences of uncertain conditions.

Engineering uncertain conditions can be seen as the combined application of forensic procedures for past events and system analysis and risk management for events that may occur in the present or future.

Undesirable events, malfunctions in the functioning of technical systems, or the occurrence of accidents, fires, and explosions most often arise due to design errors, mistakes in implementation and/or construction of systems, inadequate materials, and of course, failure to adhere to procedures and operational processes of technical systems (Figure 1).

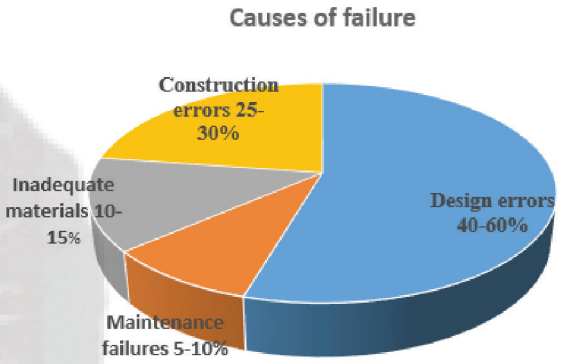


Figure 1 *Most Common Causes of Technical System Failures*
(Delić et al., 2014)

The mechanism of failure occurrence can involve a series of physical, chemical, and other processes that may lead to failures, endangering human lives and health, as well as causing material damage. In technical systems, design solutions, construction, material selection, proper usage conditions, regular and extraordinary maintenance, and the implementation of a series of other measures aim to reduce the probability of undesirable events, thereby minimizing or accepting them to an acceptable level. In the case of fires, this probability should ideally approximate zero. It is particularly important to consider that the fundamental processes that represent the causes at the lowest level, and the basis for initiating the mechanism of failure, include corrosion, wear, oxidation, hardening, and the like (Imamović et al., 2017).

The Interaction of System Analysis and Risk Management with Forensic Engineering

System analysis and risk management are the antithesis of accident investigation. Risk management aims to prevent accidents, while forensic engineering focuses on analyzing the causes and consequences of accidents. Both aspects are related to legal norms and standards. However, we can use both synergistically, as support and a prerequisite for strengthening both aspects, to conduct an analysis of the causes of undesirable events from the perspective of risk management, in order to enhance existing practices and establish preventive measures for the occurrence of undesired events. This is achieved by conducting system analysis and risk assessment before project initiation and by monitoring the implementation and control of risk occurrence.

The implementation plan for project activities or system construction can be based on previous experience to prevent future accidents through system analysis, risk assessment, and control, determining immediate and root causes of undesired events, and ensuring timely identification of the same. The plan can also be developed by assessing the framework and frequency of undesired event occurrences to estimate the probability of occurrence, ensuring that the estimated impacts align with the severity of the undesired event.

The usefulness of forensic engineering for risk management is evident, established, and widely applied. It wouldn't be an exaggeration to say that without forensic engineering, risk assessment would be nearly impossible (Singh et al., 2012; Chhetri & Kayastha, 2015). Conducting investigations into undesired events, documenting details of their severity and frequency, identifying main causes and contributing factors, builds a knowledge base and statistics that underlie the assessment and determi-

nation of the probability and seriousness of risk occurrence. Importantly, findings with any degree of certainty can be of interest for future analyses, planning, and risk management.

Forensic engineering involves an understanding of legal foundations related to the investigated undesired events, particularly regarding risk identification and the responses undertaken within the scope of system analysis and risk management. Forensic engineering is absolutely essential for risk management. A solid analysis and risk management not only reduce accidents but also serve as tools in forensic engineering. A professional comprehension of the differences between system analysis and risk management and forensic engineers holds practical benefits. Ultimately, these two fields share similar professional focuses, functions, purposes, and areas of action. System analysis and risk management are indispensable components of forensic engineering, whether it's analyzing an accident or preventing one, especially when legal implications may influence outcomes. Additionally, various methods and tools, such as the risk matrix (using the AHP method), can be applied in forensic engineering.

Legal aspects, particularly in cases of violation or non-compliance, have an impact on determining and implementing penal provisions in specific fields of action because risk assessment and risk management control are significant in the processing of cases requiring handling in the field of forensic engineering. One of the fundamental questions during case processing by a forensic engineer is whether there is a risk assessment for a specific activity and whether appropriate preventive and corrective measures have been implemented as part of the risk analysis during decision-making and rules establishment, concerning potential influences that could lead to the occurrence of an undesired event (Krishnamurthy, 2016).

Analysis and Risk Assessment of Explosions and Fires

Risk assessments of events involving fires and explosions are continuously analyzed from the perspective of systemic risk analysis, addressing potential issues and ensuring safety in a general sense. Starting from the premise that risk represents the degree of probability that a specific event will occur, coupled with knowledge of materials and conditions that could lead to hazards, the necessary elements for risk analysis and assessment are identified (Wu, 2016). Risk assessment is performed for fires, while risk analysis can be conducted in a broader context using methods for risk analysis, which encompass events to identify problems and prioritize strategic risk assessments and decision-making (Figure 2). Risk assessment forms the foundation for establishing fire and explosion protection systems, events discussed in this work. Systemic analysis and risk assessments contribute to generating recommendations that, when implemented, enhance the safety of individuals, structures, and other material assets.



Figure 2 *Risk Management Model*[2]

2 http://iso18001-delhi-ncr.blogspot.com/2008/10/iso-180012007-ohsas.html

A specific aspect in risk analysis and management is the environment, which with its conditions and factors can significantly impact the entire safety system. Therefore, risk analysis encompasses all elements and factors present in the environment of the space or object being analyzed. Depending on the degree of variability of environmental elements, it is necessary to continuously implement a cycle of processes that lead to the improvement of the risk management system (Figure 3).

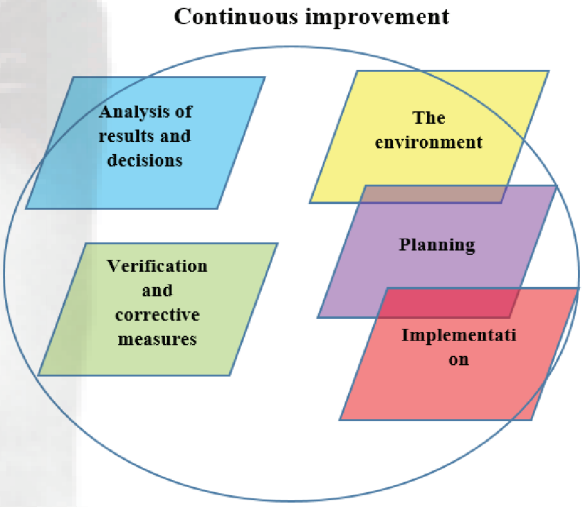


Figure 3 *The Process of Improving the Risk Analysis System*

The threat assessment models, data, and assumptions used for quantifying the risk of fire need to be specifically developed and considered. Models related to the systematic analysis of fire risk should be aligned with their purpose and utilized with particular attention due to the complexity of processes and the influence of environmental factors. Users of these fire-related models must be aware of limitations in terms of their application scope and employ them within those constraints.

During analysis, the range of fire types that can occur in the observed context should definitely be considered. Effects influencing the occurrence and spread of fire, especially flame propagation which can create additional hazards to people, equipment, and the environment, need to be adequately examined. It is also crucial to incorporate appropriate assessments of flame development, propagation, and smoke dispersion to evaluate the impact on action directions, particularly concerning critical locations along the fire's path. Assessment of Fire Consequences Appropriate considerations should be undertaken to analyze the effects of fire on humans, material goods, and the environment. Considerations can relate to various injury and damage mechanisms arising from heat (thermal radiation, inhalation of hot gases), reduced visibility, decreased oxygen, and inhalation of toxic gases and combustion products.

Table 3 *Number of Fires in the Last 5 Years. Forensic Analysis*

Year	Number of fires
2018	2521
2019	2659
2020	2292
2021	2272
2022	2181

Criteria for assessing damage in relation to people, material goods, and the environment must be carefully considered in relation to relevant factors and used judiciously when drawing conclusions related to the occurrence and effects of fire processes (Chhetri, & Kayastha, 2015; Ketsakorn & Phangchandha, 2023). These criteria are also used for defining safety measures and designing evacuation routes, as the harmful effects of fire processes can lead to the disruption of primary and even vital system functionalities, endanger human health and lives, cause damage and destruction of material goods, and harm the environment. It should also be taken into account that fire processes can occur as a primary cause or as a consequence of unwanted events, as well as the spatial and temporal distribution and significance of elements and factors in the environment that influence the occurrence and development of fire processes.

Assessment of the Consequences of the Fire (Air Pollution) at the Chinese Market Centre on August 12, 2021 Using the AHP Method

To demonstrate the interconnectedness of forensics and systemic risk analysis, let us consider the example of the consequences of the fire at the Chinese Market Centre in New Belgrade on August 12, 2021, which directly impacted air pollution with sulfur dioxide (SO_2), PM10 (particles with a diameter of 10 micrometers or less), ozone (O_3), nitrogen dioxide (NO_2), and nitrogen oxides (NO_X). Through the AHP method, we will illustrate at which locations the polluting particles have the greatest impact on the living and working environment. The measurement locations for pollution were Belgrade Omladinskih brigada, Belgrade Vračar, Belgrade Zeleno brdo, and Belgrade Vinča (data retrieved from http://www.amskv.sepa.gov.rs/mob/). The established hierarchy is shown in Figure 4.

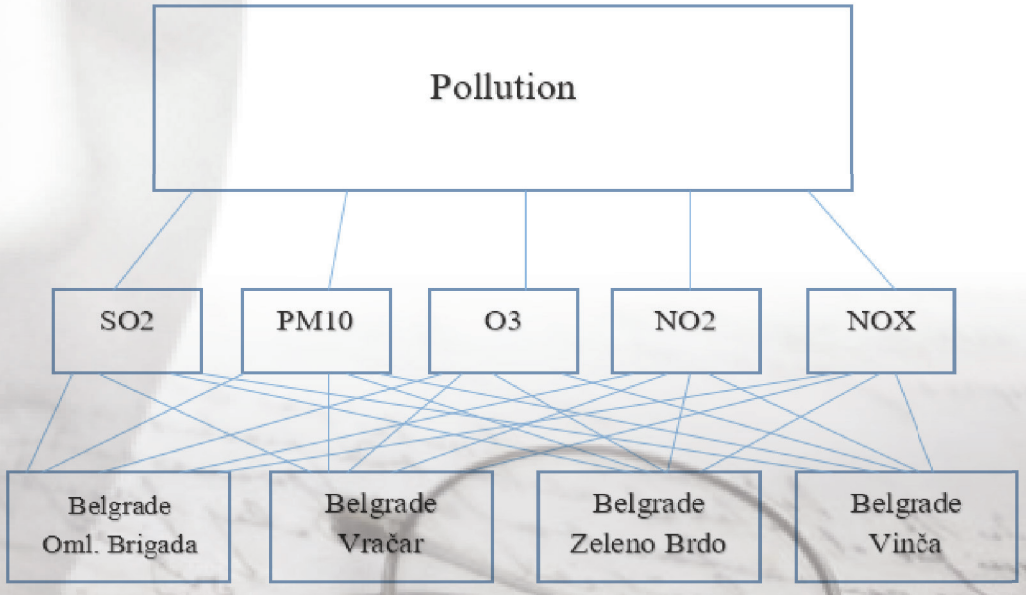


Figure 4 *Hierarchical Representation of the Pollution Problem*

Table 4 *Values of Pollutant Particles at the Location Belgrade, Omladinskih Brigada Street*

Time	SO_2 [µg·m^{-3}]	PM10 [g·m^{-3}]	O_3 [g·m^{-3}]	NO_2 [g·m^{-3}]	NO_X [g·m^{-3}]
Place	Belgrade Oml. brigada				
12.8.2021 21:00	16,79	17,19	21,56	62,77	64,49
12.8.2021 22:00	16,95	26,38	9,85	97,08	140,38
12.8.2021 23:00	17,36	38,72	9,99	95,53	145,5
13.8.2021 00:00	17,92	34,99	4,68	79,4	117,54

Table 5 *Values of Pollutant Particles at the Location Belgrade, Vračar*

Time	SO_2 [µg·m^{-3}]	PM10 [g·m^{-3}]	O_3 [µg·m^{-3}]	NO_2 [g·m^{-3}]	NO_X [g·m^{-3}]
Place	**Belgrade Vračar**				
12.8.2021 21:00	19,12	20,6	46,01	25,8	28,8
12.8.2021 22:00	28,69	19,35	62,84	17,97	20,25
12.8.2021 23:00	20,92	18,91	48,37	21,22	31,92
13.8.2021 00:00	24,72	31,61	3,78	40,75	65,2

Table 6 *Values of Pollutant Particles at the Location Belgrade, Zeleno Brdo*

Time	SO_2 [µg·m^{-3}]	PM10 [µg·m^{-3}]	NO_2 [µg·m^{-3}]	NO_X [µg·m^{-3}]
Place	**Belgrade Zeleno brdo**			
12.8.2021 21:00	12,22	14,73	28,75	58,45
12.8.2021 22:00	12,19	16,26	31,32	66,72
12.8.2021 23:00	12,2	16,27	29,93	69,71
13.8.2021 00:00	12,66	17,24	32,62	78,03

Table 7 *Values of Pollutant Particles at the Location Belgrade, Vinča*

Time	SO_2 [ug.m-3]	PM10 [ug.m-3]	O_3 [ug.m-3]	NO_2 [ug.m-3]	NO_X [ug.m-3]
Place	**Belgrade Vinča**				
12.8.2021 21:00	7,5	26,65	101,04	7,48	9,75
12.8.2021 22:00	7,73	83	47,17	31,11	34,19
12.8.2021 23:00	7,5	66,1	37,39	36,65	39,36
13.8.2021 00:00	7,78	49,61	51,76	23,33	25,59

The period immediately after the outbreak of the fire was chosen for conducting the analysis, and Figure 5 shows as the situation was at 10 p.m.

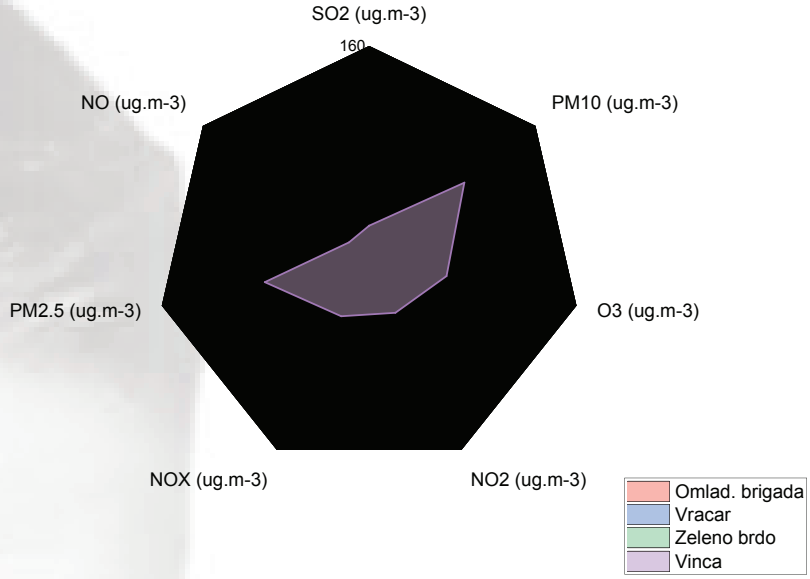


Figure 5 *Situation at 10 p.m. Approximately Two Hours After Fire Start*

According values shown in the tables 4 – 7 further steps in applying AHP method conducted.

Table 8 *Comparing the Significance of Pollutant Particles on the "Nine-Point" Scale*

	SO_2	**PM10**	**O_3**	**NO_2**	**NO_X**
SO_2	1	5	(5)	2	3
PM10		1	(3)	(5)	(5)
O_3			1	3	4
NO_2				1	2
NO_X					1

Table 9 *Assessments and Priorities in Relation to SO_2*

	Belgrade Oml. brigada	**Belgrade Vračar**	**Belgrade Zeleno brdo**	**Belgrade Vinča**
Belgrade Oml. brigada	1	2	2	5
Belgrade Vračar		1	(2)	(6)
Belgrade Zeleno brdo			1	(3)
Belgrade Vinča				1

Table 10 *Assessments and Priorities in Relation to PM10*

	Belgrade Oml. brigada	**Belgrade Vračar**	**Belgrade Zeleno brdo**	**Belgrade Vinča**
Belgrade Oml. brigada	1	7	4	5
Belgrade Vračar		1	(3)	3
Belgrade Zeleno brdo			1	(3)
Belgrade Vinča				1

Table 11 *Assessments and Priorities in Relation to* O_3

	Belgrade Oml. brigada	**Belgrade Vračar**	**Belgrade Zeleno brdo**	**Belgrade Vinča**
Belgrade Oml. brigada	1	3	(2)	5
Belgrade Vračar		1	5	3
Belgrade Zeleno brdo			1	(3)
Belgrade Vinča				1

Table 12 *Assessments and Priorities in Relation to* NO_2

	Belgrade Oml. brigada	**Belgrade Vračar**	**Belgrade Zeleno brdo**	**Belgrade Vinča**
Belgrade Oml. brigada	1	5	(3)	4
Belgrade Vračar		1	4	2
Belgrade Zeleno brdo			1	(2)
Belgrade Vinča				1

Table 13 *Assessments and Priorities in Relation to* NO_X

	Belgrade Oml. brigada	**Belgrade Vračar**	**Belgrade Zeleno brdo**	**Belgrade Vinča**
Belgrade Oml. brigada	1	3	3	4
Belgrade Vračar		1	(5)	(7)
Belgrade Zeleno brdo			1	(8)
Belgrade Vinča				1

Table 14 *Determining the Normalized Attribute Vector (Pollutant Particles)*

	SO_2	**PM10**	**O_3**	**NO_2**	**NO_X**
SO_2	1	5	(5)	2	3
PM10		1	(3)	(5)	(5)
O_3			1	3	4
NO_2				1	2
NO_X					1

Table 15 *Determining the Normalized Attribute Vector (Pollutant Particles)*

	SO_2	**PM10**	**O_3**	**NO_2**	**NO_X**
SO_2	1	5	0,2	2	3
PM10	0,2	1	0,33	0,2	0,2
O_3	5	3	1	3	4
NO_2	0,5	5	0,33	1	2
NO_X	0,33	5	0,25	0,5	1
Σ	7,03	19	2,11	6,7	10,2

Table 16 *Determining the Normalized Attribute Vector (Pollutant Particles) - Each Element in the Table is Divided by the Sum of the Elements in the Corresponding Column*

	SO_2	PM10	O_3	NO_2	NO_X	$\sum$ atribute /5
SO_2	0,14	0,26	0,09	0,30	0,29	0,22
PM10	0,03	0,05	0,16	0,03	0,02	0,06
O_3	0,71	0,16	0,47	0,45	0,39	0,44
NO_2	0,07	0,26	0,16	0,15	0,20	0,17
NO_X	0,05	0,26	0,12	0,07	0,10	0,12

Table 17 *Normalization of a Vector With Respect to SO_2 - Triangular Matrix of Pairs*

	Belgrade Oml. brigada	Belgrade Vračar	Belgrade Zeleno brdo	Belgrade Vinča
Belgrade Oml. brigada	1	2	2	5
Belgrade Vračar		1	(2)	(6)
Belgrade Zeleno brdo			1	(3)
Belgrade Vinča				1

Table 18 *Determining the Normalized Vector in Relation to SO_2*

	Belgrade Oml. brigada	Belgrade Vračar	Belgrade Zeleno brdo	Belgrade Vinča
Belgrade Oml. brigada	1	2	2	5
Belgrade Vračar	0,5	1	0,5	0,17
Belgrade Zeleno brdo	0,5	2	1	0,33
Belgrade Vinča	0,2	6	3	1
Σ	2,2	11	6,5	6,5

Table 19 *Normalization of a Vector in Relation to SO_2 - Each Element in the Table is Divided by the Sum of Elements in the Corresponding Column*

	Belgrade Oml. briga-da	Belgrade Vračar	Belgrade Zeleno brdo	Belgrade Vinča	$\sum$ atribute /4
Belgrade Oml. brigada	0,45	0,45	0,18	0,31	0,77
Belgrade Vračar	0,23	0,23	0,09	0,08	0,03
Belgrade Zeleno brdo	0,23	0,23	0,18	0,15	0,05
Belgrade Vinča	0,09	0,09	0,55	0,46	0,15

We repeat the same procedure for other pollutants.

Table 20 *Normalized Pollutant Vector*

SO_2	PM10	O_3	NO_2	NO_X
0,22	0,06	0,44	0,17	0,12

Table 21 *Normalized Pollutant Vector by Location*

	SO_2	PM10	O_3	NO_2	NO_X
Belgrade Oml. brigada	0,77	0,57	0,38	0,39	0,43
Belgrade Vračar	0,03	0,13	0,29	0,25	0,07
Belgrade Zeleno brdo	0,05	0,14	0,19	0,23	0,15
Belgrade Vinča	0,15	0,16	0,14	0,13	0,35

Table 22 *Determination of Composite Normalized Vector*

	SO_2	PM10	O_3	NO_2	NO_X	Σ atribute
Belgrade Oml. brigada	0,17	0,03	0,17	0,07	0,05	0,49
Belgrade Vračar	0,01	0,01	0,13	0,04	0,01	0,19
Belgrade Zeleno brdo	0,01	0,01	0,08	0,04	0,02	0,16
Belgrade Vinča	0,03	0,01	0,06	0,02	0,04	0,17

Based on the weights of the composite normalized vector, the exposure order of pollutants is as shown on Figure 5.

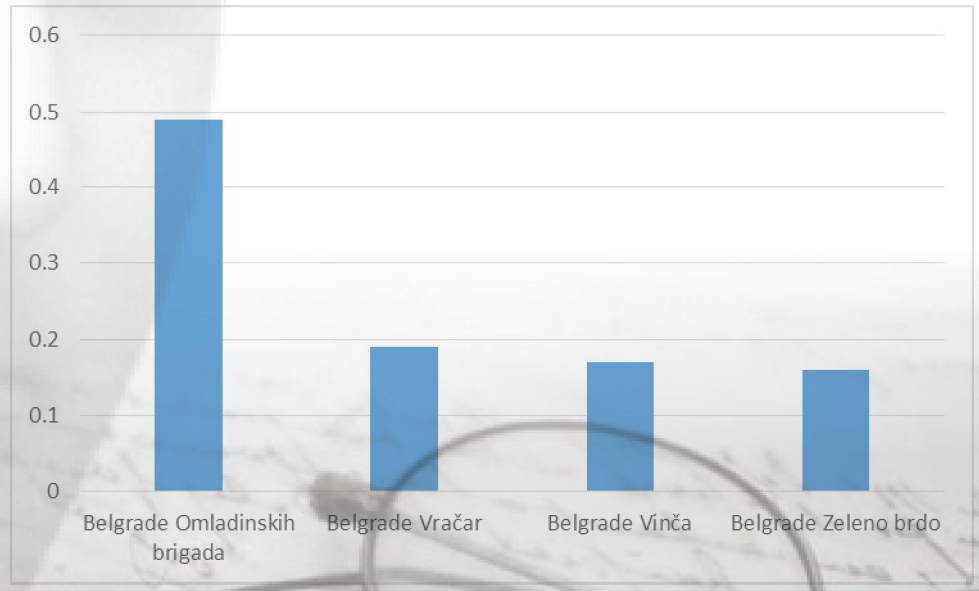


Figure 6 *Results of AHP Method – Exposure Order by Location*

The pollution results in the examined areas are expected, given that the center of the fire was the Chinese Market Centre near the measuring station in Omladinskih brigada (Figure 6-7). Vračar and Vinča, in addition to the additional pollution, also have their "usual" pollution, and Zeleno brdo is the least polluted due to its altitude.

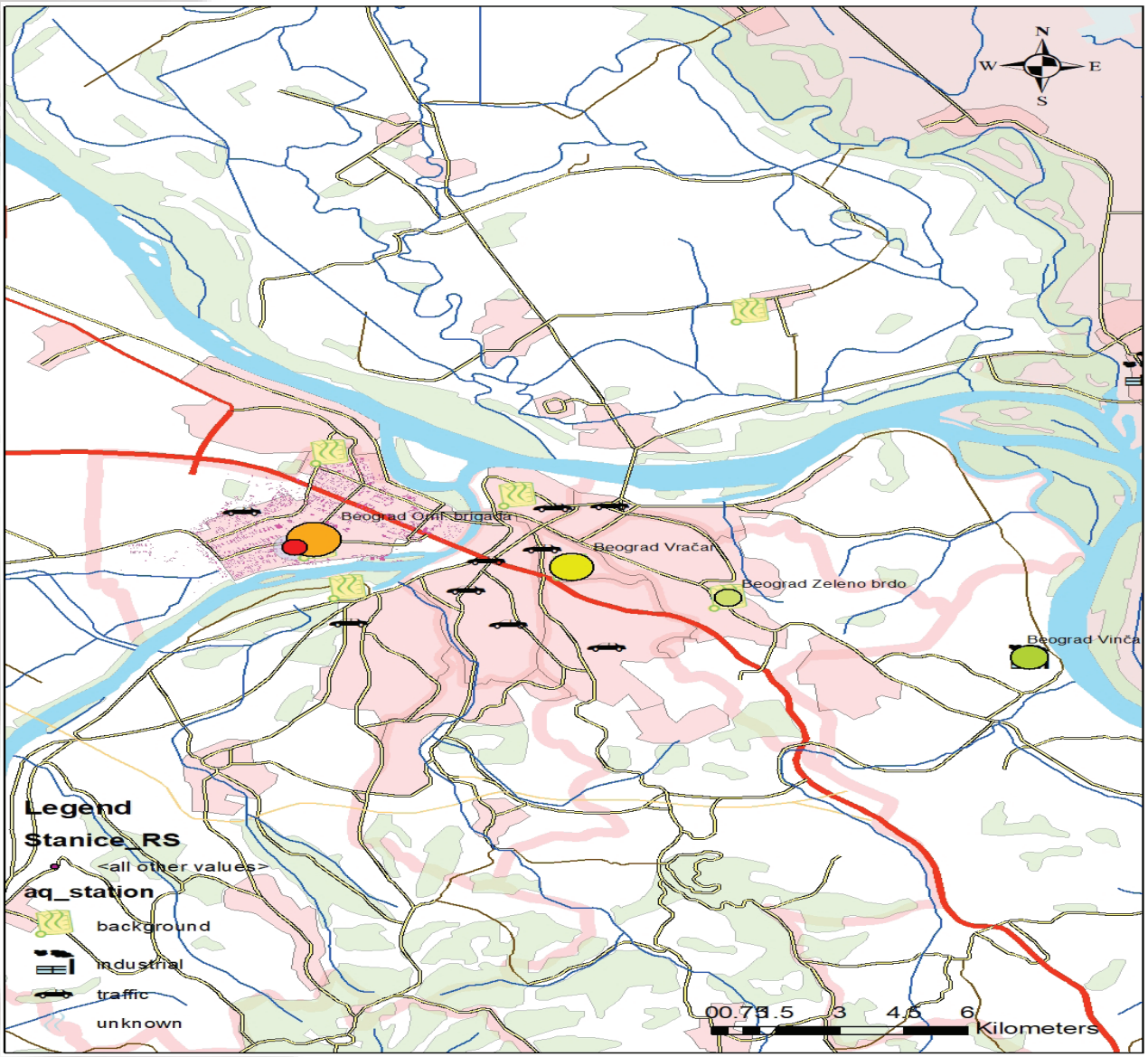


Figure 7 *Location of the Incident and Results of Applied AHP Method*

Conclusion

To demonstrate the interconnectedness of forensics and systemic risk analysis, scope of study was the consequences of the fire at the Chinese Market Centre in New Belgrade on August 12, 2021. Through the AHP method, we got at which locations the polluting particles have the greatest impact on the living and working environment. As the AHP method is one of widely used multi-criteria decision analysis approaches, in this study is shown approach based on exact data and the expert-judgment method with the facility to check the consistency of the rating provided by the expert, confirming the relative priority of each used data relevant to the criteria. It is shown that distance from evet, environment condition and measures air pollutant on stations, are relevant for prioritizing and taking actions. In the examined area the pollution effect was as expected, as the center of the fire was the Chinese Market Centre near the measuring station in Omladinskih brigada. Values measured of observed air

pollutants (SO_2, PM10, O_3, NO_2, and NO_X) on the stations for automatic air quality monitoring Vračar and Vinča, didn't differ from normal level, and Zeleno brdo is the least polluted due to its altitude.

The selection of factors is based on the availability of data for the study area and the relevance with respect to fire incidents. However, more factors can be considered for further study if data are available.

Risk assessment with involvement further factors of interest might contribute to resolve problems using fuzzy mathematics and the analytic hierarchy process together to evaluate risk which is proved useful to solve uncertainty and imprecision problems (Peng et al., 2021).

Solving problems due to fire and explosion, systematic studies are necessary, and mapping and risk assessment might contribute, however conducted study is in line with that. Also, the study of Chhetri and Kayastha (Chhetri & Kayastha, 2015) consider application of an AHP method for fire potential zone mapping generation for city area. Furthermore, AHP has been applied in many and diverse areas of decision-support in environmental management such as wildfire risk map (Mahdavi, et al., 2012), forest fire risk map (Kanga, et al., 2013), urban fire risk map (Srivanit, 2011), land use pattern selection (Malczewski, et al., 1997) and similar.

According to presented results it was confirmed correlation between location of fire and concentration of the air pollutants in the examined area as well as contribution to event analyse from the forensic point of view. Furthermore, it can be applied for further development and adaptation of standard operating procedures related to responding to the occurrence of undesirable events are elements of preventive actions related to occurrence and reducing negative effects.

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THE INFLUENCE OF TIME ON OXIDATION PROCESS OF FLUORESCEIN-CHITOSAN POWDER CONJUGATES USED TO DEVELOP LATENT FINGERPRINTS ON DIFFERENT SUBSTRATES

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Purpose

Detection and visualization of latent fingerprints is one of the main tasks for law enforcement agencies in order to identify a perpetrator of a criminal act. Fingerprints can often be found at the crime scene, when fingertips interact with objects and leave patterns specific for each individual (Mozayani & Noziglia, 2006; Daluz, 2019). Chemical and physical methods have been used for years to visualize fingerprints on different porous, semi-porous and non-porous substrates (Milašinović & Koturević, 2016; Daluz, 2019). Many commercial products are providing good results in everyday (forensic) application, while the choice of method depends on type, color and appearance of substrate, as well as the environmental conditions (Champod, Lennard, Margot, & Stoilovic, 2004; Mozayani & Noziglia, 2006; Bumbrah, Sharma, & Jasuja, 2016). Visualization of latent fingerprints on conventional surfaces is usually routine and easy, but many unconventional substrates such as firearms, skin, multicolored surfaces, etc. cause problem due to inadequate contrast between the papillary lines and background (Färber, Seul, Weisser, & Bohnert, 2010; Amata, Aprea, Chiuri, & Zampa, 2015; Barros & Stefani, 2019). Therefore, fluorescent formulations have been developed to overcome the lack of contrast with high fluorescence under alternative light sources (e. g. UV light) (Wang, et al., 2017; Chávez, Garcia, Oliva, & Diaz-Torres, 2021). Commercially available yellow and green fluorescent powders fluoresce when excited with light from UV up to blue (450 nm), while red, orange and pink fluorescent powders allow for a wider range of light, from UV up to green (530 nm) (BVDA – Fluorescent fingerprint powders, n.d.). Research groups are constantly trying to improve existing systems and to obtain even higher sensitivity and better contrast. A large number of powder substances contain natural or synthetic organic derivatives that exhibit fluorescence or phosphorescence when exposed to UV or laser light. Some of the organic substances that are used for years are acridine yellow and orange, coumarin 6, genipin, crystal violet, Nile blue, rhodamine B and 6G, etc. (Levinton-Shamuilov, Cohen, Azoury, Chaikovsky, & Almog, 2005; Araya-Hermosilla, et al., 2014; Vadivel, Nirmala, & Anbukumaran, 2021). Kumar et al. (2020) have prepared a novel aggregation-induced emission (AIE) based electron withdrawing moiety such as 2-(4-fluorophenyl)-3H-benzocoumarin, called Coumarin Fluorescent Tag (CFT). The investigation of latent fingerprints using mentioned system (in both solid and liquid state) showed immutable and consistent patterns due to the strong adsorption of CFT on

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the ridges of the fingerprint under visible and 365 nm UV light. The results showed that CFT can be used for detection and visualization of minutiae points and sweat pores of latent prints developed on non-porous substrates due to high photoluminescence properties (Kumar, Udayabhanu, Mahadevan, & Nagaraju, 2020). System based on similar emission phenomenon was proposed by (Li, et al., 2020). A novel composite combining the aggregation induced emission luminogens (AIEgens) salicylaldehyde azine (SAA) with montmorillonite (MMT) was used to develop latent fingerprints. The obtained results demonstrated high resolution and high quality of enhanced prints, due to the bright yellow emission of SAA and high absorptive capacity of MMT. Additionally, when compared with commercial powder, these composites showed higher match degree with control/reference fingerprint, which is a very promising result (Li, et al., 2020).

On the other hand, polymeric materials have drawn great interest from researchers due to their specific properties, particularly suitable for systems used in forensic examination of (latent) fingerprints (Milašinović N. , 2016; Chen, Kuo, Tsai, Ke, & Liao, 2016; Hejjaji, Smith, & Morris, 2017 (a); Hejjaji, Smith, & Morris, 2017 (b)). Some of our previous studies indicated great potential of chitosan- and dextran-based (bio)powders in visualizing latent prints. Fingerprints, previously kept in different storage conditions (humid and dry environment), were successfully developed on non-porous (glass) surface with prepared powders. Results showed that the prepared powders were uniform in size and shape, with adequate sensitivity and satisfying contrast in visualized fingerprint image (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020; Vučković, Dimitrijević, & Milašinović, 2020).

In this paper, chitosan-based powder systems conjugated with fluorescein and crosslinked with sodium-tripolyphosphate were obtained by simple ionotropic gelation process. Chitosan (Ch) was used due to its specific polycationic properties and its ability to bind to the fingerprint lipid residues by both electrostatic and lipophilic interactions. In solutions where the pH is below chitosan's pKa value, chitosan amino groups become protonated and could potentially interact with anions/polyanions, such as Na-TPP, but also with lipid residues from sweat (Hejjaji, Smith, & Morris, 2017 (b); Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020). Additional conjugation with fluorescein was used to improve the sensitivity and contrast by fluorescence assisted by UV light. Prepared powders were used to visualize latent fingerprints deposited onto non-porous (glass), semi-porous (varnish paper) and porous (wood) surfaces, to enhance the quality of developed fingerprints by fluorescence assisted by UV light. The effect of time on oxidation of fluorescein in the conjugates used to develop traces was also investigated in order to determine whether the color change appears, as well as whether it affects the quality of developed fingerprints over time. The results showed good fluorescence under UV light and satisfying development of latent prints under visible light, indicating that prepared bio-based powder systems could complement some of the routinely used (fluorescent) systems, especially due to relatively low price and non-toxic properties.

Design/Methods/Approach

Materials

Medium molecular weight chitosan and itaconic acid (IA) were purchased from Sigma-Aldrich (USA), Na-TPP from Acros Organics (USA), and fluorescein was prepared according to procedure described by (Mohan, 2003). Distilled water was used for the preparation of all solutions. All materials were used without further treatment or purification.

Preparation of Fluorescein-Chitosan Powder Conjugates

The conjugates were prepared using different (w/w) amounts of chitosan and tripolyphosphate, 6/1 and 1/1 (respectively), because these conjugates demonstrated the best properties in our previous research (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020). Briefly, 0.2000 g of Ch, 0.1500 g of IA and 0.002 g of FL were dissolved in 100 ml of distilled water, and 0.0840 g of Na-TPP and 0.1500 g of IA were dissolved in 100 ml of distilled water, for one hour, at room temperature and low speed (~ 400 rpm). Afterward, the Ch-FL solution was added dropwise to the Na-TPP solution in ratios 6/1 and 1/1 (Ch-FL/Na-TPP), and then mixed for additional one hour, at the same conditions as already stated above. The particles were spontaneously formed due to ionotropic gelation of Ch-FL by Na-TPP. Afterward, mixtures were left at room temperature until complete solvent evaporation. The final conjugates were ground with pestle and mortar to fine powders and kept in desiccator until further use.

Characterization of the Fluorescein-Chitosan Powder Conjugates

FT-IR Analyses

Prepared fluorescein-chitosan powder conjugates were recorded in dry and solid state, using the *Bomem MB* 100 FT-IR spectrophotometer. Powders in amount of 1.5 mg were mixed and ground with 75 mg of potassium bromide and then compressed into pallets at pressure of 11 t for about a minute, using the *Graseby Specac* model: 15.011. The spectra were obtained in the wavenumber range between 4000 to 400 cm^{-1}, at 25 °C and at 4 cm^{-1} resolution spectra.

Optical Microscopy

The obtained (bio)powder conjugates were recorded with optical microscope *Leica FS C Comparison Macroscope*, equipped with the *Leica IM Matrox Meteor II Driver Software Module*. Powders were recorded in dry state, with and without backlighting. Prior to imaging under the microscope, latent fingerprints left on microscope glass slides were developed using prepared powder conjugates.

Development of Latent Fingerprints

In order to determine the performances of fluorescein-chitosan powder conjugates, one male donor, using only a right-hand thumb, deposited sebaceous/oily fingerprints onto non-porous, semi-porous and porous surfaces, i.e. glass, varnish paper and wood, respectively. The prints were then kept under laboratory (humid) conditions for a couple of minutes. That period allowed the traces to dry and reduce the residues, until the latent fingerprints were developed with synthetized powder conjugates 6/1 and 1/1, using BVDA Squirrel hair brush (BVDA, The Netherlands) (International Fingerprint Research Group, 2014).

Optical microscopy was additionally used in order to confirm binding of the fluorescein-chitosan powder conjugates and visualization of latent fingerprints on glass surface, that initially showed the best results. Therefore, sebaceous fingerprints were randomly deposited onto the glass microscopic slides (properly labeled) and left for a few minutes. After this period, fingerprints were visualized with

prepared 6/1 and 1/1 conjugates and recorded under the optical microscope to determine visualization capabilities and quality (International Fingerprint Research Group, 2014).

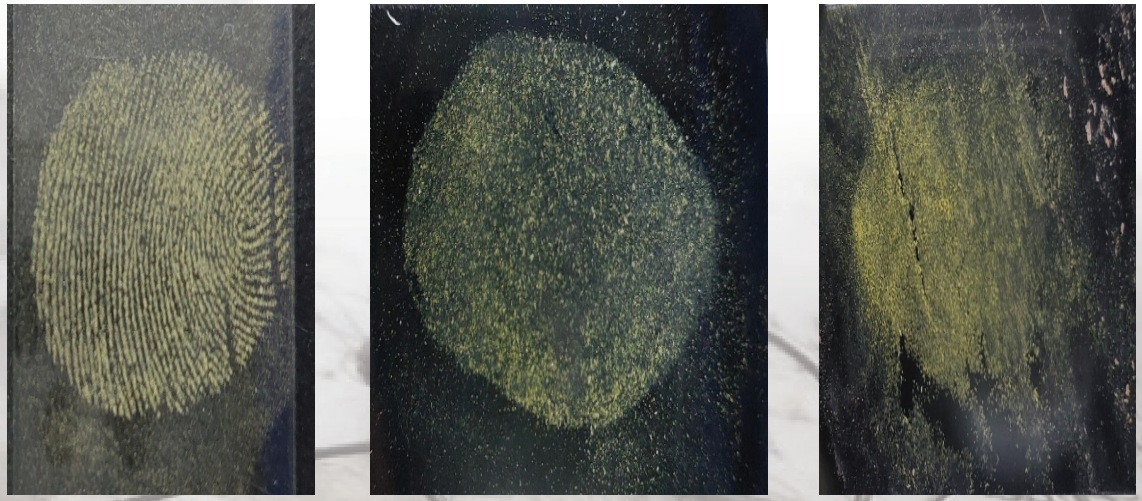
The influence of time on oxidation of fluorescein-chitosan powder conjugates was investigated under laboratory (humid) and desiccator (dry) conditions. Fingerprints developed on glass surface with conjugates 6/1 and 1/1 were kept under above-mentioned conditions and recorded again after 20 and 30 days, to observe potential color and appearance change due to possible oxidation progression. After the period of 30 days, powders were removed from fingerprints (using lancet) and analyzed again by FT-IR to observe possible changes/shifts of the initial spectra.

Findings

Fluorescein-chitosan powder conjugates were used to visualize latent fingerprints deposited onto non-porous (glass), semi-porous (varnish paper) and porous (wood) surface. Deposited sebaceous fingerprints were developed with prepared conjugates 6/1 and 1/1, using BVDA Squirrel hair brush. Both powders were applied on multiple number of fingerprints on each substrate, to evaluate the quality and reproducibility of their application. The best results were obtained with the sebaceous fingerprints deposited onto the glass surface and developed with conjugate 6/1. The results obtained on varnish paper and wood substrate were poor, with obvious "blurring" of the fingerprints, since more fingerprint residues (and powder particles) retained in the porous structure of these substrates.

Figure 1 shows sebaceous fingerprints of one donor, developed with prepared conjugates 6/1 (Figure 1, 1)) and 1/1 (Figure 1, 2)) on glass, varnish paper and wood surface. Latent fingerprints left on varnish paper and wood surface were visualized and then lifted (with BVDA black Gellifters) to obtain adequate contrast for recording and comparison. The prints were then photographed under visible light using a 64 MP camera (aperture $f/1.8$, pixel size 0.8 μm). Fingerprints developed on glass substrate were recorded with assistance of black background surface for appropriate contrast.

1)



a) b) c)

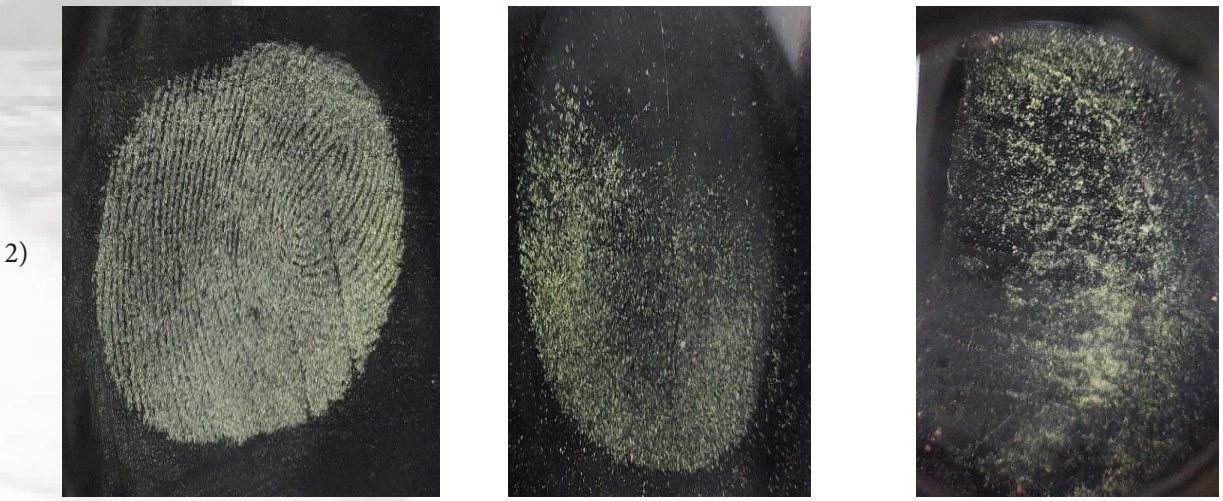


Figure 1 *Sebaceous fingerprints developed on: a) glass, b) varnish paper and c) wood surface, using prepared fluorescein-chitosan powder conjugates: 1) 6/1 and 2) 1/1, and recorded under visible light. Fingerprints developed on varnish paper and wood surface were visualized and then lifted with BVDA black Gellifters, while prints developed on glass substrate were recorded with assistance of black background surface to obtain adequate contrast for recording and comparison.*

When observing fingerprints developed on different substrates, it is obvious that the best results were obtained on glass (non-porous) substrate, because smooth/flat glass surface enabled easy binding of the powder particles to the latent fingerprint residues, making visible fingerprint basic pattern and minutiae points, i.e. fingerprint level I and II features, respectively (Figure 1, a)). On the other hand, fingerprint contour was visible on the prints developed on varnish paper, but without specific fingerprint characteristics, while prints developed on wood surface did not contain adequate contrast for analysis. Therefore, fingerprints visualized on semi-porous and porous substrate were transferred to black Gellifters with aim to provide better contrast, but the results were poor in this case, as well (Figure 1, b) and c)). This may be associated with porosity of paper and wood surface, where the majority of fingerprint residues is reduced, thus disabling binding of the powder and visualization of complete fingerprint image. Furthermore, when comparing fingerprints developed with different conjugates, results indicated that conjugate 6/1 enables better detection and enhancement of latent fingerprints. Powder conjugate 6/1 developed the prints with continuous papillary line flow, enabling good contrast and visualization of fingerprint level I and II features (Figure 1, 1), a)). On the other hand, conjugate 1/1 showed good results, but with obvious "overpowdering" of fingerprints, and consequently the disruption of the line flow, probably due to a larger size of the particles, when compared to conjugate 6/1.

Figure 2 represents the same fingerprints as Figure 1, but recorded under UV light in longwave mode (375 nm). Contrary to recording under visible light, prints left on varnish paper and wood surface could be photographed using alternative light source – UV light (without lifting).

The results showed in Figure 2 confirmed the presumptions observed in Figure 1. The fine/smooth structure of glass surface enabled the visualization of complete fingerprint images (Figure 2, a)), while fingerprints developed on varnish paper and wood surface were of poor quality, even without basic fingerprint patterns (Figure 2, b) and c)). However, the results obtained under UV light are promising and such fingerprints could be visualized with adhesive films based on polymeric materials with fluo-

rescein. Based on these initial results, glass surface was used to thoroughly investigate the application performances, as well to evaluate the influence of time on oxidation process of fluorescein-chitosan powder conjugates.

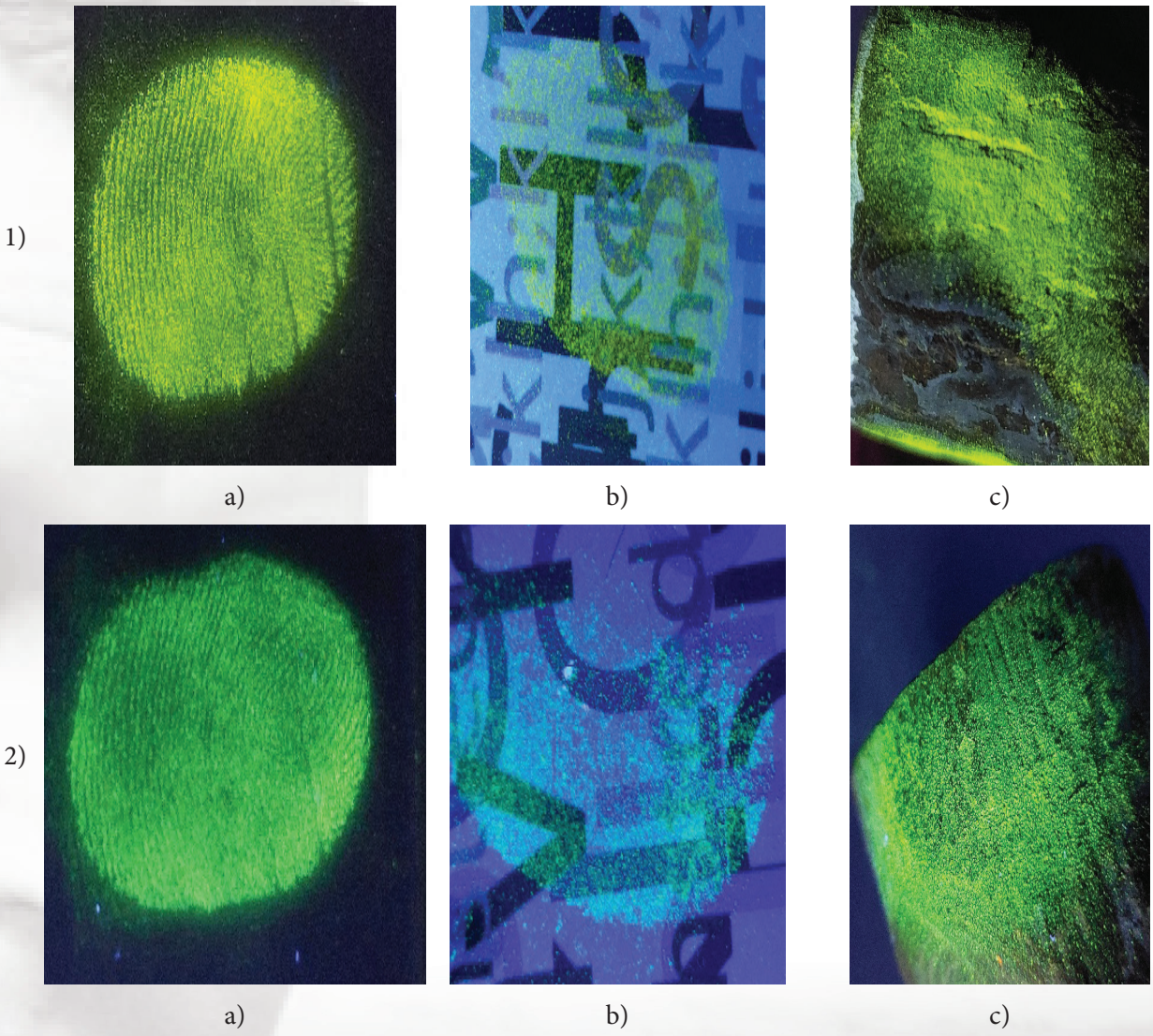


Figure 2 *Sebaceous fingerprints developed on: a) glass, b) varnish paper and c) wood surface, using prepared fluorescein-chitosan powder conjugates: 1) 6/1 and 2) 1/1, and recorded under UV light (375 nm).*

FT-IR Analyses

FT-IR analyses were performed to determine interactions between components of prepared conjugates, i.e. interactions due to ionotropic gelation process, as well to evaluate the potential impact of time on oxidation of fluorescein-chitosan conjugates. Figure 3 shows spectra of pure chitosan and fluorescein, as well as conjugates 1/1 and 6/1. In spectra of pure Ch, as well as conjugates 1/1 and 6/1, a characteristic strong and wide absorption band around 3500–3400 cm^{-1} indicates the overlapped stretching and bending of –OH and $–NH_2$ groups (Milašinović, et al., 2016). However, this band is stronger in spectrum of pure Ch when compared to spectra of prepared conjugates, probably due to

a larger number of free amino and hydroxyl groups (these groups are occupied in spectra of prepared conjugates as a consequence of ionotropic gelation and conjugation) (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020). The small shoulder peaks around 2920 cm^{-1} and 2870 cm^{-1} are present in the spectra of pure Ch, as well as in the spectra of both prepared conjugates, and can be related to the stretching of C–H groups (Ali, Rajendran, & Joshi, 2011). The spectrum of pure Ch (Fig. 3, a) has a characteristic bands amide bond: specifically at 1655 cm^{-1} related to the stretching of the C=O bonds within the $–CONH_2$ group (amide I band), at 1596 cm^{-1} due to the stretching of the N–H bond of $–NH_2$ (amide II band) and band at 1379 cm^{-1} corresponding to amide III band (Prlainović N. Ž., et al., 2013; Prlainović N. Ž., et al., 2016). Small shoulder peak around 1320 cm^{-1} can be associated with the deformation of O–H bonds of –CH–OH, while peak around 1070 cm^{-1} may be due to stretching of C–O bonds of Ch chains (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020).

Fluorescein also has some specific bands and peaks. Strong and sharp peak around 1580 cm^{-1} is related to skeletal C–C stretching containing conjugated carbonyl band, and asymmetric carboxylate stretching in xanthene ring. The peak around 1465 cm^{-1} can be associated with skeletal C–C stretching conjugated with symmetric COO^- stretching in xanthene ring (Wang, Roitberg, Meuse, & Gaigalas, 2001; Pirillo, Cornaglia, Ferreira, & Rueda, 2008). Medium intensity bands around 1385 cm^{-1} and 1310 cm^{-1} may be connected with phenoxide ion stretching conjugated with stretching in xanthene ring, and aromatic skeletal C–C stretching in xanthene ring, respectively. Two sharp bands around 1210 cm^{-1} and 1115 cm^{-1} can be related with C–O–C stretching of xanthene ring, and in plane bending of aromatic C–H bonds, respectively (Wang, Roitberg, Meuse, & Gaigalas, 2001; Pirillo, Cornaglia, Ferreira, & Rueda, 2008).

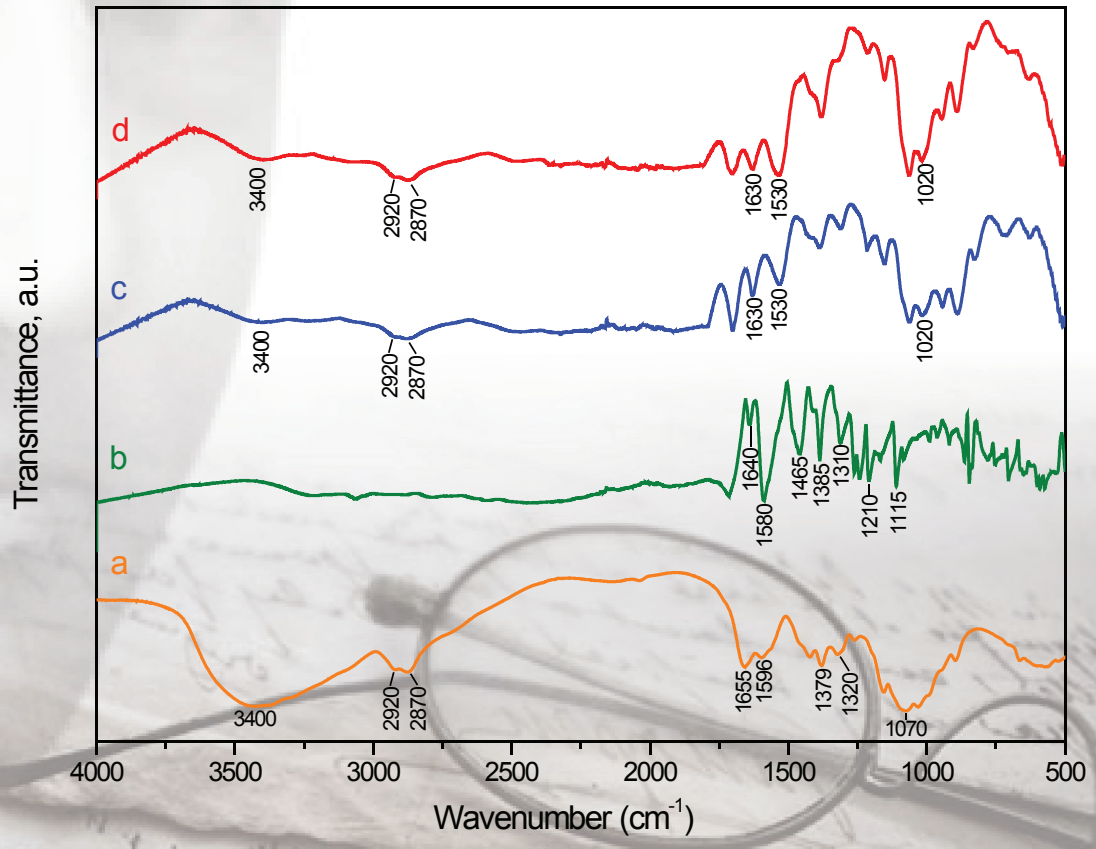


Figure 3 *FT-IR spectra of: a) pure Ch, b) pure FL, c) 1/1 and d) 6/1.*

When observing spectra of conjugates 1/1 and 6/1, some bands related to chitosan chain interactions can be spotted. The peak around 1530 cm^{-1} indicates the deformation of the N–H bond (amide band II in chitosan) (Hejjaji, Smith, & Morris, 2017 (a)). The peak at 1380 cm^{-1} could be associated with deformation of the O–H bond at –CH–OH (Wang & Liu, 2014), while the appearance of the absorption peak at 1155 cm^{-1} could be due to the swinging of NH_3^+ (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020).

Broad band around 1655 cm^{-1} at spectrum of pure Ch and weak band around 1640 cm^{-1} at spectrum of pure fluorescein may have resulted in the formation on new medium band around 1630 cm^{-1} at spectra of prepared conjugates, and can be associated with antisymmetric deformation vibrations of the NH_3^+ groups (Žalnėravičius, Paškevičius, Mažeika, & Jagminas, 2018). Additionally, a sharper band around 1530 cm^{-1} at spectra of prepared conjugates may be attributed to the vibration of C=O originating from amide groups, indicating the formation of fluorescein-chitosan conjugates. The band at approximately 1020 cm^{-1} is related to the bending vibrations of the pyranose ring of Ch (Saldías, et al., 2018).

FT-IR analyses were also performed with samples that were kept for 30 days in different storage conditions (humid and dry environment), in order to determine whether the humidity and/or sunlight would affect the structure of prepared conjugates. After 30 days, the powders were removed from fingerprints using scalpel, and again analyzed by FT-IR to compare potential changes/shifts in spectra. Figure 4 shows samples of prepared conjugates 1/1 and 6/1, as well as samples of these conjugates kept under different storage (humid and dry) conditions (*note*: the amount of sample 1/1 kept under dry conditions was insufficient for FT-IR analysis).

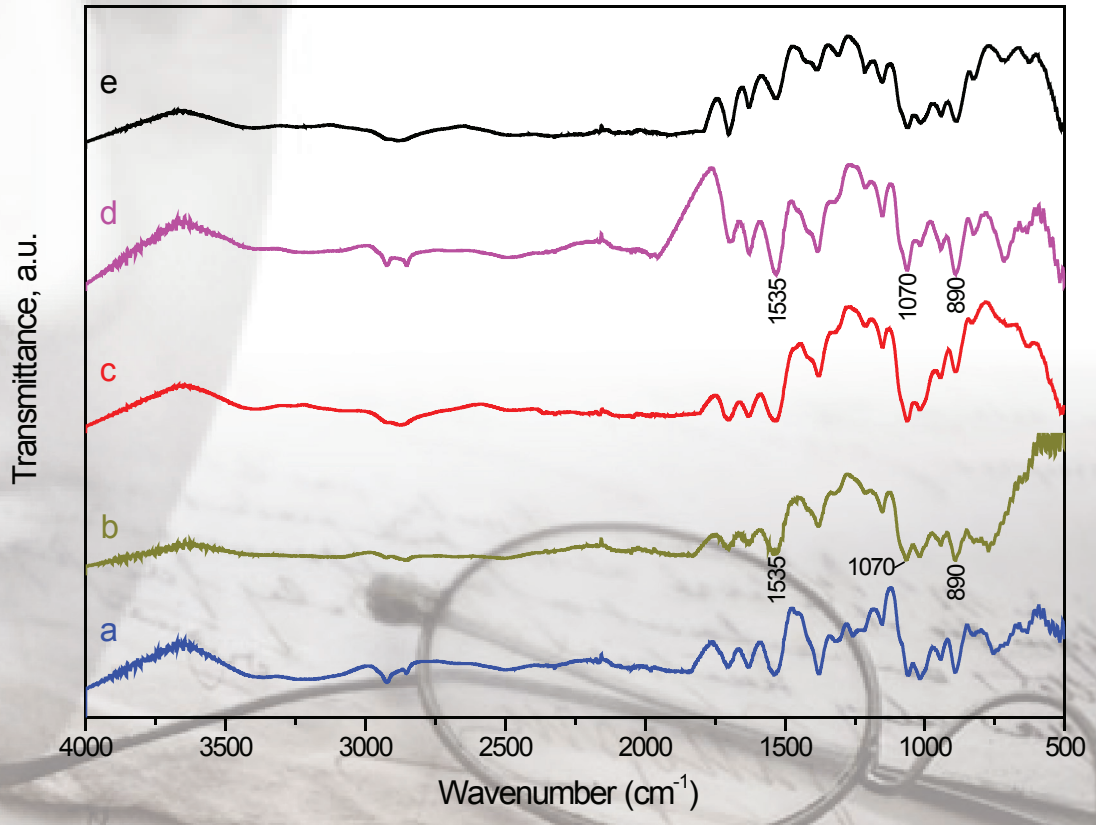


Figure 4 *FT-IR spectra of conjugates: a) 1/1 (initial), b) 1/1 (kept under humid conditions), c) 6/1 (initial), d) 6/1 (kept under humid conditions) and e) 6/1 (kept under dry conditions).*

When comparing spectra in Figure 4, the change in some peaks' intensity is noticeable between the initial spectra and the spectra of samples kept under different storage conditions. The decrease (for sample 1/1) and increase (for sample 6/1) in intensity of peaks around 1535 cm^{-1}, 1070 cm^{-1}, and 890 cm^{-1}, at spectra kept under humid conditions (Figure 4, b) and d)) when compared to initial spectra (Figure 4, a) and c)), respectively, indicate that humid environments have influenced the structure of prepared fluorescein-chitosan powder conjugates. This is often a problem when preserving powder conjugates before/after the application (SDS – LP Dual Use Fingerprint Powder, 2013). On the other hand, when observing the sample kept under dry conditions, the changes were minor (maybe due to the sunlight), so it is appropriate to protect powders from the influence of moisture and radiation, and storage them in dark, cool and dry place (SDS – LP Dual Use Fingerprint Powder, 2013).

Optical Microscopy

The Structure of Powder Conjugates

Optical microscopy was used to approximate the size and uniformity of prepared powder conjugates. Figure 5 shows the images of prepared powder conjugates, recorded with optical microscope *Leica FS C Comparison Macroscope*, equipped with the *Leica IM Matrox Meteor II Driver Software Module*, using magnification ×15, without backlighting (Figure 5, a)), with bright-field (Figure 5, b)) and dark-field contrast technique (Figure 5, c)). Different backlighting modes were used to obtain adequate contrast, to observe both amassed and thin layers of powders. Since the best results were achieved on a non-porous (glass) surface, the same was used for further research. Powder samples were deposited onto microscopic glass slides to approximate the size and compare the uniformity of their particles.

When comparing prepared powder conjugates recorded with different backlighting modes, it was determined that conjugate 6/1 had yellowish appearance, with small and uniform particles that do not stick to the glass substrate (they disperse easily), while conjugate 1/1 had greenish appearance, with also small and relatively uniform particles, but with noticeable spiking to the glass surface. This observation is related to the initial results. The "blurring" of the fingerprints developed with conjugate 1/1 was noticeable, probably due to a larger dimeter of particles and increased adhesion to the substrate.

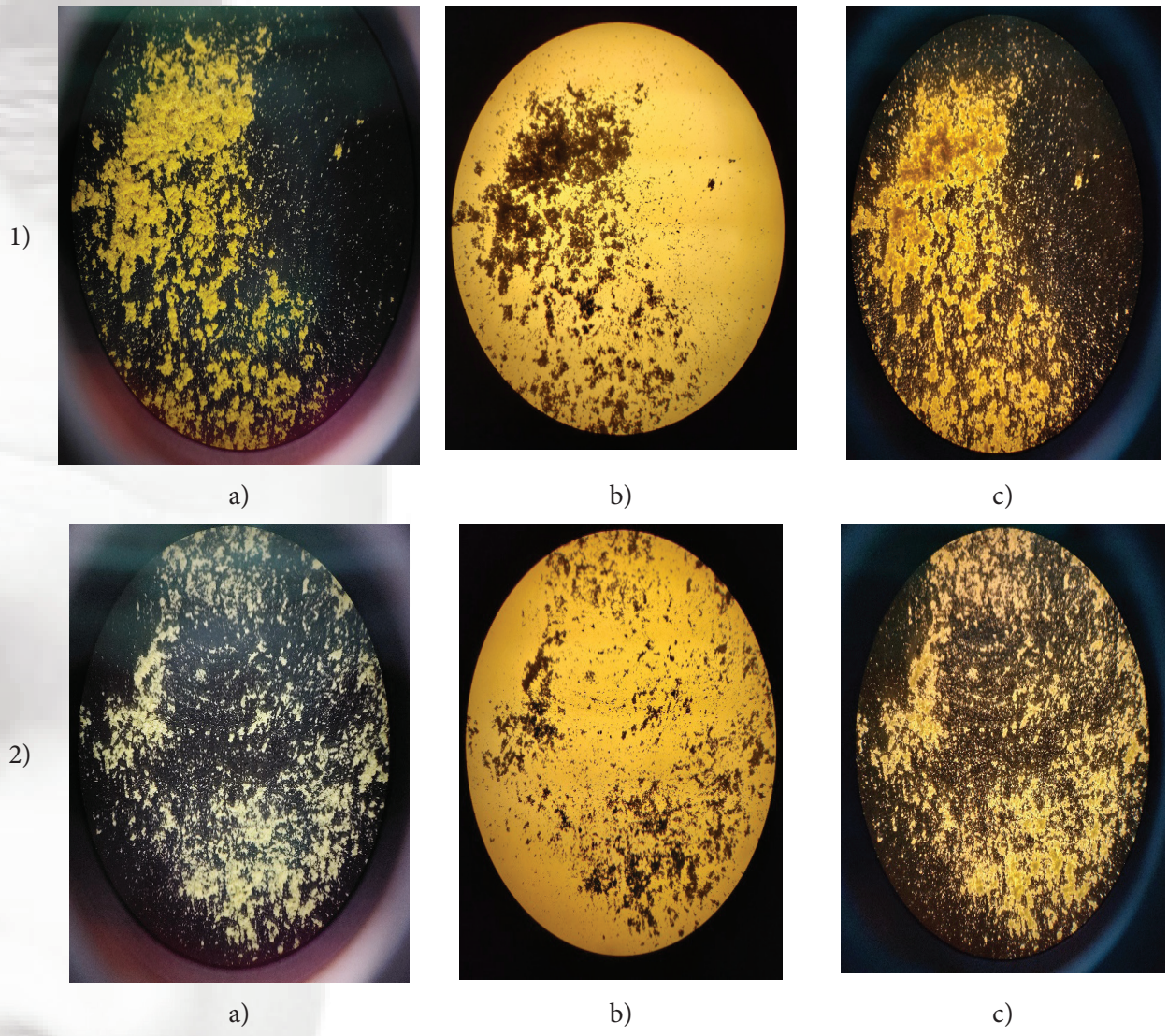


Figure 5 *Microscopic images of prepared powder conjugates: 1) 6/1 and 2) 1/1, recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×15).*

Testing of Powder Conjugates

In order to confirm the initial results of application, as well as to determine whether the time could influence the fluorescein-chitosan conjugates appearance and color, prepared powder conjugates were used to visualize latent fingerprints deposited onto glass substrate. Following the Guidelines proposed by the International Fingerprint Research Group (IFRG) (International Fingerprint Research Group, 2014), sebaceous fingerprints were deposited onto microscopic glass slides using a technical scale (force applied to accommodate 100-150 g) and left for a few minutes. After this period, fingerprints were developed with prepared conjugates 1/1 and 6/1. The developed fingerprints were then photographed with optical microscope *Leica FS C Comparison Macroscope*, equipped with the *Leica IM Matrox Meteor II Driver Software Module*, without backlighting (Figure 6, a)), with bright-field (Figure 6, b)) and dark-field contrast technique (Figure 6, c)), using the magnification ×7.5. Different backlighting modes were used to obtain adequate contrast, to observe both level I and II features of fingerprints.

After visualization and recording, fingerprints developed on glass slides were kept under laboratory (humid) and desiccator (dry) environment to evaluate the time influence on oxidation of fluorescein in prepared powders. Developed fingerprints were kept under mentioned conditions, and recorded again after 20 and 30 days, in order to observe potential changes in appearance and/or color of powder conjugates. For practical reasons, only immediately recorded fingerprints (day 0) were shown in the Manuscript, while detailed results are represented in the Supplementary Material.

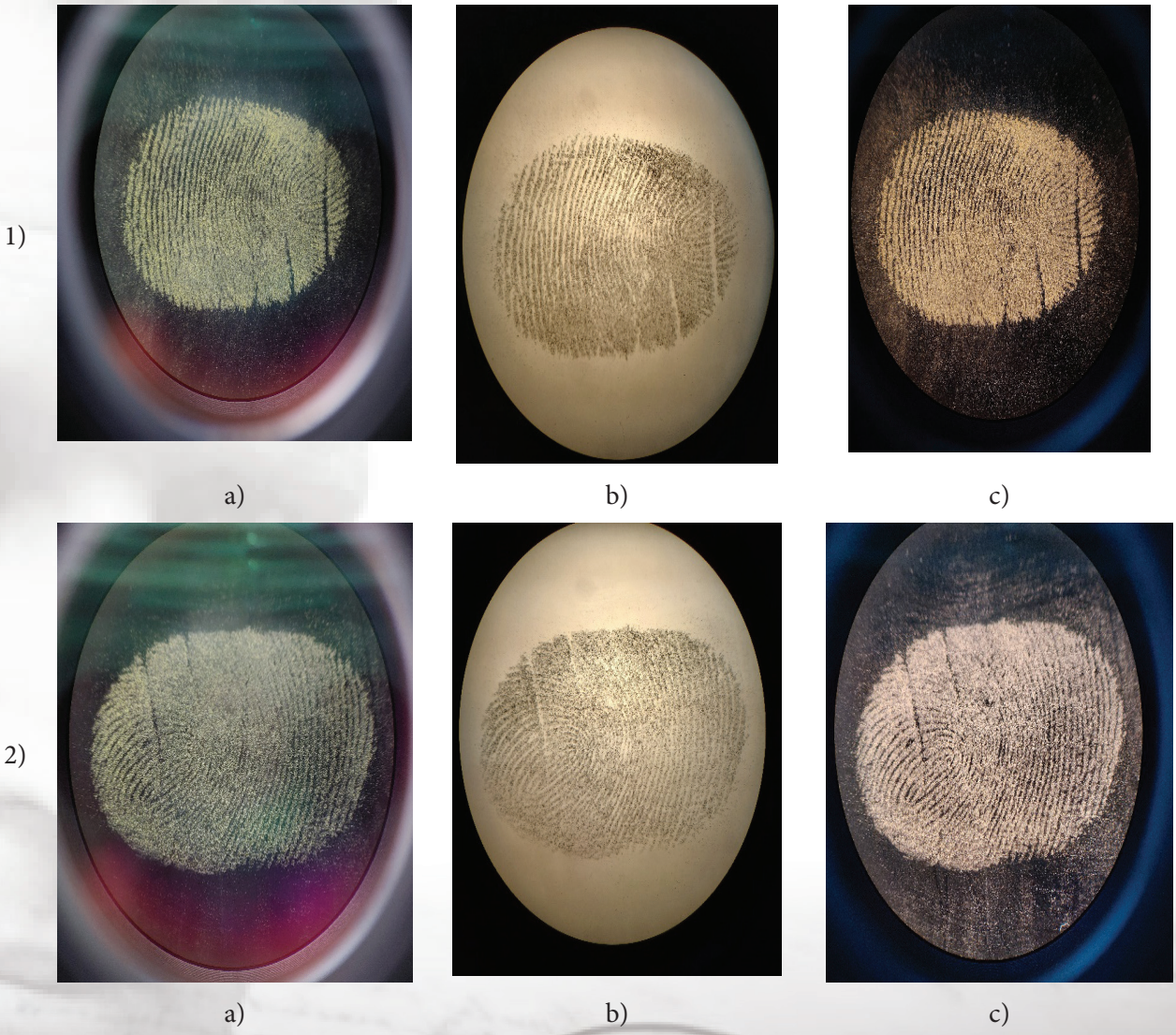


Figure 6 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, recorded immediately after visualization: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Following the results that were obtained by initial testing on glass substrate (Figure 1, a)), the results obtained by optical microscopy confirmed those presumptions. It was determined that conjugate 6/1 enabled development of the papillary lines with their continuous flow and basic fingerprint pattern, making visible minutiae points as well (i. e. level I and II features of fingerprints). On the other hand, noticeable "overpowdering" of the interpapillary space occurred when conjugate 1/1 was applied, thus making disruptions in the flow of papillary lines (Gürbüz, Özmen Monkul, İpeksaç, Gürtekin Seden, & Erol, 2015).

Moreover, Figures S1–S6 presented in Supplementary Material document show developed (sebaceous) fingerprints stored under humid and dry environment, recorded immediately after visualization, and after 20 and 30 days, in order to evaluate the impact of time on oxidation of fluorescein present in prepared conjugates. Results indicated that moisture contributed to the change of powders' structure by creating agglomerates of the particles. Therefore, powder conjugates should be kept under dry conditions (thoroughly explained in Supplementary Material document).

Originality/Value

In this paper, two fluorescein-chitosan powder conjugates were obtained by simple ionotropic gelation process. Chitosan (Ch) was used due to its non-toxic and specific polycationic properties, while fluorescein was used due to its ability to fluoresce under UV light, with aim to increase sensitivity and quality of visualized fingerprints. Prepared powder conjugates were tested on glass, varnish paper and wood surface, and initial results showed that the best visualization of fingerprints is obtained on glass (non-porous) surface, with conjugate 6/1. These results were confirmed by optical microscopy, while FT-IR analyses demonstrated the formation of conjugates. Afterward, the influence of time on oxidation process of fluorescein-chitosan powders was investigated by optical microscopy and FT-IR. Developed fingerprints were stored under humid and dry conditions and reevaluated after 20 and 30 days. Results indicated that humid environment contributes to the change in structure of prepared conjugates, particularly noticeable in FT-IR spectra. Therefore, fingerprint powders should be kept in dry, cool and dark place (protected from moisture, sunlight and high temperature). On the other hand, conjugate 6/1 showed better performances than conjugate 1/1, enabling continuous papillary line flow and developing complete fingerprint images, with level I and II features (which are necessary for reliable identification of individual). Additionally, prepared conjugates are cheap, non-toxic, easy applicable and persistent (during the testing period). Based on all obtained results, prepared powder conjugates could be used as a supplement for routinely used systems on non-porous surfaces. Additional research should be directed to improvement of powders for application on multicolored and other problematic substrates, with the aim to increase sensitivity, fluorescence and quality of developed fingerprints.

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Supplementary Material

The Guidelines proposed by the International Fingerprint Research Group (IFRG) were followed to evaluate the performances of prepared powder conjugates for visualization of latent fingerprints (International Fingerprint Research Group, 2014). Therefore, one male donor deposited the sebaceous right-hand thumb prints onto non-porous (glass) substrate using a technical scale (force accommodated to 100–150 g, per fingerprint), to simulate manipulation with objects under real conditions. Fingerprints were left for a couple of minutes, after which they were developed using prepared conjugates 6/1 and 1/1. Subsequently, fingerprints were recorded with *Leica FS C Comparison Macroscope*, equipped with the *Leica IM1000 Matrox Meteor II Driver Software Module*, using magnification ×7.5, without backlighting (Figures S1-S6, a)), with bright-field (Figures S1-S6, b)) and dark-field contrast technique (Figure S1-S6, c)). Different backlighting modes were used to obtain adequate contrast, to observe both level I and II features of fingerprints. Additionally, after visualization and recording fingerprints developed on glass slides were kept under laboratory (humid) and desiccator (dry) environment to evaluate the time influence on oxidation of prepared powders. Developed fingerprints were kept for 20 and 30 days, and after each period they were photographed using mentioned optical microscope, to observe potential changes in appearance and/or color of prepared powder conjugates.

Developed Sebaceous Fingerprints – Day 0 (Recorded Immediately After Development)

Sebaceous fingerprints of one male donor developed and recorded immediately after deposition, with prepared conjugates 6/1 (Figure S1, 1)) and 1/1 (Figure S1, 2)). Figure S1 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S1, a)), with bright-field (Figure S1, b)) and dark-field (Figure S1, c)) contrast technique. Afterward, these fingerprints were kept under laboratory (humid) conditions, and recorded again after 20 and 30 days.

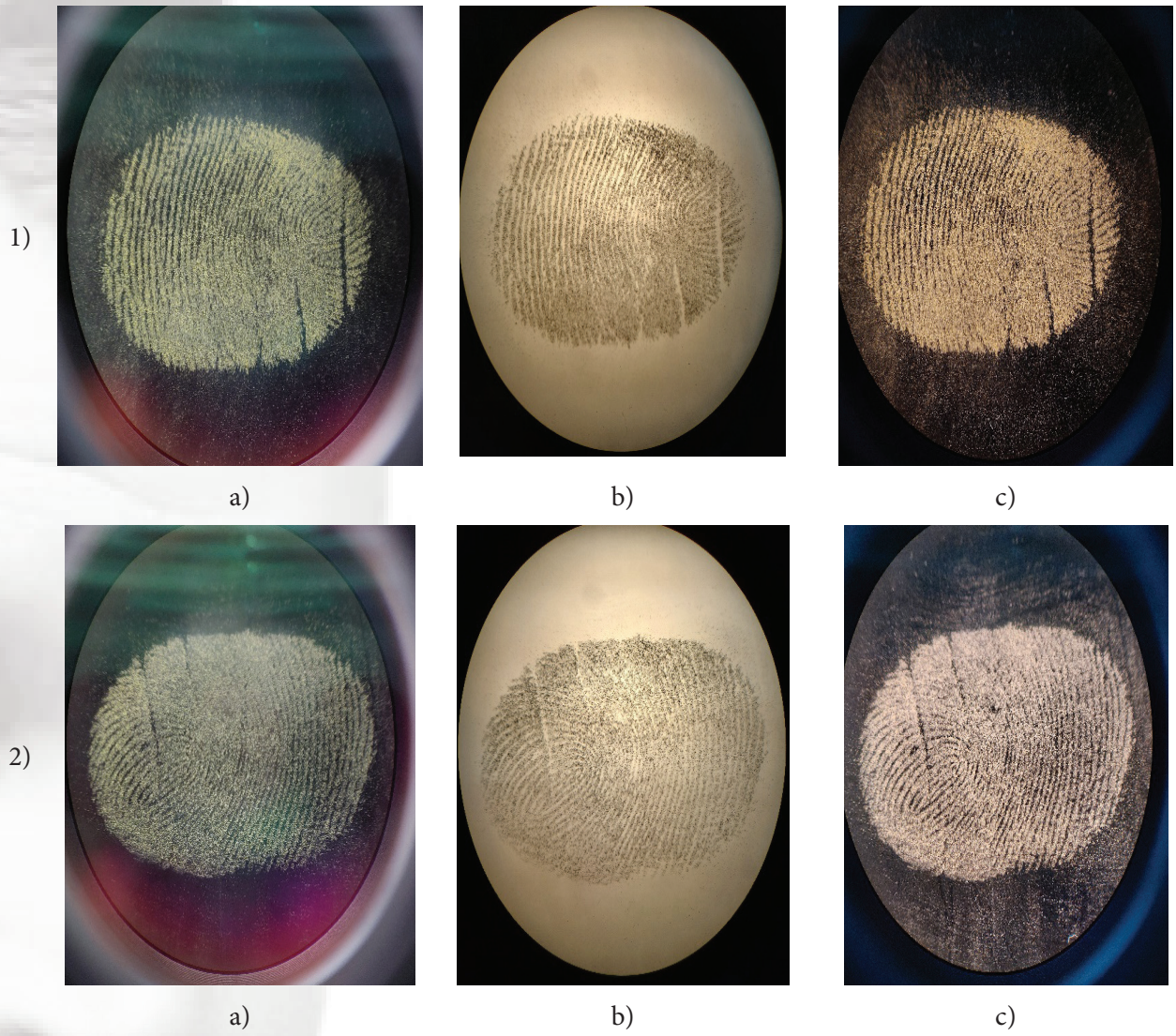


Figure S1 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Developed Sebaceous Fingerprints – Day 20 (Kept Under Humid Conditions, Recorded After 20 Days)

Sebaceous fingerprints of one male donor, developed immediately after deposition with prepared conjugates 6/1 (Figure S2, 1)) and 1/1 (Figure S2, 2)), kept under humid (laboratory) conditions and recorded after 20 days. Figure S2 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S2, a)), with bright-field (Figure S2, b)) and dark-field (Figure S2, c)) contrast technique.

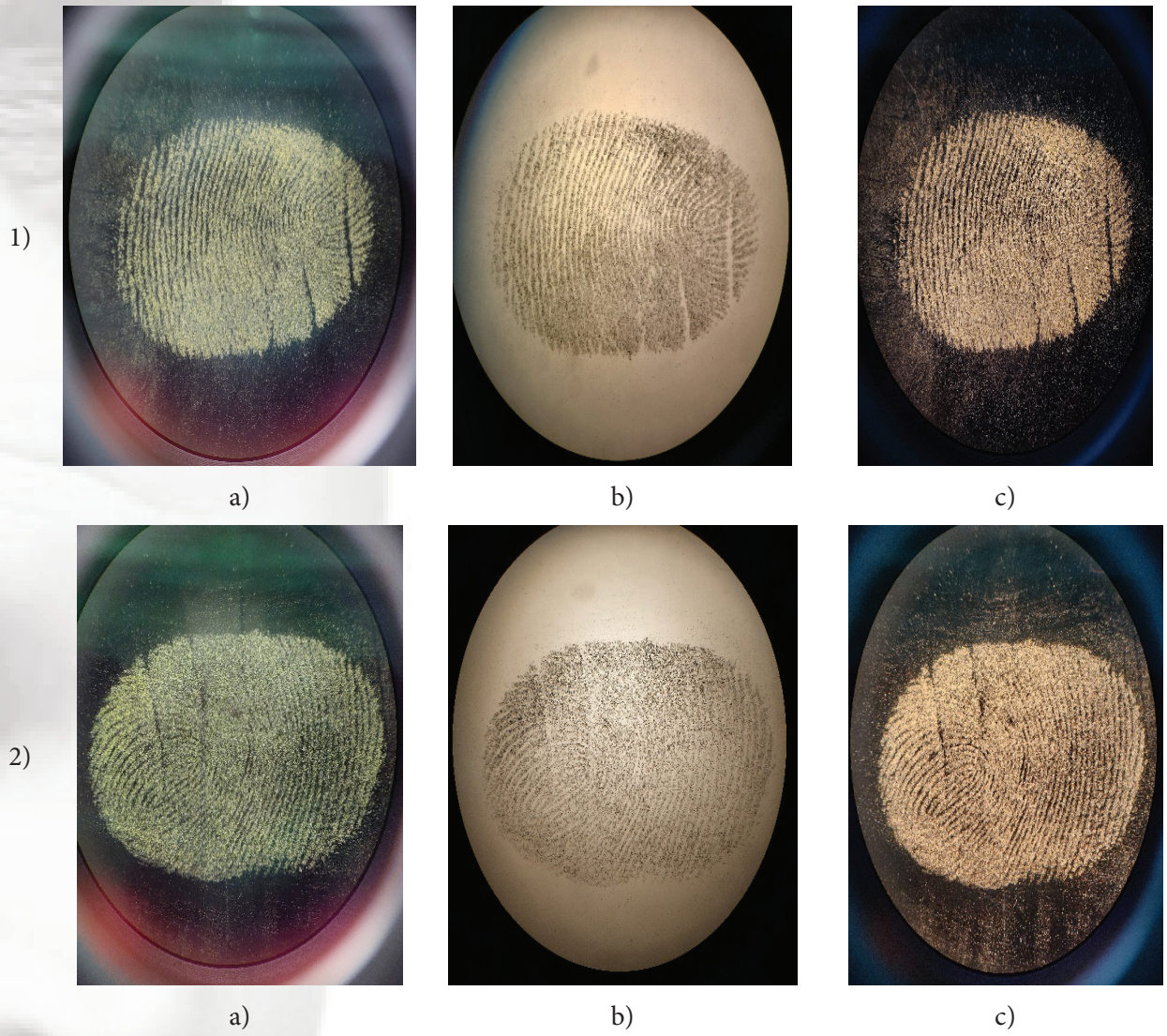


Figure S2 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, kept under humid conditions for 20 days and recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Developed Sebaceous Fingerprints – Day 30 (Kept Under Humid Conditions, Recorded After 30 Days)

Sebaceous fingerprints of one male donor, developed immediately after deposition with prepared conjugates 6/1 (Figure S3, 1)) and 1/1 (Figure S3, 2)), kept under humid (laboratory) conditions and recorded after 30 days. Figure S3 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S3, a)), with bright-field (Figure S3, b)) and dark-field (Figure S3, c)) contrast technique.

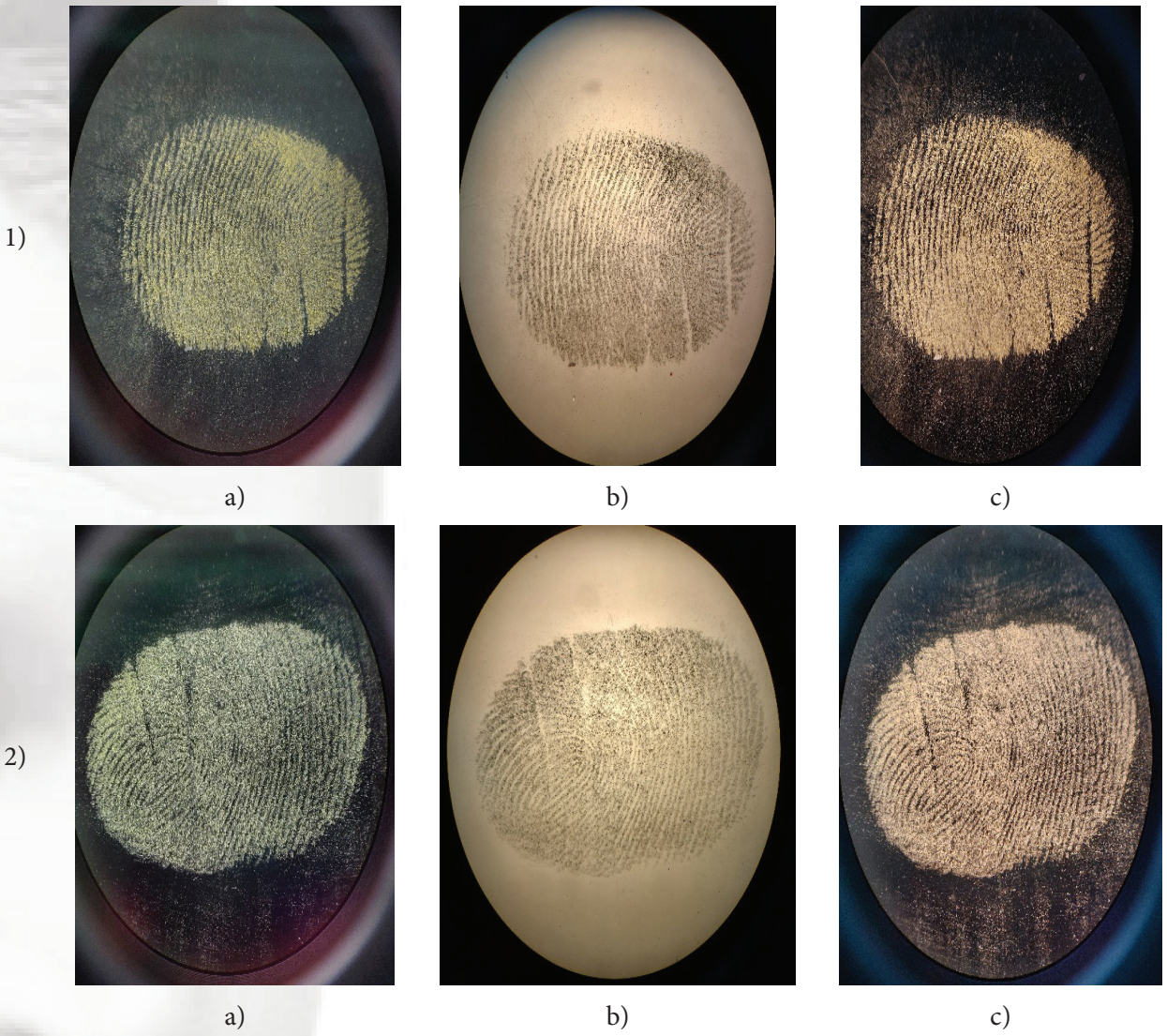


Figure S3 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, kept under humid conditions for 30 days and recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Developed Sebaceous Fingerprints – Day 0 (Recorded Immediately After Development)

Sebaceous fingerprints of one male donor developed and recorded immediately after deposition, with prepared conjugates 6/1 (Figure S4, 1)) and 1/1 (Figure S4, 2)). Figure S4 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S4, a)), with bright-field (Figure S4, b)) and dark-field (Figure S4, c)) contrast technique. Afterward, these fingerprints were kept under desiccator (dry) conditions, and recorded again after 20 and 30 days.

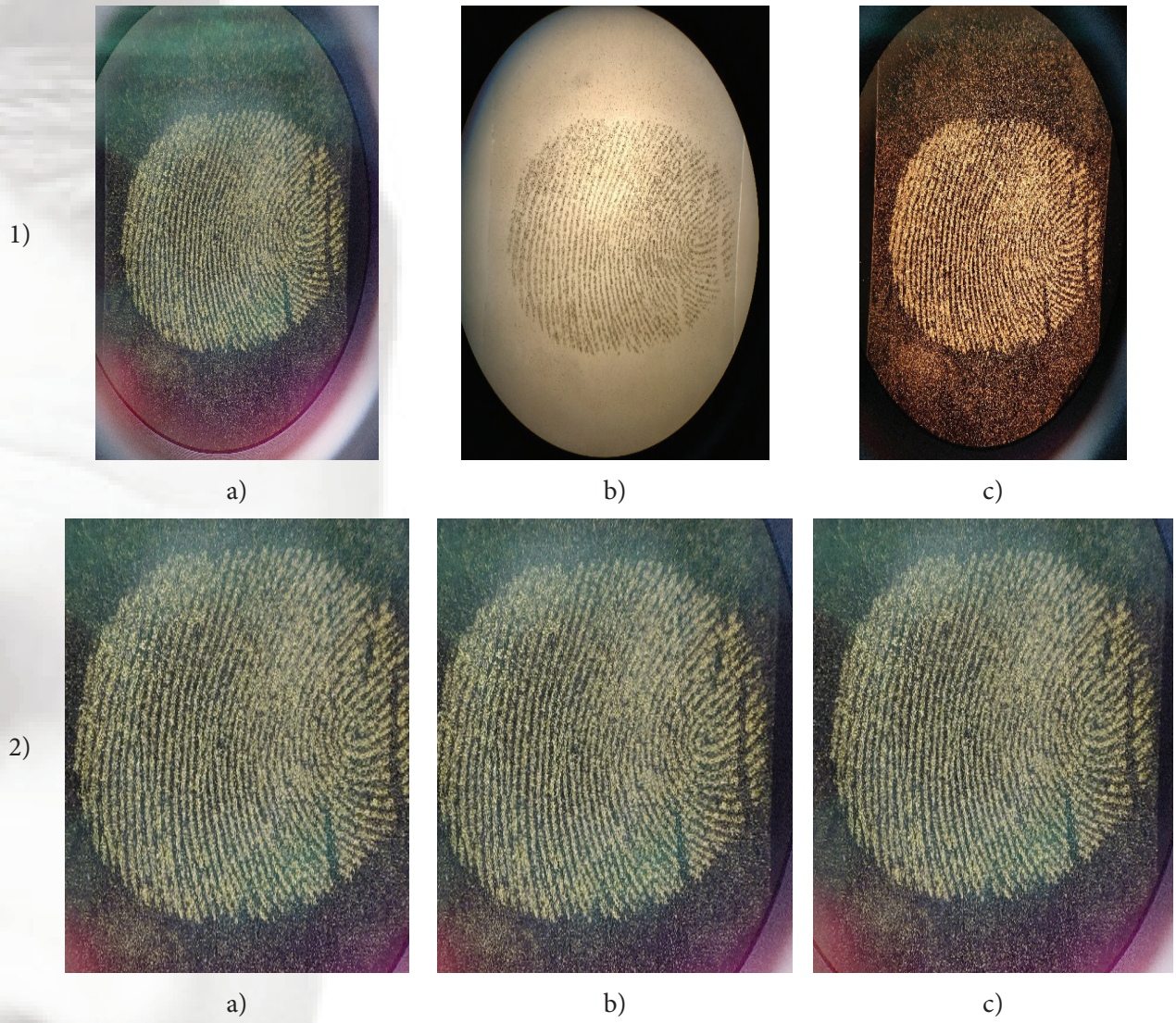


Figure S4 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Developed Sebaceous Fingerprints – Day 20 (Kept Under Dry Conditions, Recorded After 20 Days)

Sebaceous fingerprints of one male donor, developed immediately after deposition with prepared conjugates 6/1 (Figure S5, 1)) and 1/1 (Figure S5, 2)), kept under dry (desiccator) conditions and recorded after 20 days. Figure S5 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S5, a)), with bright-field (Figure S5, b)) and dark-field (Figure S5, c)) contrast technique.

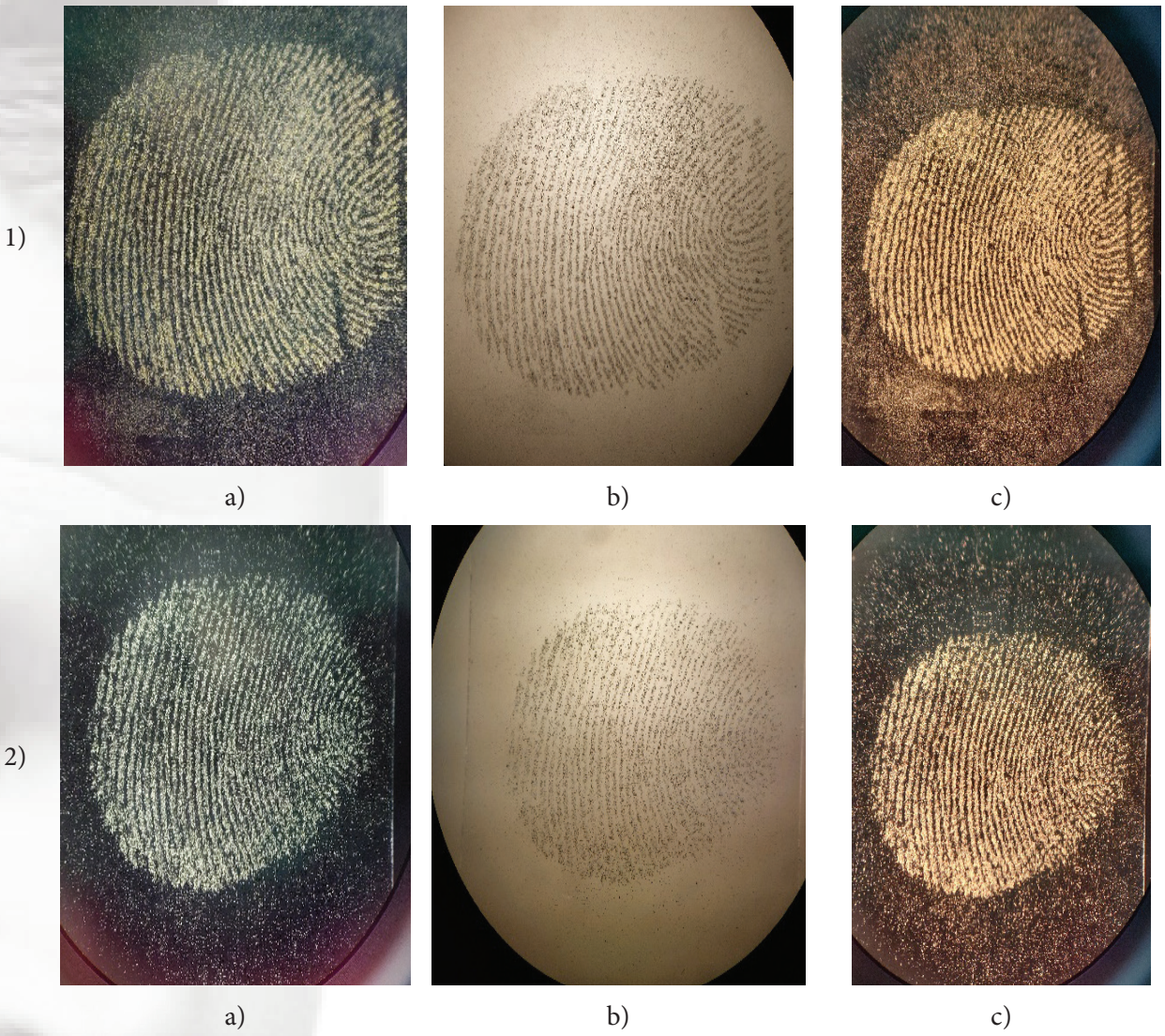


Figure S5 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, kept under dry conditions for 20 days and recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Developed Sebaceous Fingerprints – Day 30 (Kept Under Dry Conditions, Recorded After 30 Days)

Sebaceous fingerprints of one male donor, developed immediately after deposition with prepared conjugates 6/1 (Figure S6, 1)) and 1/1 (Figure S6, 2)), kept under dry (desiccator) conditions and recorded after 30 days. Figure S6 shows fingerprints developed on glass (non-porous) surface, recorded without backlighting (Figure S6, a)), with bright-field (Figure S6, b)) and dark-field (Figure S6, c)) contrast technique.

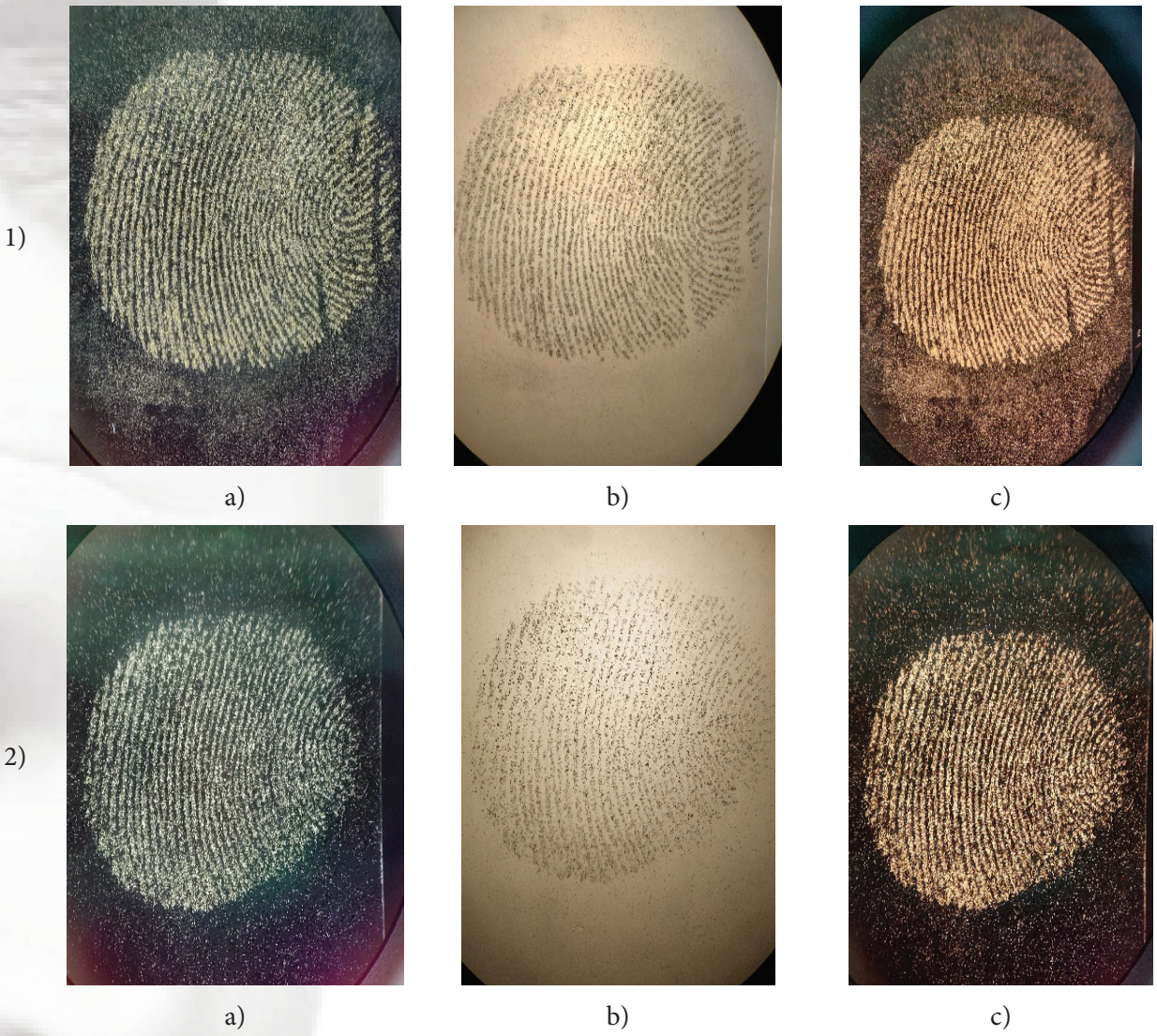


Figure S6 *Sebaceous fingerprints on glass substrate developed with prepared powder conjugates: 1) 6/1 and 2) 1/1, kept under dry conditions for 30 days and recorded: a) without backlighting, b) with bright-field contrast technique and c) with dark-field contrast technique, using optical microscope (magnification ×7.5).*

Originality/Value

According to the results from previous research (Vučković, Glođović, Radovanović, Janaćković, & Milašinović, 2020), humid environment is often contributing to better adhesion (binding) of the powders to the fingerprint residues. However, the impact of moisture on powder preservation is completely opposite. As confirmed by FT-IR analysis, developed fingerprints that were kept under humid conditions showed potential change in structure, unlike those kept under dry conditions (with only minor shifts). Moisture can affect the powders by creating agglomerates of the particles, which afterward cannot adhere well to the (latent) fingerprint residues. We assume that structure change occurred due to the moisture and sunlight for fingerprints kept under humid conditions, while sunlight only slightly affected the appearance of fingerprints kept under dry conditions. Therefore, under humid

conditions, fingerprints became "blurred" over the time, with slight disruption in the papillary line flow. Additionally, although the researchers were very careful while manipulating the samples, there is a possibility that accidental (minor) changes were made to the fingerprints, which contributed this conclusion to be drawn.

When observing fingerprints from Figure S1-S6 under UV light, there were no obvious differences in fluorescence over the period of time (from initial period to 30 days), under both storage conditions and for both prepared conjugates, so these results are not shown in this paper.

Comparison of Fingerprints and Final Conclusions

As confirmed by initial testing and optical microscopy, the best results were obtained with sebaceous fingerprints deposited onto glass (non-porous) substrate and developed with conjugate 6/1. Flat glass surface contributed to the far better binding of powders to fingerprint residues. At last, when comparing the influence of time on oxidation of fluorescein-based powders, it was determined that dry (desiccator) conditions are more suitable, so powders should be stored in dry (but also dark and cool) place (SDS – LP Dual Use Fingerprint Powder, 2013).

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ROAD TRAFFIC SAFETY INDICATOR TRENDS IN SERBIA AND EUROPE

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Introduction

Road Safety Management (RSM) consists of continuous monitoring of the current state of Road Traffic Safety (RTS), professional and realistic setting of the desired state, and the selection and application of various measures in order to bring the current state closer to the desired traffic safety situation (Lipovac et al., 2020).

Just like goods and services, safety is also produced, and the production process could be seen through a three-level management system. The institutional management function produces interventions, which in turn produce results. The institutional management function is result-oriented, and provides coordination, regulations, financing and allocation of resources, promotion, monitoring, evaluation, research and development and knowledge transfer. Interventions seek to manage risk exposure, prevent Road Traffic Accidents (RTA) and reduce injury. Results are defined and expressed as objectives in terms of final outcomes, intermediate outcomes and outputs. The objectives define the desired performance of the RTS system, and the level of safety is ultimately determined by the quality of the system's institutional management functions (Bliss & Breen, 2008). The final outcomes are the social costs and the number of RTAs, and the number of victims (injured and killed), while intermediate outcomes are the RTS system performance indicators, i.e. any measures that are causally related to RTAs or casualties, used with RTAs and casualty data, that indicate the performance of RTS system or understanding of the processes that lead to RTAs (ETSC, 2001). The most commonly used RTS system performance indicators were initially related to the speed of vehicles in the traffic flow, driving under the influence, usage of safety belts and motorcycle and bicycle helmets, etc. (Bliss & Breen, 2008). Outputs represent physical results that influence improvements in intermediate and final outcomes. According to Bliss & Breen (2008), typical output indicators were: kilometres of roads with safety engineering improvements, the number of police traffic enforcement operations, the number of roadworthiness tests, or alternatively measures corresponding to achievements that show that a certain task has been completed.

Respecting the best practices, this approach has been shaped into the international standard ISO 39001 (ISO/FDIS 39001:2012) which specifies the requirements for a RTS management system to enable the organization that interacts with the road traffic system to reduce the mortality and serious injuries related to RTAs that it can influence. This standard has been translated into Serbian and as

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such has officially been in use in the Republic of Serbia since January 29, 2016. The ISO 39001 standard provides performance indicators classified into three groups:

2. Risk exposure factors (distance travelled and volume of road traffic; amount of products and/or services provided by the organization);
3. Final results of safety factors (e.g. the number of the persons killed and seriously injured in RTAs);
4. Intermediate results of safety factors (related to safe planning, design and use of the road network, products and services on them, etc.). This includes indicators related to the usage of safety belts, child restraints, helmets for cyclists and motorcyclists, alcohol, narcotics, indicators of reaction after RTAs, etc.

RTS performance indicators have an important place in the RTS management process, and that is why it is important to make a relevant selection of indicators and to continuously monitor them.

Key Performance Indicators

The process in which entities (jurisdictions - states, provinces, etc.) continuously measure and compare various aspects of their performance in traffic safety with each other, with the aim of improving their own performance (that is, to learn from each other) is called Road Traffic Safety Benchmarking (Wegman and dr., 2010; Nešić et al., 2021). Two key tasks in this process are: (1) developing a set of Road Safety Performance Indicators (RSPINs) and combining them into a composite index (RSPI - Road Safety Performance Index); and (2) identifying a meaningful reference (best in class), which has already acquired outstanding practices in RTS improvement (Wegman et al., 2010). Best-in-class provides information about better achieved performance that can be used as a basis for making appropriate decisions and taking necessary actions (e.g. policy making, goal setting, countermeasures and program development and prioritization) to improve performance (Chen et al., 2015).

In the selection and development of the set of RSPINs, different approaches were made.

ETSC (2001) recommended seven basic fields for the development of the indicators: the use of alcohol and drugs, speed, restraint systems, daytime running lights, vehicles, roads and medical care.

Al-Haji (2005, 2007) proposed the Road Safety Development Index (RSDI) based on eight dimensions of road safety: traffic risk, individual risk, vehicle safety, road conditions, participant behaviour in traffic, socio-economic origin, organization of road traffic safety and enforcement of traffic regulations. Each dimension is represented by one or more quantitative RSPIN.

Within the SUNflowerNext project (Wegman et al., 2008), and later work (Wegman and Oppe, 2010; Gitelman et al., 2010) a comprehensive set of indicators was developed, which were summarized in a composite index. The indicators are classified into RSPINs (outcome indicators), implementation performance indicators (process indicators) and policy performance indicators (quality of national road safety plans) along with indicators of the structure and culture of the observed entities.

Within the European SafetyNet project Hakkert et al. (2007) developed a set of RSPINs related to seven key areas: alcohol and drugs, speed, safety systems, daytime running lights (DRL), vehicles, roads and trauma management.

Bax et al. (2012) grouped the indicators into (1) final outcomes (fatalities and RTAs), (2) intermediate outcomes (RSPINs such as drunk driving, speeding, vehicle safety) and (3) policy outcomes (measures and programs).

Pešić et. al. (2013) selected the most used outcomes indicators (number of traffic accident fatalities per 100 000 inhabitants; number of traffic accident fatalities per 10,000 registered vehicles; and number of traffic accident fatalities per 100,000,000 vehicle kilometres travelled) and RSPINs which have the most influence on traffic safety (percentage of drivers and passengers in front seats that use safety belts; percentage of drivers that do not drive under the influence of alcohol; percentage of non-speeding drivers) as relevant road traffic safety indicators as to the rate of traffic safety level of a territory.

Kukić et al. (2013) chose five indicators based on public risk (number of injuries weighted by corresponding coefficients, depending on the level of injuries; number of RTA with injuries; number of killed persons; number of RTA with killed persons; number of killed and seriously injured persons) expressed in relation to the number of inhabitants.

Tešić et al. (2018) collected and compared data of 6 RSPINs: (SPI1) the percentage (%) of surveyed car drivers below the legal limit of Blood Alcohol Concentration; (SPI2) % of surveyed car drivers who drive below the legal speed limit in urban areas; (SPI3) safety belt wearing rate at front seats of cars and vans; (SPI4) % of cars younger than 6 years; (SPI5) density of motorways and (SPI6) total health expenditure as a % of GDP.

Kukić et al. (2016) selected the following outcome indicators: the number of RTAs with casualties, number of fatalities, and number of fatalities and the seriously injured together, all expressed in relation to the population and the number of vehicles.

Davidović et al. (2020) categorized indicators related to driver fatigue into four groups: Sleep-related indicators (indicators related to the quantity and quality of sleep); Operation-related indicators (indicators related to working hours and time of the day); Rest-related indicators (indicators related to rest periods and breaks); Indicators of undertaken activities (indicators related to the measures for eliminating fatigue and education of drivers). As indicators which can be monitored on a daily basis in transportation companies and that can be observed on a national basis, they have selected key performance indicators which affect driver fatigue as: % of professional drivers with good sleep quality; % of drivers using appropriate measures for fatigue prevention (according to age groups); % of nights with the sufficient sleep quantity; % of nights without sleep; daily driving time; weekly driving time; fortnightly driving time; % of daytime driving hours; % of night-time driving hours; and daily rest.

These are just some examples from the period of intensive development of benchmarking in the field of Road Traffic Safety. Works that are also worth mentioning are for example: Chen et al. (2016); Egilmez G. and McAvoy D. (2013); Chen et al. (2017); Antić et al. (2020).

The EU reaffirmed its long-term goal of approaching zero fatalities by 2050 (Vision Zero), and for the first time, in line with the Valletta Declaration on Road Safety of 9 March 2017, set a target to halve the number of serious injuries in the EU by 2030 compared to 2020. A technical study (Jeanne Breen Consulting, 2018), among other things, recommended the setting of new interim objectives on the way to "Vision Zero" and the establishment of a range of key performance indicators for road safety (KPIs) at the European level directly related to the prevention of death and serious injury to provide focus for intervention strategy and delivery. In order to be able to gain a much clearer understanding of the different issues that influence overall safety performance, the European Commission has established, in close cooperation with Member State experts, the main intervention areas and measurement as a first set of KPIs to be connected to target outcomes.

The main intervention areas are (European Commission, 2019):

1. Infrastructure - safe roads and roadsides

2. Safe vehicles
3. Safe road use
   a) Safe speed,
   b) Sober driving (alcohol and drugs),
   c) Preventing driving whilst distracted,
   d) Use of safety belts, child restraint systems and protective equipment.

A KPI for road infrastructure should show the safety quality of a road network independent of road user behaviour or vehicle technology (European Commission, 2019). There are numerous tools for measuring the road infrastructure safety performance. Various methods for identifying dangerous locations (black spot) have been in use for the longest time (Nešić et al., 2016; Lipovac et al., 2016).

Research found 5-star rated Euro NCAP cars to have a 68% (±32%) lower risk of fatal injury alone and a 23% (±8%) lower risk of fatal and serious injury combined than 2-star rated cars (Kullgren et al., 2010). This is why the vehicle safety KPI should be based on data on Euro NCAP ratings (European Commission, 2019).

Safe road use is the third pillar for the prevention and mitigation of fatalities and serious injuries in collisions. Driver licensing, targeted education and awareness raising, supported by strong and sustained compliance and enforcement regimes, all have an important role to play in giving road users the capability and willingness to use roads and vehicles safely. On the other hand, non-resident drivers in the EU represent about 5% of traffic, but about 15% of traffic offences. So, current cross-border enforcement legislation (Directive (EU) 2015/413), which tackles the biggest offences including speeding, running red lights, failure to use safety belts and drink driving, should be improved.

Regarding speeding, the risk of being involved in a crash is 12.8 times higher when speeding than if not speeding (Dingus et al., 2016). When it comes to distraction, research found that the risk of being involved in a crash is increased by 12.2 times when dialling and 6.1 times when texting (Dingus et al., 2016). Distraction has been found to be a factor in 10 to 30% of road crashes, and the Spanish authorities reported that it had overtaken speed and alcohol as the highest risk factors in 2017[2].

Table 1 *List of KPIs and Their Definitions*

KP Indicator	**Definition**
Speed	Percentage of vehicles travelling within the speed limit
Safety belt	Percentage of vehicle occupants using the safety belt or child restraint system correctly
Protective equipment	Percentage of riders of powered two wheelers and bicycles wearing a protective helmet
Alcohol	Percentage of drivers driving within the legal limit for blood alcohol content (BAC)
Distraction	Percentage of drivers NOT using a handheld mobile device
Vehicle safety	Percentage of new passenger cars with a Euro NCAP safety rating equal or above a predefined threshold
Infrastructure	Percentage of distance driven over roads with a safety rating above an agreed threshold
Post-crash care	Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services

2 Cited in European Commission (2019)

The European Commission elaborated a list of Key Performance Indicators (KPIs) for road safety in 2019. These KPIs are defined and discussed in the Staff Working Document 'EU Road Safety Policy Framework 2021-2030 (European Commission, 2019). The KPIs relate to the main road safety challenges to be tackled and the aim of using the KPIs is to monitor the trends in factors that contribute to reaching the EC targets in road safety. The KPIs and their definitions are listed in Table 1.

A data collection methodology was developed and defined for each KPI. For example, for speed, methodological aspects of data collection are shown in Table 2.

Table 2 *Methodological Aspects of the Speed Indicator*

Aspect	**Minimum methodological requirements**
Road type coverage	Motorways, rural non-motorway roads and urban roads.
Vehicle type	At least passenger vehicles (cars). Buses and goods vehicles (light [less than 3.5t] and heavy [more than 3.5t]) and powered two-wheelers are optional in the first phase.
Location	The choice of locations should be based on random sampling if this is possible, but not near safety cameras whether fixed or mobile.
Time of day	For day hours in free flow traffic; the night indicator should be optional due to its higher cost.
Day of the week	Tuesdays, Wednesdays or Thursdays. Weekend measurements also possible but optional.
Month	Late spring and/or early autumn.
Weather	Not during bad weather conditions (e.g. heavy rain, snow, ice, strong winds or fog).

Data Analysis

European Transport Safety Council (ETSC) started to publish Road Safety PIN (Performance Index) Report in 2007 (Achterberg, 2007). After that, the annual publication of the PIN report continued. In the beginning, the Report contained indicators representing final outcomes (total number of deaths, number of deaths from drink-driving crashes), but also indicators representing intermediate outcomes. The latter refers to certain indicators that were generally not available in all countries. Safety belts use was available for all countries from the beginning, but distribution of alcohol levels among the driver population only for the Netherlands, Belgium, Finland and Estonia. Speed was available for France, Belgium, Switzerland, Norway, the Netherlands, Great Britain, Ireland, Portugal, Austria, Estonia, Latvia and Poland. Regarding the vehicle, the first indicators were related to safety belt reminders. Data were available for Sweden, Luxemburg, Germany, Czech Republic, Slovakia, Hungary, Poland, Lithuania, Italy and Greece. Subsequently, an increasing number of countries joined the collection of data on various indicators.

In accordance with the decision of the European Commission on determining the list of KPIs (European Commission, 2019), within the "BASELINE" project[3] (Vanhove, 2023; Silverans & Vanhove, 2023), KPI values were collected, processed and published through eight reports - one for each KPI (Van den Broek et al., 2023; Van den Broek, et. al., 2022; Yannis & Folla, 2022a; Yannis & Folla, 2022b; Boets, 2023; Wardenier & Silverans, 2023; Van den Berghe, 2022; Nuyttens, 2022).

3 BASELINE project: 2020-2022. Via Institute, Brussels, Belgium. https://www.baseline.vias.be/en/. Accessed on 31.08.2023.

When it comes to the analysis of the current state and trends based on indicators representing intermediate outcomes, the "BASELINE" project reports are representative, and for the analysis of the current state and trends based on indicators representing final outcomes, the ERSO (European Road Safety Observatory) Annual statistical report on road safety in the EU 2022 (European Commission, 2023) and ETSC 17th Road safety performance index report (Carson et al., 2023) are representative. The ETSC report is particularly interesting because it also contains some data about the Republic of Serbia.

Compared to European countries (Figure 1), Serbia is at the bottom of the scale with 83 Road Deaths/Million Inhabitants, right before Romania, which is at the last place in terms of Public Risk during 2020 with 86 Road Deaths/Million Inhabitants. Best performing European countries are Norway and Sweden (with 21 and 22 Road Deaths/Million Inhabitants, respectively). During the observed period (2022 compared to 2012) the average for 27 EU countries decreased from 54 to 46 Road Deaths/1 Million Inhabitants (a decrease of 14.8%) (Figure 2). For the same period, the decrease in Serbia is 12.6% (from 95 to 83 Road Deaths/Million Inhabitants) (Figure 2).



Figure 1 *Public Risk in 2022 Compared to 2012 (in Road Deaths per 1 Million Inhabitants)* (Carson et al., 2023)

Compared to Sweden, as a leader in road traffic safety in EU27, the current situation in Serbia in terms of Public Risk corresponds to the situation in Sweden about 25 years ago, and compared to the average in the EU27, Serbia lags behind by about 15 years.

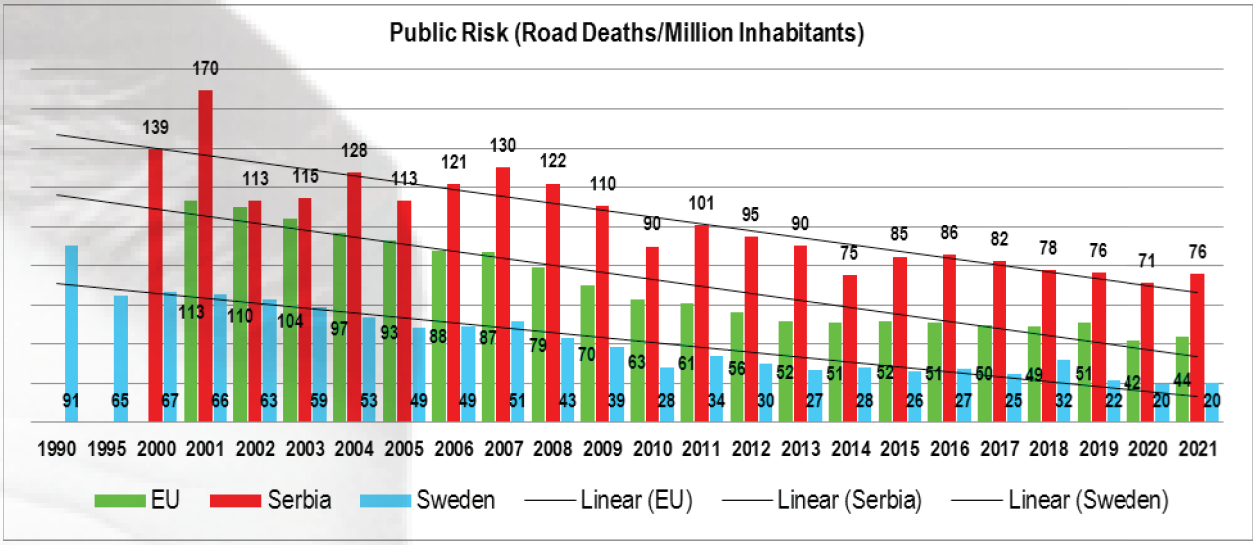


Figure 2 *Direct Comparison of Public Risk in Serbia with Values in Sweden and in Relation to the Average in the EU over a Long Series of Years (Road Deaths/Million Inhabitants)*

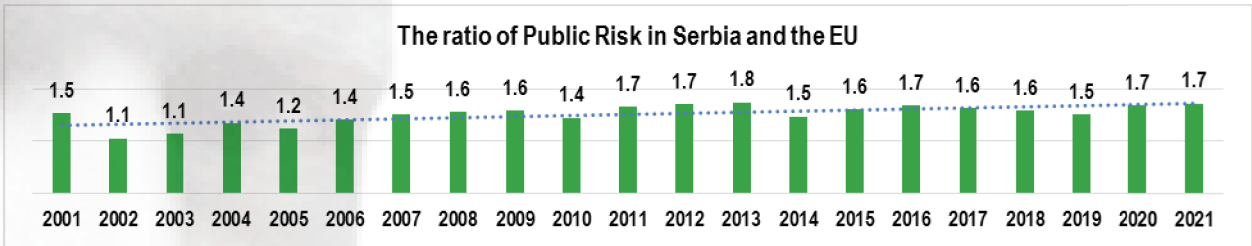


Figure 3 *The Ratio of Public Risk in Serbia and the EU over a Long Series of Years*

Observed individually by year, in the period from 2001, the value of Public Risk in Serbia was always higher than the average in the EU by 1.1 to 1.7 times (Figure 3), while compared to the values in Sweden, as one of the most successful countries in road traffic safety, the value of Public Risk was always higher by 1.8 to 3.8 times (Figure 4). In both cases, the emerging trend indicates an increase in the value of those relations, which indicates an increasing lag between Serbia and the EU for past 20 years.



Figure 4 *The Ratio of Public Risk in Serbia and Sweden over a Long Series of Years*

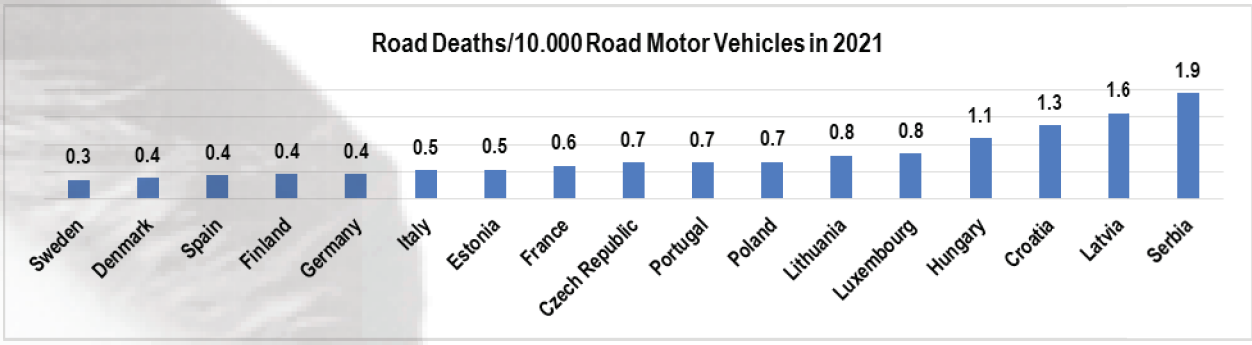


Figure 5 *Traffic Risk in 2021 (Road Deaths/10.000 Road Motor Vehicles)*

The analysis of the current state of Traffic Risk showed results that are similar to the analysis of Public Risk. Sweden has the best results (0.3 Road Deaths/10,000 Road Motor Vehicles), followed by Denmark, Spain, Finland and Germany (Figure 5). Among the EU countries, the worst situation is in Latvia (1.6 Road Deaths/10,000 Road Motor Vehicles), and the situation is somewhat better in Croatia (1.3) and Hungary (1.1) (Figure 5). Of the analysed countries, the worst situation is in Serbia, where this indicator has a value of 1.9 Road Deaths/10,000 Road Motor Vehicles (Figure 5).

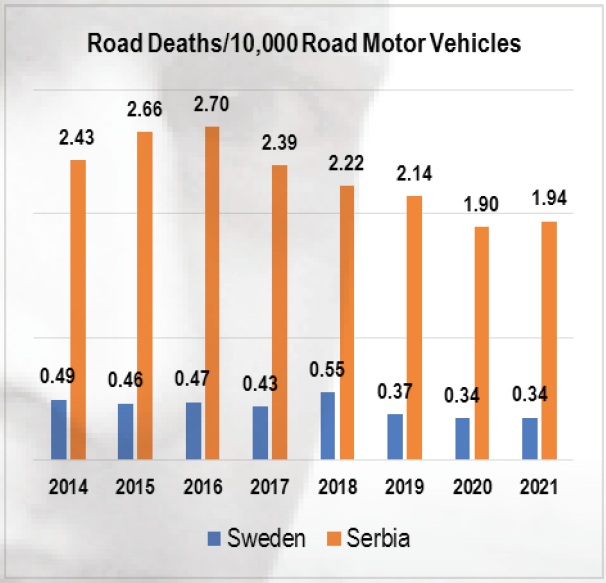


Figure 6 *Direct Comparison of Traffic Risk in Serbia with Values in Sweden over 8 Years (Road Deaths/10,000 Road Motor Vehicles)*

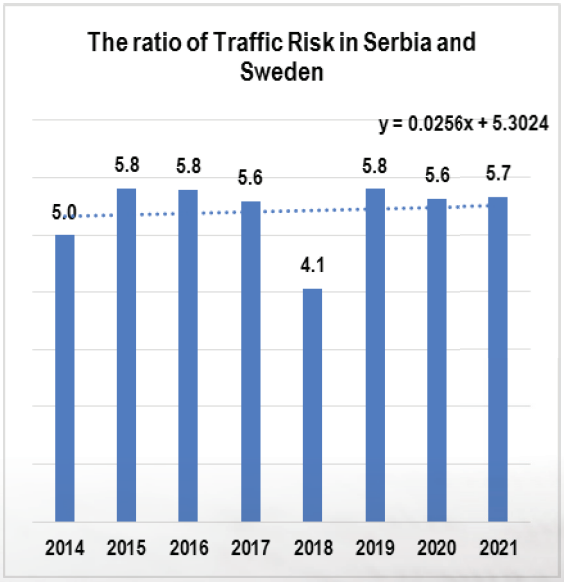


Figure 7 *The Ratio of Traffic Risk in Serbia and Sweden over 8 Years*

When comparing Traffic Risk values (Road Deaths/10,000 Motor Vehicles) in Sweden and Serbia over a period of 8 years (2014-2021), even greater differences than in Public Risk are observed (Figure 6). In Serbia, Traffic Risk is 4.1 to 5.8 times higher than in Sweden, with a slight trend of increasing the difference during the observation period (Figure 7).

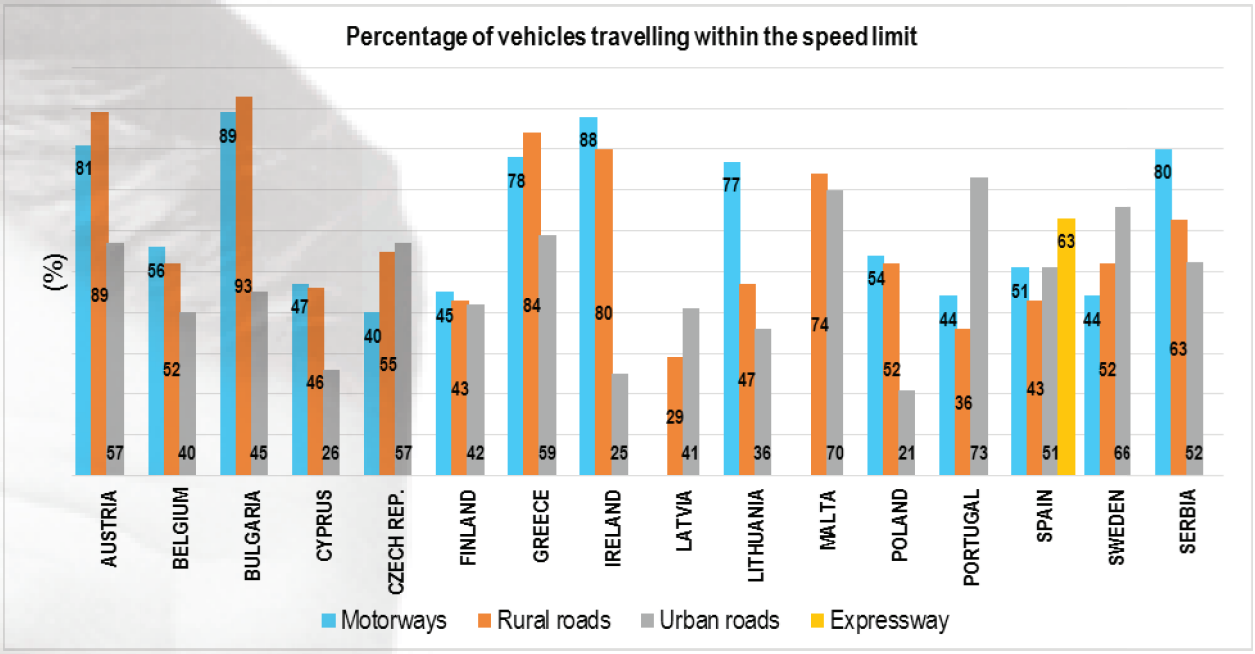


Figure 8 *Speed Compliance by Passenger Cars During Weekday/Daytime in 2022*

When it comes to indicators representing intermediate outcomes, the indicators related to vehicle speed and the use of vehicle user protection systems (safety belts, child restraint systems and the use of motorized two-wheel helmets) are discussed here.

Speeding is defined as the percentage of drivers driving within the speed limit (Van den Broek, 2023). Data are presented separately by road type (Figure 8). The highest degree of compliance on Motorways is observed in Bulgaria (89%), followed by Ireland (88%), Austria (81%), Serbia (80%), Greece (78%) and Lithuania (77%). According to this indicator, Serbia ranks quite well. Bulgaria (93%), followed by Austria (89%), Greece (84%) and Ireland (80%) leads the way in terms of compliance on rural roads. Serbia is well below with 63%, but it is still better than the Czech Republic (55%), Sweden, Poland and Belgium (52%). On urban roads, the highest degree of compliance is observed in Portugal (73%), Malta (70%) and Sweden (66%). Serbia is in 7th place with 52% compliance.

The KPI safety belts and child restraint systems (CRS) is defined as the percentage of vehicle occupants using the safety belt or child restraint system correctly (Van den Broek, 2022). The data is shown for passenger vehicles, separately for the driver, front seat occupant, front passenger and rear seat occupant (Figure 9).

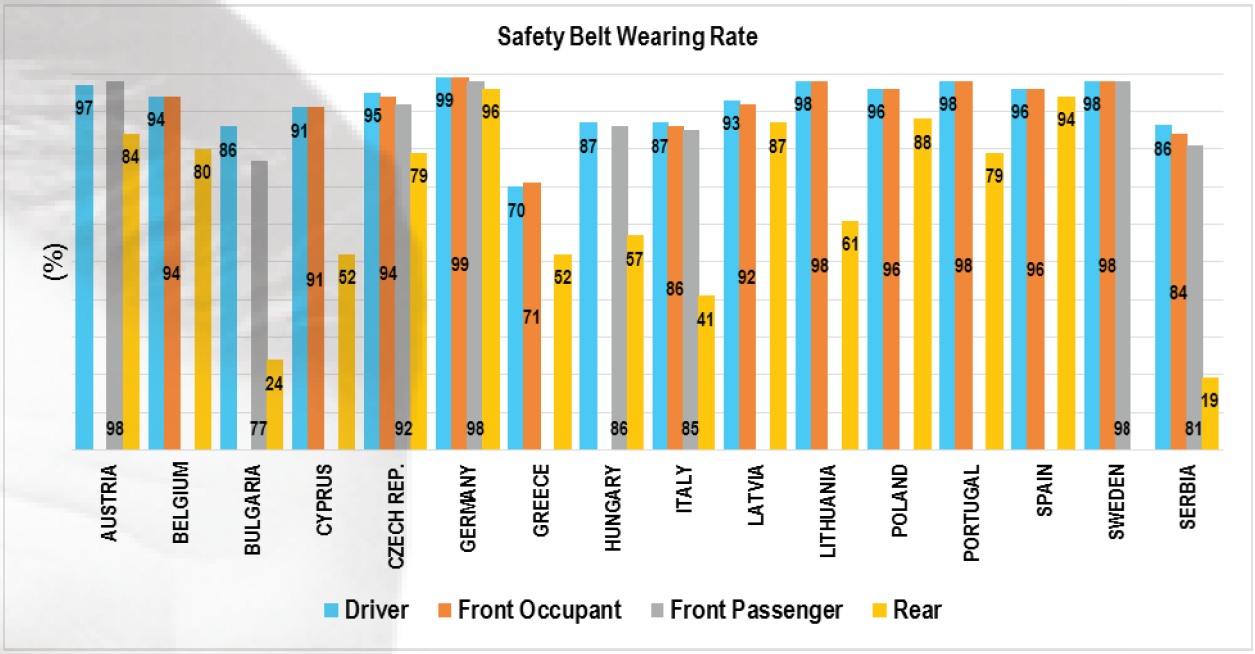


Figure 9 *Percentage of Passenger Car Occupants Correctly Using the Safety Belt During Weekday/Daytime by Position in the Vehicle in 2022*

The degree of driver safety belt use of over 95% was achieved in the following countries: Germany (99%), Lithuania (98%), Portugal (98%), Sweden (98%), Austria (97%), Poland (96%) and Spain (96%). In 11 EU countries, the safety belt usage rate is over 90%. Serbia is at the bottom with 86%, together with Italy. The most unfavourable situation is in Greece with 70%. Also, the use of safety belts by front passengers usually has high rates in the EU countries, and in most countries it is greater than 95%, such as in: Germany (99%), Austria (98%), Sweden (98%), Lithuania (98%), Portugal (98%), Poland (96%) and Spain (96%). Serbia is on the other side of the scale, with 81%. The rate of safety belt use in rear seats is generally lower than in the front, with only two countries exceeding 95%. These are Germany (96%) and Spain (94%). Serbia is in the last place on the scale with only 19% of occupants in the back seats using safety belts.

When it comes to child restraint systems (Figure 10), only two EU countries exceed 95%: Austria and Germany with 99%. Poland follows with 95%, and then a number of countries with values below 90%. Serbia is slightly below the middle of the scale with 60%. The lowest level of use is in Spain with 36%.

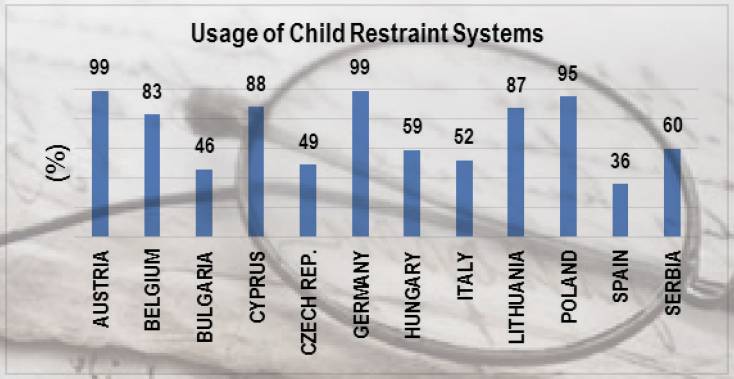


Figure 10 *Percentage of Children in Passenger Cars (Correctly) Using Cars During Weekday/Daytime According to Roadside Observation in 2022*

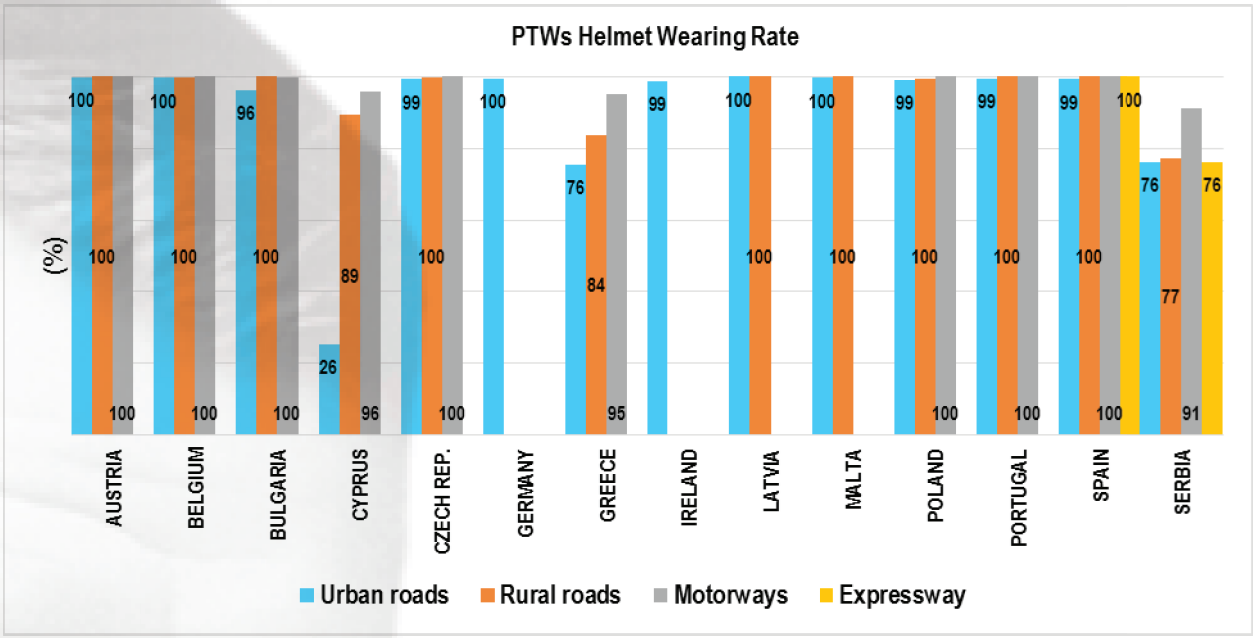


Figure 11 *Helmet Use Among PTWs by Road Type in 2022*

Helmet use among powered two-wheelers (PTWs) is defined as the percentage of riders of powered two-wheelers wearing a protective helmet (Yannis & Folla, 2022a). For 10 of the 13 EU countries that submitted data on helmet wearing rates for PTW riders and passengers on urban roads, the values are higher than 99%, and for 11 countries they are higher than 95% (Figure 11). The worst is Cyprus with 25.5%, followed by Greece with 75.5% and Serbia with 76.1%. It is similar with helmet wearing rates for PTW riders and passengers on rural roads. In 9 of the 11 countries that submitted data, the percentage of use is greater than 99%. Serbia is at the bottom of the scale with 77.3%. Greece has 83.7% and Cyprus 89.3%. On motorways, the helmet wearing rate for PTW riders exceeds 99% in 7 out of 10 EU countries. These are: Austria, Portugal, Spain, Belgium, the Czech Republic, Poland and Bulgaria. According to this indicator, Serbia is at the bottom (in the tenth or last place) with 91%.

Discussion and Conclusion

Among the indicators representing final outcomes of the road safety system, Public Risk (total number of deaths per number of inhabitants) is one of the easily accessible and most frequently used indicators. By comparing the value of this indicator between the EU countries and Serbia, it can be concluded that the state of traffic safety in Serbia ranks among the worst EU countries. When it comes to the trends of this indicator, it is positive for both the EU and Serbia. However, by comparing the ratio between the values of average Public Risk in the EU and Public Risk in Serbia, it is evident that the difference in the trends of decreasing of values during the observed period of 20 years is increasing, which indicates that over time Serbia is lagging behind the EU countries according to this indicator. Compared to Sweden, the lag is even more prominent. When looking at the second most famous indicator representing final outcomes of the road safety system, Traffic Risk (total number of Road Deaths per number of Road Motor Vehicles), the situation is similar. In the current state, the value of the indicator in Serbia is more than 5.5 times higher than in Sweden, and during the observed period of 8 years (2014-2021), the difference in the ratio of the value of the indicator has been steadily increasing, so that Serbia is falling further behind.

Indicators representing intermediate outcomes (KPIs) were also used to compare the state of traffic safety.

The most common KPI is speeding, and it is analysed separately by road type. None of the EU countries exceeds the degree of compliance of 95% on any type of road. The highest level of compliance on Motorways is 89% (Bulgaria) and 88% (Ireland). Serbia ranks quite well with 80%, and at the bottom of the scale are several EU countries with less than 50%, including Sweden with 44%, which indicates that speeding on motorways in itself does not have to be decisive for the state of traffic safety. Bulgaria again has the highest level of compliance on rural roads (93%), and as many as six EU countries have a level of compliance below 50%. Serbia is somewhere in the middle with 63%. The example of Bulgaria shows that a small percentage of speeding on Motorways and Rural roads does not necessarily imply a good state of traffic safety. On Urban roads, the degree of compliance is the lowest, so the best (Portugal) has only 73% and the worst (Poland) only 21%. Serbia is again somewhere in the middle with 52%.

The most well-known KPI in the field of passive safety is the use of safety belts. When it comes to the use of safety belts by drivers, Germany is at the top with 99%. A total of seven EU countries (out of 16) have over 95% (Sweden is among them). The lowest degree of safety belt use is 70% (Greece). Serbia is at the bottom of the scale with 86%. More than 95% of safety belts are used in the passenger seat in three EU countries (out of 6). It is used the least in Bulgaria (77%). Serbia is slightly below the middle of the scale with 81%.

On average, in the front seats, in six out of 12 EU countries, safety belt usage is over 95%. The worst is in Greece (71%), and Serbia is at the bottom of the scale with 71%. The use of safety belts in the back is less than in the front. In only two countries (out of 14 in the EU) the degree of use is over 95%. It is used the most in Germany (96%) and the least in Bulgaria (24%). Serbia is below all with only 19%.

And finally, the use of a helmet for PTW on urban roads in 11 countries (out of 13 EU countries) transfers a value of 95%. In Cyprus it is only 26%, and in Serbia it is around the middle of the scale (76.1%). Rural roads are even better, because in 9 countries (out of 11 EU), the usage rate is over 99.5%. Serbia is at the bottom of the scale with 77.3%. On Motorways, in 7 countries (out of 9 EU countries) the usage rate is over 99.8%. Serbia is again at the bottom of the scale with 91.2%.

Analysis of traffic safety conditions and trends is a complex and demanding job, and requires the collection of a large volume of data and the selection and application of sophisticated and demanding methods that exceed the scope of this work. Several well-known and easily accessible indicators representing final and intermediate outcomes of the road safety system are analysed here. Based on them, the most important conclusions were drawn:

1. The analysis of the current state of the road safety system based on indicators representing final outcomes showed that Serbia is among the EU countries with the worst state;
2. The analysis of trends in the state of the road safety system based on indicators representing final outcomes showed that Serbia lags significantly behind the EU countries, and that it lags behind more and more over time;
3. The analysis of indicators representing intermediate outcomes of the road safety system showed that Serbia is among the EU countries with the worst conditions.

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IS THE THREAT POSED BY AIR WEAPONS UNDERRATED? – ANALYSIS OF THE IMPACT OF A PROJECTILE FIRED FROM AN AIR RIFLE ON A SANDY SUBSTRATE

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Purpose

We live in times when people are overwhelmed by their responsibilities. Parents' time dedicated to children is limited and most of the time some extreme interests of their children are unknown to them (Macuka, Petani & Reić Ercegovac, 2023). Some people are not aware of the dangers that life brings, others manipulate some and some simply have bad intentions.

On the other hand, today's youth, as well as all people from various classes of society, have access to a wide range of side activities and hobbies. Furthermore, the violent video games, as a new digital medium, have attracted the increasing attention of children and adolescents in recent decades, causing numerous harmful consequences, of which aggressive behavior stands out. (Stojanović, 2019) The problem is even more serious if we take into account the data that more than 85% of video games contain violence, while half involve serious acts of violence (Anderson, Bushman & Carnagey, 2006), where violent content is shown more brutally and realistically from year to year. More and more often, very low-quality content and inadequate authorities are fashionable. In this way, people, especially young people, are subject to bad influences, often of a dangerous nature (Ninčić, 2022).

Considering the situation from the last decade of the past century, it is well known that Serbia started the reformation process with a delay comparing to other countries in transition. (Paunović, Dimić & Arsenijević, 2019) The consequences of this delay have a great impact on society development regarding the stability. In terms of stability, we consider economic and political, as well as personal, psycho-

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logical stability of an individual and of the choices one make. These factors are mostly influenced by poverty. The poverty is a direct consequence of an unemployment rate, which is much higher in Serbia then in the European Union (EU) member countries (Paunović et al., 2019). The rules and laws must or should be in accordance with a temporary situation in a country of interest.

A current Law on Arms and Ammunition ("Official Gazette of the RS", no. 20/2015, 10/2019, 20/2020 and 14/2022) allows the free acquisition of air weapons by persons over 18 years of age, and even possession without any report to the competent authorities. With this paper, we want to point out that although less dangerous than firearms, air weapons are also unsafe and should not be available to anyone with the sole requirement of having an ID.

Diabolos and pellets are non-spherical projectiles intended for use in air weapons. An air rifle fires a projectile with compressed air. (Ceylan, McGowan & Stringer, 2002) The air is compressed by bending the tube with a spring or with the help of a gas ampoule. In terms of pressure, pistol diabolo differs from weapon bullets: air rifles function at a pressure of only 50 atmospheres, whereas firearms operate at thousands of atmospheres. Diabolos and balls are frequently constructed to be stable because they can be placed via a smooth tube. Diabolos can be sharp for hunting, rounded and flat for target practice, or both.

This work arose from an idea related to the study of physics, that is, the distribution of the energy of a projectile impact on a certain surface. It is not the first time that experiments used to study pure physics found application in much more important fields in a practical sense. (Ivanković et al., 2018) On the other hand, it is very important to apply a scientific approach to solving any practical problem, especially problems of this importance. By investigating the physics of the impact of the projectile and the distribution of energy, the type of injury that can be caused, as well as the danger of it, can be assumed. A detailed analysis of the image at the moment of impact and after it reveals various parameters that, through further analysis, can be connected to other scientific branches and lead to a complete profile of the threat posed by the use of air weapons.

This kind of investigation is also significant to understand the behavior of granular materials during the effect of different energy distributions.

Methods

The High-Speed Camera Measurements

For the research described in this paper, optical methods for analyzing the impact of a projectile on a surface fired from an air rifle were applied. First, the shooting was monitored by a high-speed camera. A photographic camera Panasonic DMC-FZ-200 with 40 fps and resolution 2560 x 1920 pixels (5 MP) was used. This kind of recording collected a large amount of data summarized in photographs that faithfully show the effect of the projectile on the surface. The advantage of the fast camera is that the moments preceding the impact are clearly distinguished from the moments of the breakthrough and those that follow the breakthrough itself. The digital photos were obtained in the form of a burst record of a series of high-resolution photos at equidistant time intervals.

The Image Analysis Method

Afterwards, the obtained recordings were analyzed using the image analysis program ImageJ. ImageJ is an open source Java-written program created by Wayne Rasband. (Abràmoff, Magalhães & Ram, 2004) This program is used to calculate different dimensions related to the impact of projectiles, which are important for research, based on the known dimensions of the sample boxes. This program was used for some similar investigations in impact analysis (Ravindran, Kumar, Rangasamy & Kumar, 2022), as well for granular matter (Ari & Akbulut, 2022). Some additional analyses were also performed, which support the obtained results.

Fractal Analysis

This type of analysis is a special function also analyzed as a part of imageJ program analysis. It is important for the analysis of complex surfaces, and a more detailed explanation is given in the results section of the paper.

Findings

At the beginning of the research, the analysis of the problem was carried out in terms of gathering information. The fact is that there are quite a few cases of injuries from air weapons. In Serbia, only in the last two years, numerous cases have been recorded. There are well-known cases of abuse when the owner of an air weapon injures a person unknown to him (Blic, 2022, April 7), to injury in the household when the weapon is in the hands of a child (Telegraf, 2022, August 22). Unfortunately, we have also witnessed more serious injuries caused by this type of weapon (021, 2023, May 5).

In studies done at the end of the last century in America, it was established that air weapons could cause serious and fatal injuries. For example, an eye injury very often results in permanent vision loss; in intracranial injuries, 30 percent are fatal. (Bratton, Dowd, Brogan & Hegenbarth, 1997) Although perhaps "not often enough", deaths from air gun injuries are a reality (Bratton et al., 1997; Bakovic, Petrovecki, Strinovic & Mayer, 2014; Guenther, Chen, Wozniak & Leshikar, 2020). Are percentages an appropriate benchmark for leaving one's life to chance? Are the statistics that talk about rare cases enough to pass a law that potentially threatens the safety of people, and above all more sensitive groups such as children?

Air Weapons vs. Firearms

The authors of this paper have thoroughly investigated the effects of air rifle pellets. In terms of physics, the authors have shown the effects of projectiles for air weapons. Unlike firearms manufacturers, who describe the best effects of firearms, airgun manufacturers only show the possibility of injury. If the analysis of the complexity of the construction of firearms and air weapons is taken into consideration, one can easily come to the conclusion that the technology of making air weapons is simple compared to the construction of firearms. On the other hand, projectiles for air weapons are commercially available and readily available to all users.

Furthermore, firearms manufacturers provide details how to use firearms, and airgun manufacturers probably take into account the simplicity of firearms and very briefly state the same. The same is the case with safety measures, as well as measures for safe handling and storage. The storage of firearms

requires special conditions, which is not the case with air weapons. Shooting positions are prescribed for shooting with firearms (standing, lying down, kneeling, etc.), while this is not the case for shooting with air weapons. Air rifle shooting gives its user the freedom to shoot from a position that suits them best. As a very important fact, it should be pointed out that there is no precisely defined instruction for the training of persons who carry out shooting from aerial weapons, except in the aerial ranges where the training of competitors takes place. One of the reasons for injuries resulting from improper air gun handling is an unsafe shooting stance. Shooting positions are prescribed for the purposes of shooting training and competitions in air ranges. Based on all of the above, we are of the opinion that people who shoot from air weapons are in a large number of cases unprepared for the realization of shooting from air weapons. Injuries caused by improper handling of air weapons leave lasting consequences. The author's desire was to show in this paper the effects of air weapons that result in permanent or serious injuries.

Safety and Security

The following safety measures are taken for shooting in air ranges (Ranđelović, 2016; Kokelj & Ranđelović, 2016; Kokelj & Ranđelović, 2018):

- shooting can only be performed by fully trained personnel;
- air weapons from which are fired must be inspected before and after use;
- the use of defective and untested air weapons is prohibited;
- before performing any actions, the weapon is unloaded and checked to see if it is empty;
- during filling, emptying and removal of blockages, movement in front of the pipe is not allowed;
- mandatory inspection of ammunition before use;
- ammunition is protected from unfavorable atmospheric influences (moisture, direct sunlight, low and high temperatures).

Shooting protection is the process of taking concrete measures in a given situation on the ground. Measures protection is undertaken by all authorities at the training ground in order to create conditions during preparation and execution shootings that do not lead to injuries and that create conditions for full physical and psychological safety of the executor of the shooting.

The following protective measures are taken for preparation and execution:

- the barrel of the weapon is always turned in the direction of shooting towards the area of effect;
- all personnel at the test site must comply with prescribed safety and security measures;
- ammunition is inspected and issued correct and undamaged for the purpose of shooting, other measures are taken to protect personnel during the preparation and execution of shooting. The authors suggest that any person who plans to use firearms must undergo adequate training in sports associations that deal with shooting, and after obtaining a certificate that those persons are allowed to purchase and use air weapons.

Experimental Analysis

Further research was based on experimental testing. After the experimental shooting, filmed with a high-speed camera, the recorded frames on the target were analyzed.

The photographic camera Panasonic DMC-FZ200 was used in experiments. The camera has Leica DC Vario-Elmarit zoom objective with fixed aperture F2.8 across entire zoom range from 4.5 mm till 108 mm. The resolution of the camera is 4256 x 2832 pixels (12.1 MP). When camera is used for high-speed recording resolution is 2560 x 1920 pixels (5 MP) and speed is 40 fps.

The impacts on the ground-fine sand during shooting from two different angles of 0° and 15° were observed. The density of fine sand is 1700 kg/m^3. An air rifle Steyer LG 110, 4,5 mm, with a projectile speed of about 100 m/s was used. The distance from which the test was performed was 20m. Sand was used as a representative of granular materials that have a huge military application. (Simović Pavlović, Nestorović, Janković, Radulović & Pagnacco, 2023) It was precisely the impact of the projectile on this substrate that was examined in terms of fundamental physics. (Janković et al., 2023) The projectile had a conical tip. Since the mass of the projectile for air weapons is less than 2 g (in this particular case of the order of 1 g), and the speed is approximately 100 m/s, using the classic formula for kinetic energy, it can be calculated that the applied kinetic energy does not exceed 10 J. It is obvious that the kinetic energy of an air rifle projectile impact is hundreds of times smaller than that of firearms and real ammunition, but the sensitivity of the human body, that is, organs, is essential in this representation. (Myre & Black, 1987) It was observed that despite the fact that the applied kinetic energy is less than 10 J, penetration is evident as well as the power of deformation, i.e. destruction of the substrate. All important parameters for the experiment are given in the Table 1.

Table 1 *Important Parameters for the Experiment*

Shooting angles		Granular matter	Sand density	Air rifle type	Projectile type	Projectile speed	Shooting distance
0°	*15°*	*Fine sand*	*1700 kg/m^3*	*Steyer LG 110 4.5mm*	*Conical tip*	*100 m/s*	*20m*

The discussion on the dimensions of penetration and traces in the sand is redundant, bearing in mind that the sample that represented the target had dimensions that exceeded the depth of penetration. No less important, this data also speaks in favor of the high energy of the impact of a prjectile on the observed surface. What is taken as the main result for the analysis in this paper is the deformation of the surface. By observing the recordings respectively, a very destructive effect on the substrate is observed (*Figure 1*). Shooting images at 0 degree angle were taken for analysis.

On the frame showing the moment of penetration, a hole can be seen at the point of penetration of the projectile with a diameter of 11.18 mm and a sand scattering wave with a diameter of approximately 147 mm. These initial results are a parameter for comparing further obtained results. Already by themselves, these dimensions testify to the not so small penetration power of air ammunition grains. Further analysis is determined in the direction of tracking the diameter of the projectile penetration hole as a function of time after impact. Although in some conditions of a different, solid substrate, we would not witness this expansion of the penetration hole, this analysis was done with the aim of showing that there is a large energy that is transferred to the rest of the substrate through which the projectile penetrates.

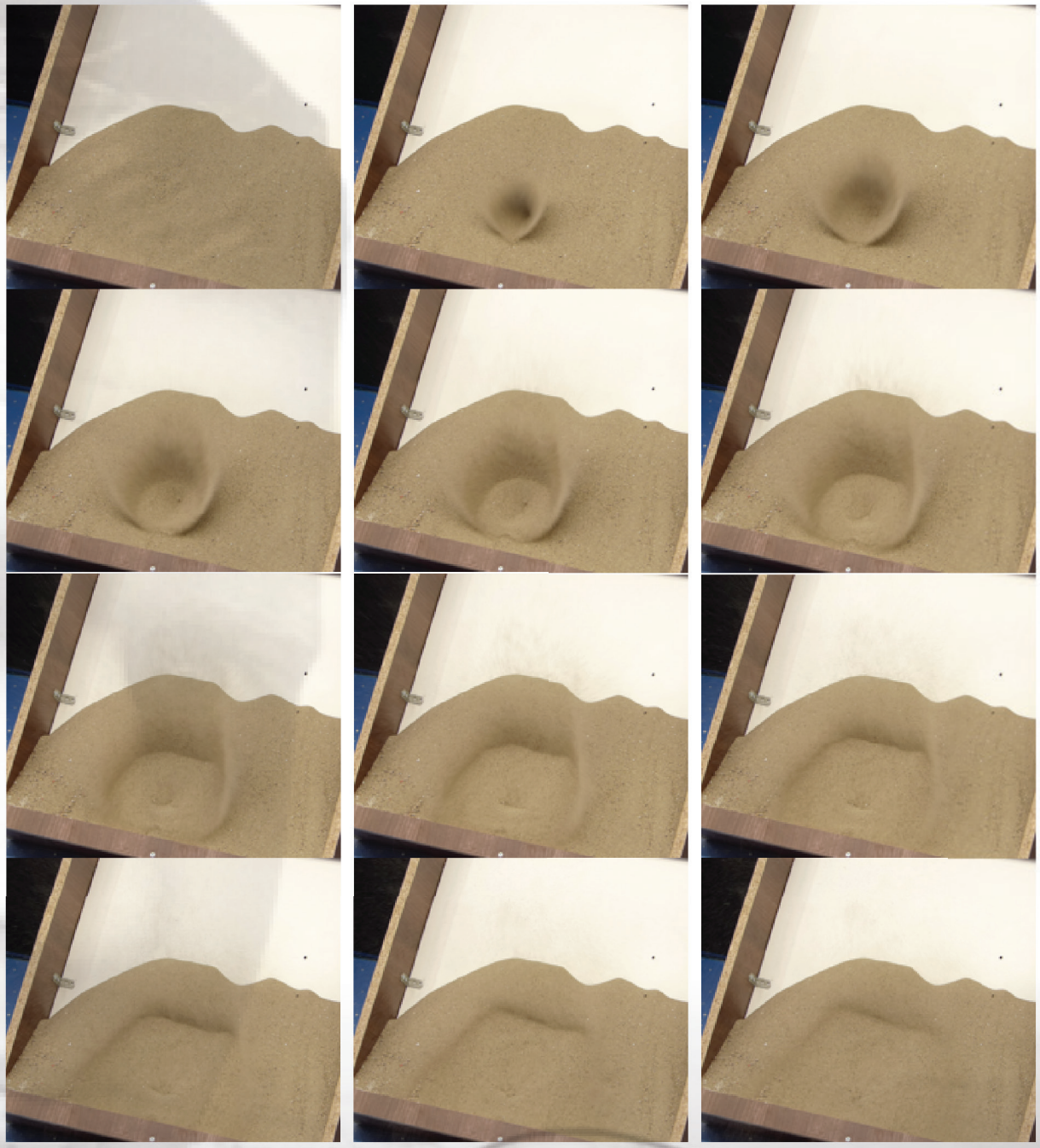


Figure 1 *Panel Image Representing Different Consecutive Frames Due to the Penetration of the Projectile into the Substrate and a Few Moments After the Penetration*

For further analysis, a representative image was taken that represents the moment after the projectile hit the ground.

The following diagram (*Figure 2*) is obtained by measuring the diameter of the crater created at the moment of penetration, and then its subsequent expansion. The graphic shows the maximum measured diameter values at a given moment. Of course, it is important to note that due to the granular substrate, the depth of the crater decreases with the increase in crater diameter.

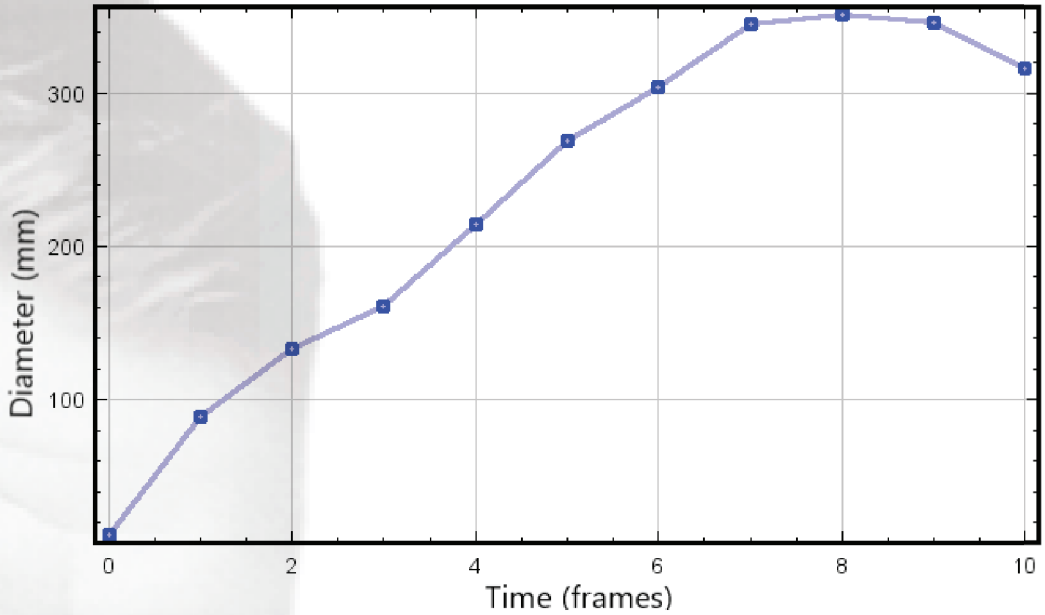


Figure 2 *Diagram of penetration hole diameter dependence on the time. The diameter is the largest possible measured diameter of the hole formed due to penetration, and later expansion of the initial hole due to energy transfer. The time is presented in the recorded frames after the penetration*

Further analysis revealed an increase in the scattering diameter (*Figure 3*), which at one point shows a large jump. The scattering diameter does not show a decrease but the scattering just disappears at one point so that part is not shown in the diagram. Again, these are secondary results that contribute to the data on the transfer of energy to the environment of the substrate, that is, that the impact of projectile penetration is not only related to the exact location of penetration.

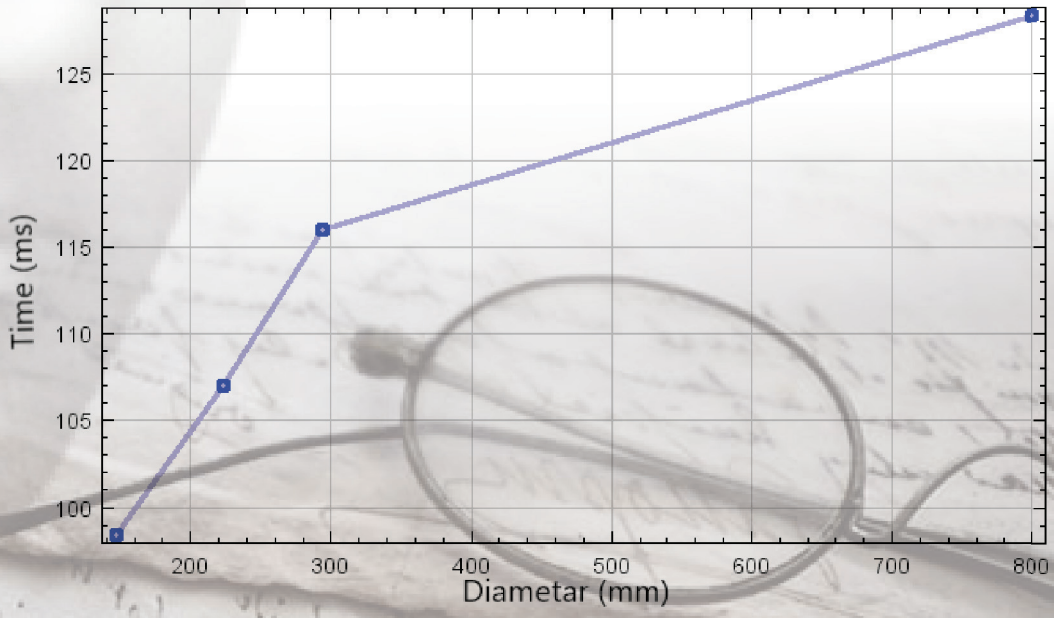


Figure 3 *Diagram of the sand scattering in a function of a time. The diameter of sand scattering was measured at different moments of penetration and after it*

The fractal dimension of the granular surface was measured at different moments of recording the substrate (*Figure 4*). Fractal analysis measures the so-called surface complexity. This complexity refers to the change in detail in the scaling function. It is measured in values from 1 (line complexity) to 2 (square area complexity). High complexity values of approximately 1.9 were definitely measured for the granular surface. The fractal dimension measured on the recording of the very moment of projectile penetration is 1.8712. In the image of one of the following frames, this dimension is 1.9056, while in the last analyzed image it is calculated as 1.9219. What was also observed is that the complexity is impaired at the moment of penetration of the projectile, and then its values increase again after the subsidence of the substrate. Here, the homogeneity of the structure is actually disturbed due to penetration and transferred energy. The panel shows three images with corresponding diagrams of the fractal dimension.

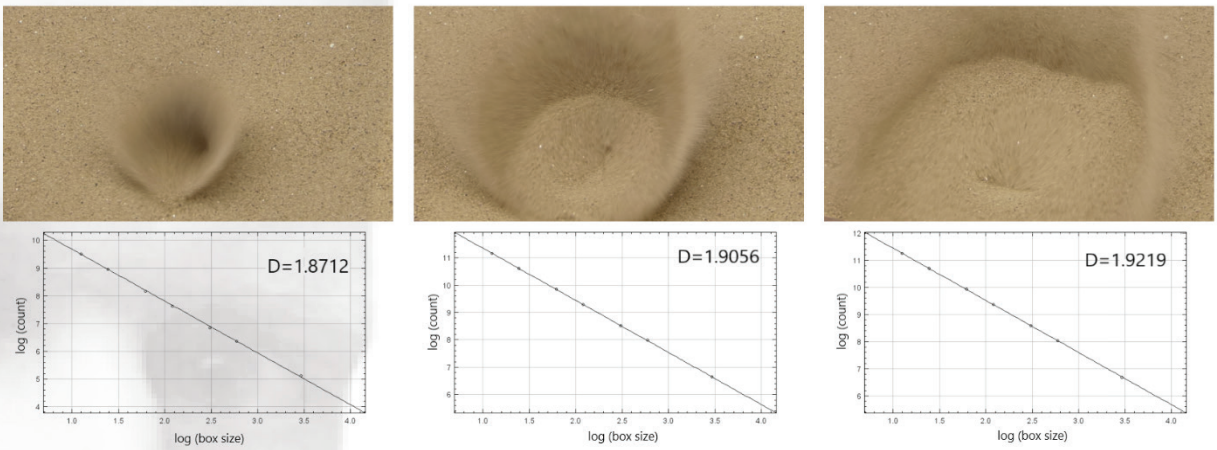


Figure 4 *Panel image representing three frames due to the penetration of the projectile into the substrate and after (top row), with corresponding diagrams showing the fractal dimension for each of them (bottom row). The fractal dimension is similar for all images and is approximately 1.9.*

Regarding the presented results, it is important to mention that standard deviation is calculated and there is no significant dispersion.

The presented results testify to the transfer of energy to the surrounding substrate due to the penetration of the projectile. The analysis of the surface itself defines its complexity. The complex granular structure proved to be convenient for observing the deformation of the obstacle due to the action of air weapons projectiles. The tests within the framework of this research were performed on a granular substrate. The next step is to examine the impact on some biological materials, that is, artificial systems made of biological materials (Simović Pavlović, Bokić, Vasiljević & Kolarić, 2022) and analyze the effect in that case. It is also planned to observe the deformation of the substrate in more detail using the triple rec method (Simović Pavlović et al., 2022). In this way, the plan is to monitor and analyze the formation of certain patterns (Pagnacco et al., 2023) due to the impact of projectiles. However, the obtained results open new possibilities for connection of different scientific fields (material science, optics, and non-linear dynamics) with military science.

Originality/Value

In accordance with current events in the world, especially in Serbia, it is very important to take into account all the dangers that different types of weapons bring. The presented research is based on a real simulation of events and analyzed using a scientific approach. The results lead to the conclusion that it would be very useful to consider changes to certain laws related to air weapons. It would also potentially be convenient to introduce a certain system for the selection and possibility of distribution of such weapons in the civilian domain. The systems based on the Decision expert (DEX) method (Jokić, Delibašić & Randjelović, 2021) would probably be appropriate in this case.

It is necessary to take into account many more circumstances during the analysis, which is crucial for making some decisions that may put safety in question. Danger lurks at every moment and it is not enough to make a simple comparison, in the sense of which weapon is less dangerous, but to exclude every possibility of potential danger.

Such a conjugation of scientific fields is very interesting and once again proved that the study of physical phenomena has a direct impact on the world that surrounds us, in this case on our everyday safety.

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INNOVATIVE AND MULTIDISCIPLINARY APPROACHES IN DETECTING BIOLOGICAL AGENTS USING CONTEMPORARY TECHNOLOGIES

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Introduction

Biological agents (BA), encompassing bacteria, viruses, and toxins, pose severe threats to both human and animal health, capable of causing serious illnesses and even fatalities (Janik et al. 2020). Consequently, BA detection holds paramount significance across diverse domains, including public health, food safety, and biodefense, and it assumes critical importance in promptly identifying and mitigating outbreaks, as well as advancing biodefense initiatives (Mir et al., 2022; Zhang et al., 2022).

Although conventional techniques such as Enzyme-Linked Immunosorbent Assay (ELISA), Polymerase Chain Reaction (PCR), and Mass Spectrometry (MS) still find extensive use in a variety of scientific and clinical approaches for the qualitative and quantitative characterization of biomolecules (Grigorov et al., 2023; Drakulić et al., 2013; Popović et al., 2019), these methods face an array of limitations with respect to BA detection. They often involve prolonged durations, necessitate specialized equipment and expertise, and may lack the requisite sensitivity to detect trace amounts of BA, particularly in the context of field-based detection scenarios (Kabiraz et al., 2023).

Consequently, a persistent demand emerges for advanced and multidisciplinary methodologies to enhance BA detection. Efforts are continuously being made to develop detection technologies that overcome the limitations of traditional methods (Janik-Karpinska et al., 2022). The argument for supporting innovative and multidisciplinary approaches, including biosensors, nanotechnology, and genomics, emanates from their potential to overcome the limitations of conventional detection techniques. By fusing perceptions from various fields such as biology, chemistry, physics, and engineering, these approaches have the potential to yield detection technologies with enhanced sensitivity, specificity, and rapidity (Janik-Karpinska et al., 2022; Walper et al., 2018).

Mass Spectrometry Based Methods

Mass spectrometry (MS) is an effective analytical technique used to measure the mass-to-charge (m/z) ratio of ions in a sample and to determine the mass of particles or molecules. It provides information regarding the structure of molecules, their overall atomic mass, molecular fragments, and individual atoms. It is currently a widely exploited tool in molecular biology, enabling the examination of large molecules and their interactions and alterations, organelles and cell lysates, intact cells and cell lines,

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tissues, and even organisms to characterize the protein structure under normal or pathological conditions (Jones, 2020).

The basic principle of MS involves ionizing a sample and subjecting ions to an electric and/or magnetic field to separate them based on their m/z. The resulting data is represented as a mass spectrum, which shows the intensity of ions at different m/z. MS-based methods typically use only microgram (μg) quantities of biological materials for examining diverse proteins, precise identification of protein isoforms, and their post-translational modifications (PTMs) (Kaur et al., 2019). The ultrahigh sensitivity, specificity, and low turnaround time in molecular detection make this technology highly powerful in the detection of a wide spectrum BA, but also in disease detection and therapy monitoring (Banerjee, 2020). The multiplexing capability and applicability for analysing complex samples such as air, water, culture medium, bodily fluids, and food have significant worth for the functionality of MS-based techniques in biothreat scenarios.

The challenges of bringing MS technology into on-site settings are twofold: the technical barriers and the high cost. There are several versions of MS, each designed for particular applications. Over the last two decades, two noteworthy techniques - ambient ionization (Wang et al., 2023) and miniature MS (Rampler et al., 2021) brought significant advancements in addressing the abovementioned challenges and creation viable solution for point-of-care (POC) MS analysis. While ambient ionization methods offer the advantage of direct sampling from the natural environment, eliminating the need for pre-treatment procedures, the miniature MS systems were designed to be compact enough to be used on-site, and simple enough to deliver user-friendly analytical reports understandable to the end users without complex analytical training. By overcoming the technical barriers and cost issues, this integrated approach lays the foundation for more accessible and practical POC MS analysis, enabling quicker and more informed decision-making in on-site settings (Zhou, Zhang & Ouyang, 2022).

One example of a successful practical application of these achievements is portable Membrane Inlet Mass Spectrometric (MIMS) technology presented and tested in 2021 at the U.S. Army Dugway Proving Ground, military testing, and research centre for various types of military equipment, including chemical, biological, radiological, and explosive (CBRE) defence systems. Presented MIMS technology provides a comprehensive strategy for the application of MS technology for Chemical Warfare Agents (CWAs) detection wherein the mass spectrometric aspect allows specificity in fragmentation and precise molecular peak detection, enabling the determination of the chemical structure of any relevant toxic agents. The application of a portable MIMS system displays an effective and consistent performance for qualitative and quantitative detection in both indoor and outdoor scenarios. It can detect and quantify low-mass permeable compounds with parts-per trillion limits of detection and within seconds after the initial exposure time, which represents a significant improvement compared to Fourier Transform Infrared (FTIR) spectroscopy and Lightweight Chemical Detectors (LCD) systems, detection technology currently used by the U.S. government (Virgen et al., 2021).

Mass spectrometry imaging (MSI) is another important innovative method using MS technology to identify BA by visualizing the spatial distribution of molecules, as biomarkers, metabolites, or proteins by their molecular masses. Prevalent ionization technologies in MSI are Desorption Electrospray Ionization (DESI) imaging, Matrix-Assisted Laser Desorption/Ionization (MALDI) imaging, and Secondary Ion Mass Spectrometry (SIMS) imaging (Watrous & Dorrestein, 2011). The principle of these methods is that after acquiring a mass spectrum from a specific location, the sample is repositioned to reach another area, and this process is repeated until the entire sample has been scanned. By choosing a peak in the resultant spectra that corresponds to the compound of interest, the MS data is coupled to record its distribution through the sample, pixel by pixel. Each dataset consists of an array of images

as any peak within the individual spectra can be converted into a spatial map. Although MSI generally represents a qualitative approach, the produced signal is proportional to the substance's relative concentration, thus quantification is also possible.

As single MS struggles with notable limitations in analysing complex microbial cultures, food, and environmental samples, and detecting rare or novel-emerging pathogens a tandem mass spectrometry (MS/MS) was developed to overcome those shortcomings. MS/MS is a two-step procedure for analysing a sample either by using two or more connected mass spectrometers, or a single mass spectrometer by several analysers settled one after another. MS/MS is particularly valuable for analysing complex mixtures and consists of two stages of MS. In the initial stage of MS/MS, a predefined array of m/z ions is sequestered from the rest of the ions coming from the ion source and fragmented by a chemical reaction. In the second stage, mass spectra are generated specifically for these resulting fragments (Büyükköroğlu et al., 2018). Peptide fragments can be analysed for *de novo* peptide sequencing, peptide mass fingerprinting (PMF) (He et al., 2010), or amino acid sequencing of the peptide, succeeded by protein database examination of the resulting fragments (Feist & Hummon, 2015). The identification of the unknown protein can be accomplished by matching the resulting and theoretical peptide masses, using search engines for database search, like Proteome Discoverer, Mascot, X!Tandem (Jayathirtha et al., 2021), ProFound, as well as open-source software tools like MSTracer (Zeng & Ma, 2021) and OpenPepXL (Netz et al., 2020). Moreover, MS/MS is capable of generating sequence information and therefore can significantly improve the specificity for BA detection based on the recognition of unique peptides. For instance, a combined bottom-up and top-down proteomics approach is used, employing a high-resolution/high mass accuracy LTQ-Orbitrap instrument to identify specific markers of *Bacillus anthracis* spores, efficient in discriminating subtle similarities with *Bacillus cereus* biovar anthracis strains CI, CA, and *Bacillus thuringiensis* 9727 (Chenau et al., 2014).

Tandem MS methods can be applied across various domains of biological research, encompassing both fundamental and clinical investigations. These methods are helpful in qualitative and quantitative analysis of proteins and peptides, along with their post-translational modifications (PTMs) and interactions between proteins (PPIs) in a wide range of biological samples allowing the transition from targeted to untargeted proteomic approaches (Neagu et al., 2022). The greatest advantage of tandem MS is its very high specificity, resulting from significantly reduced chemical noise, and generally superior signal-to-noise ratio, compared to single MS.

Generally, there are two MS/MS approaches for the verification of BA: Targeted and Shotgun. Their procedures differ, and the choice between them depends on the experimental goals and the nature of the sample being analysed (Neagu et al., 2022).

The targeted approach uses to screen for the BA from a pre-defined list of pathogens using selected unique marker peptides. This approach is also known as selected reaction monitoring (SRM) or multiple reactions monitoring (MRM). A particular group of precursor ions (also known as parent ions) is selected and isolated during the initial phase of the process. In a second phase, a specific set of fragment ions (referred to as product ions) generated from these precursor ions are monitored. It is employed when one possesses prior knowledge of the expected compounds present in a sample, and the objective is to quantify or identify them with high sensitivity and specificity. This approach is commonly used for quantitative analysis of known BA in complex mixtures.

The shotgun approach intends to generate sequence information for as many peptides as possible and to identify even the unknown or advanced BA. In this approach, also known as data-dependent acquisition (DDA), a broad spectrum of precursor ions is selected from the sample during the initial phase of the process. These precursor ions are usually generated from the entire sample mixture, generating

a complex mixture of fragment ions. Subsequently, the most intense or abundant ions from the mixture are selected for fragmentation in the second stage. This approach is commonly used for identifying a large number of peptides in proteomics experiments, as it provides comprehensive coverage of the peptide content in the sample.

Nucleic Acid-Based Methods

Nucleic acid (deoxyribonucleic acid, DNA and ribonucleic acid, RNA) detection technology refers to the various methods and techniques used to identify and analyse nucleic acids, which are the genetic material found in all living organisms. Nucleic acid detection boasts high sensitivity, specificity, short window periods, and is vital for diagnosing infections, diseases, but also for the detection of pathogens like bacteria, viruses, or toxins - materials with the capacity to be used in biological warfare (Shen et al., 2020).

The process entails several steps that are performed in isolated molecular laboratory zones, connected by designated transfer windows to prevent contamination:

a) Sample preparation – extraction and purification of target nucleic acid is from the cellular components that might interfere with the subsequent steps.
b) Amplification – the process of making multiple copies of the target nucleic acid sequence. The most common method of amplification is PCR which involves repeated cycles of heating and cooling to replicate the target DNA segment. PCR stands as a widely favoured method for detecting pathogens, serves as the gold standard in molecular diagnosis. PCR is very powerful, specific, and sensitive, enabling the exponential amplification of specific DNA or RNA sequences, even when only a few copies are present. Traditionally, PCR is conducted with a small volume of sample (no more than 100 μL), and the reaction is run at temperatures cycled among around 60 °C, 72 °C, and 95 °C. However, conventional PCR machines are complex, sizable, and costly, limiting their use to well-equipped and specialized laboratories and making them unsuitable for point-of-care (POC) detection, particularly in resource-limited settings. Other isothermal amplification methods like LAMP (Loop-Mediated Isothermal Amplification) and NASBA (Nucleic Acid Sequence-Based Amplification) can amplify nucleic acids at a constant temperature without the need for thermal cycling.
c) Detection – third step in which amplified nucleic acid can be detected using various methods including fluorescence, colorimetric, and electrochemical assays. Real-time PCR, for example, monitors the amplification process in real-time by measuring the increase in fluorescence signal.

In the wake of the global COVID-19 outbreak across the world, the intensified demand for nucleic acid detection placed a great pressure on various nations and institutions. To address this issue, companies and scientific research institutions have designed a whole process automated systems for nucleic acid testing. Moreover, in response to the demand for on-site rapid detection, integrated rapid detection devices were also developed.

Automatic Nucleic Acid Detection Systems

According to the established workflow, the automated detection systems can be divided into four modules, each capable of functioning autonomously. These modules are: automated dispensing (cup division), automated nucleic acid extraction, automatic amplification system preparation, and auto-

matic amplification analysis modules. Between modules, materials are transported through a handling device, and each module is coordinated by the master control terminal through the communication bus. To prevent contamination and biosafety risk, each module implements a high-efficiency particulate air filter (HEPA) independently to maintain negative pressure.

The entire procedure, starting from sample preparation to data uploading can be automated, as done in available systems like NeuMoDxTM 288 (Qiagen), Cobas® 6800/8800 (Roche), AutoMolec 3000/1600 (Autobio Diagnostics), and High-protection-level nucleic acid automatic detection system (Cohere). These platforms are entirely automated testing solutions, representing the concept of "input sample, receive result". They can accommodate laboratories with different levels of testing demands, be it low, medium, or high throughput, enabling the simultaneous identification of multiple pathogens (Yuan et al., 2022).

Miniaturized PCR Devices

The emergence of microfluidics, coupled with micro electro-mechanical systems (MEMS) technology, supported the miniaturization of PCR into a compact chip-based process. These innovations brought the potential for ultra-fast speed, reduced expenses, minimal sample usage, portability, high capacity, and automation enabling PCR-based diagnostics to extend their reach to POC applications. For instance, in India, a chip based TrueNAT device using Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) was introduced for POC detection of *Mycobacterium tuberculosis* and diagnosis of pulmonary tuberculosis (PTB) and extra pulmonary tuberculosis (EPTB) (Mangayarkarasi et al., 2019). Their results demonstrated that the sensitivity/specificity of TrueNAT device were 93.1 / 72.5% for the diagnosis of PTB and 96.77 / 76.4% for EPTB, respectively. Additionally, the device has the ability to identify rifampicin resistance, it displays a portability, extended shelf life, cost-effectiveness, and the capacity to operate within a temperature range of 2 °C to 40 °C, which makes it suitable for integration into various detection environments (Mangayarkarasi et al., 2019).

A group of authors from Mexico compared the sensitivity, reproducibility, and convenience of MiniPCR from Amplyus, with a conventional and commercially available PCR thermocycler for the detection and amplification of Ebola and Zika virus samples. MiniPCR can run 8 amplifications in parallel, has dimensions of 20×5×15 cm, and a weight of 0.7 kg. The unit requires 120 V (AC) and 3.5 A to operate, it has its own blueGel electrophoresis unit powered by 120 AC volts, and photo-documentation can be done using a smartphone camera. Results showed that the performance of both thermocyclers is comparable, but that miniPCR's portability, user-friendly design, and reproducibility make MiniPCR a credible for POC nucleic acid detection and amplification (Liu et al., 2014).

Clustered Regularly Interspaced Short Palindromic Repeat (CRISPR)-Based Technology

Clustered Regularly Interspaced Short Palindromic Repeat (CRISPR)-based technologies have emerged as powerful tools for the detection of BA, displaying their innovative and multidisciplinary potential in the realm of biodetection. This revolutionary approach employs the precision of the CRISPR-Cas (CRISPR-associated proteins) system, originally recognized for its genome-editing capabilities, to detect specific biological entities with remarkable accuracy and sensitivity.

The CRISPR-Cas system uses RNA to target a specific DNA sequence, which is then cleaved by the Cas enzyme. This cleavage event can be detected using various methods, such as fluorescence, colorimetry, potentiometry, and lateral flow assay (Kumaran et al., 2023). The versatility of CRISPR-based biodetection extends from DNA to RNA and even proteins, enabling the identification of a wide range of BA, including viruses, bacteria, and specific biomarkers. This adaptability is crucial for combating emerging infectious diseases and monitoring environmental contaminants. Techniques such as lateral flow assays and isothermal amplification have been integrated with CRISPR-based systems to create user-friendly, point-of-care testing devices. Furthermore, the development of smartphone applications and portable devices which can interpret CRISPR-based biodetection made the process more accessible to non-experts. Ma and his team (2022) developed a cutting-edge CRISPR-Cas12a-based visual biosensor, integrated with smartphone technology, designed for the highly sensitive and specific detection of SARS-CoV-2. Basically, this biosensor is activated by the genetic material of SARS-CoV-2, causing the CRISPR-Cas12a system to break down a specific single-stranded DNA that links two gold nanoparticles, inducing the disaggregation of nanoparticles and thus producing colour changes that can be easily distinguished by the naked eye or through a smartphone with a Color Picker App. The proposed biosensor was successfully applied to detect SARS-CoV-2 gene in synthetic vectors, transcribed RNA and SARS-CoV-2 pseudo viruses. This biosensor achieved a remarkable "single copy resolution" with a detection limit of 1 copy per microliter for pseudo viruses, no false-positive results and it provided 100% agreement with qPCR results. The entire process, from sample collection to obtaining results, takes approximately 90 minutes (Ma et al., 2022).

In addition to its diagnostic applications, CRISPR-based biodetection plays a pivotal role in biosurveillance and biosecurity. Its ability to provide rapid, specific, and sensitive results makes it an indispensable tool for monitoring biothreats, ensuring food safety, and safeguarding public health. CRISPR, also, enables scientists to conduct larger, faster, and more comprehensive experiments to better understand the key characteristics of pathogens. Moreover, CRISPR streamlines the creation of precise animal models for studying novel diseases, expediting the research process.

Numerous experts and organizations advocate for the seamless integration of life science and biotechnological advancements like CRISPR into both national and international initiatives aimed at strengthening pandemic preparedness and response mechanisms (Watters et al., 2021).

Biosensors

Biosensors, integrated analytical tools, combine biological recognition units with transducers to detect and quantify BA through characteristic interactions with target molecules. Biosensor architecture typically encompasses the biological recognition element, transducer, signal processing unit, and readout system.

Enzymes, antibodies, nucleic acids, hormones, organelles, or whole cells can serve as biological recognition elements. Upon contact with the target analyte which might be affinity-based, catalytic, or linked to metabolic processes, these elements generate a response, an analytically measurable signal, translating the biological event into an electrical or optical output. The signal processing unit amplifies, filters, and converts the raw signal into a format suitable for analysis. The readout system finally presents the results to the user (Metkar & Girigoswami, 2019; Singh et al., 2021).

The first major difficulty in the development of biosensors is the efficient capturing of biorecognition signals and their transduction into different forms like electrochemical, electrical, optical, gravimetric,

or acoustic signals. Secondly, improving the performance of the transducers is a significant challenge. This involves boosting sensitivity, reducing response times, ensuring reproducibility, and achieving low detection limits, to the extent of identifying individual molecules. Lastly, there is the goal of downsizing biosensing devices through the utilization of micro- and nano-fabrication technologies. Advancements in nanomaterials significantly contributed to overcoming these challenges and impacted biosensor performance. Nanomaterials such as nanoparticles, nanotubes, and nanowires have unique properties that amplify the biosensor's ability to detect BA. They offer a larger surface area for biomolecule immobilization, enhancing sensitivity and enabling the detection of BA at lower concentrations. Furthermore, nanomaterials can be engineered to provide a favourable microenvironment for immobilized biomolecules, improving their stability and specificity (Naresh & Lee, 2021). In their recent study, Ziółkowski et al. (2020) introduced a novel, completely portable test for the detection of a specific gene fragment called pagA in the *Bacillus anthracis*. This gene fragment is associated with the anthrax toxin translocating protein. The instrument uses graphene oxide nanoflakes to interact with the pagA fragments, causing them to produce a fluorescent signal upon binding. The process uses a fluorometric-paired-emitter-detector-diode and the entire procedure is completed in 2 minutes. What adds to the practicality of this method is that it relies on readily available components like LEDs, PCR tubes, multimeters, and 2.5V batteries. The instrument's sensitivity of 0.625 μM is better than that of spectrofluorophotometers but still lower than conventional PCR product detection methods. The combination of efficiency, cost-effectiveness, and portability of this test makes it an excellent candidate for use in biosafety facilities, environmental, and emergency testing (Ziółkowski et al., 2020).

An inherent advantage of biosensors is their ability to offer real-time monitoring. This is especially critical in applications such as environmental monitoring and medical diagnostics. Enabling quick and precise detection of BA, biosensors have been pivotal in outbreak detection and control. An illustrative example is an acetylcholinesterase (AChE) inhibition biosensor, based on the inhibition of AchE's catalytic activity through interaction with the targeted agent. Once immobilized onto an electrode surface, AchE enzyme triggers the breakdown of acetylthiocholine chloride (ATCl), eventually producing a detectable electroactive byproduct thiocholine (TCh) which serves as an indicator for the presence of pesticides (Zhang et al., 2015).

Biosensor platforms have also integrated microfluidic systems to enhance detection capabilities. Microfluidics enables precise control over sample volumes, reducing detection time and reagent consumption. This technology, when combined with biosensors, enhances portability and it is easy to use. Lab-on-a-chip biosensors are emerging, allowing multiple tests to be conducted simultaneously on a single device (Fu et al., 2021).

Paper-Based Biosensors for Field Testing

Paper-based biosensors offer a sophisticated yet accessible solution for rapid, on-site detection of BA and toxins. These devices employ patterned paper strips that are impregnated with specific biochemical agents, such as antibodies or aptamers that selectively react with target molecules. When a sample is applied to the paper, it interacts with the immobilized agents, leading to visible colour changes or other detectable signals. For warfare and emergency response, paper-based biosensors provide a rapid and cost-effective means of assessing the presence of hazardous substances. They are particularly useful in resource-limited settings where sophisticated laboratory equipment is unavailable. Their simplicity, portability, and ability to provide results without the need for specialized training make them valuable tools for on-the-ground assessment and decision-making (Singh et al., 2018).

Due to their simplicity, cost-effectiveness, and portability, paper-based biosensors have gained substantial attention in recent years. These biosensors are classified into three main categories: dipstick tests, lateral flow assays (LFAs), and microfluidic biosensors on microfluidic paper-based analytical devices (μPADs).

Dipstick, also known as test strips or test cards, involves the usage of specially designed paper strips containing chemical reagents which once immersed into a sample, changes colour based on the presence of specific substances or BA. Dipstick tests are commonly used in various fields, including clinical diagnostics, environmental monitoring, and food safety.

LFAs are a more advanced form of paper-based biosensors that have gained widespread use. LFAs operate on the principle of capillary action, where the sample flows through the paper channels by capillary forces. LFAs consist of a sample pad, conjugate pad, nitrocellulose membrane, and absorbent pad. The sample pad is where the sample is applied, and the conjugate pad contains labelled detection reagents. As the sample flows through the membrane, it interacts with immobilized capture molecules, leading to the formation of a visible test line. LFAs are extensively used for rapid point-of-care diagnostics, such as pregnancy tests and infectious disease detection. For the detection of bioterrorism-relevant agents, lateral flow strips are suitable for the measurement of *Bacillus anthracis*, *Francisella tularensis*, *Brucella sp*., *Yersinia pestis*, staphylococcal enterotoxin B, botulinum toxin, and orthopox viruses. The strips are made for one, five, or eight BA contemporary measurable in one step. Two USA manufacturers - Advnt Biotechnologies x and Alexeter Technologies are active in this area (Pohanka, 2019).

Microfluidic biosensors on μPADs combine the advantages of microfluidics and paper-based devices. These biosensors incorporate intricate paper-based microfluidic structures to control and manipulate small volumes of fluids. μPADs can perform complex assays, including multiplexed analyses and sample pre-concentration. The channels and reservoirs on μPADs can be designed to facilitate sequential fluid flow, enabling multi-step assays. They offer increased sensitivity, reduced sample and reagent consumption, and improved analytical performance compared to traditional paper-based biosensors (Kuswandi & Ensafi, 2020). Recent developments in electrogenerated chemiluminescence paper-based microfluidic analytical devices include the use of 3D-origami devices and devices utilizing self-powered and bipolar electrodes. These advancements offer the potential for rapid and accurate point-of-care testing, enabling early and effective diagnosis and treatment (Chinnadayyala et al., 2019).

Advanced Imaging and Spectroscopic Techniques

Advanced imaging techniques play a pivotal role in the accurate identification and characterization of BA, offering intricate insights into their structural and functional features. Commonly used are fluorescence-based imaging which leverages fluorescent labels to visualize agents' presence, hyperspectral imaging which analyses spectral data for accurate identification, and terahertz (THz) spectroscopy which probes molecular vibrations for non-invasive detection. These cutting-edge approaches offer precise, rapid, and non-destructive means of identifying BA in various scenarios, from research laboratories to security applications.

Fluorescence-based imaging is a powerful method that exploits the inherent fluorescence properties of certain BA. In this procedure, specific molecules are tagged with fluorescent labels, which enable visualization of their presence. After exposure to light of a particular wavelength, these labelled molecules emit light of different wavelengths, which can be detected and analysed. Fluorescence-based im-

aging is broadly used to identify different pathogens, viruses, and biomolecules in complex samples. Recent innovations include the development of high-resolution fluorescence microscopes and novel fluorescent probes that can enhance sensitivity and enable simultaneous identification of multiple agents (Etrych, Janoušková & Chytil, 2019).

Hyperspectral imaging implicates capturing images at numerous narrow and contiguous wavelengths across the electromagnetic spectrum. This results in a hyperspectral cube containing spectral and spatial information for each pixel in the image. In the context of BA detection, hyperspectral imaging can distinguish different agents based on their unique spectral signatures (Manganiello et al., 2021). This technology is particularly useful when dealing with mixed samples, where multiple agents might be present. By analysing the spectral data, algorithms can differentiate between BA, pollutants, and other materials, thus enabling accurate identification.

THz spectroscopy is an emerging imaging technique that utilizes electromagnetic waves in the THz frequency range, falling between microwaves and infrared radiation. It enables the detection of bacterial cells based on their specific spectral characteristics as a result of the interactions between THz radiation and the low-frequency molecular motions of the cellular components of bacteria. The photon energy of THz radiation is comparable with the excitation energy of the rotational transitions in molecules; thus, THz spectroscopy contains information such as molecular vibration and rotation - the fingerprint characteristic of THz spectroscopy owing to which it can be applied to substance detection and recognition (Yang et al., 2016). THz spectroscopy is also characterized by good biosafety. Unlike the X-rays, THz waves have very low photon energy (4 meV at 1 THz) and are non-ionizing, so besides providing valuable information about the composition and structure of BA, they do not cause damage to biological samples. THz waves can penetrate general dielectric materials including plastics, clothing, and ceramics, which makes them suitable for non-invasive screening of individuals and objects and, thanks to which THz spectroscopy has the potential to enhance security screenings at airports, border crossings, and other critical checkpoints (Fu et al., 2022).

Among the important spectroscopy technologies that needed to be mentioned as powerful tools in the detection and identification of BA are also Raman spectroscopy, Surface-Enhanced Raman Spectroscopy (SERS), Tip-Enhanced Raman Spectroscopy (TERS), and Mid-Infrared (Mid-IR) spectroscopy. When combined with biomarkers, these technologies offer unparalleled sensitivity and specificity, making them indispensable in safeguarding against biowarfare threats.

Raman spectroscopy is non-invasive detecting method which operates on the principle of inelastic light scattering, where incident photons interact with molecular vibrations within the sample. This interaction generates a Raman spectrum that provides valuable information about the composition and structure of BA. By analysing specific vibrational modes in the Raman spectra, it is possible to identify and characterize various biomolecules, such as proteins, DNA, and specific markers associated with biological threats (Oshima et al., 2023).

In the study of Pahlow et al. (2023) they introduced a functionalized magnetic bead-based sample preparation method for the purpose of distinguishing positive and negative samples using Raman spectroscopy. They used the ACE2 (Angiotensin Converting Enzyme 2) receptor protein, as a recognition element, allowing the selective capture of SARS-CoV-2. Subtle differences in the Raman spectra for SARS-CoV-2, Influenza A H1N1 virus and negative control were detected using correlation coefficients, specifically the Pearson and Normalized cross correlation coefficients. Thus, this method offers a promising initial step toward the use of conventional Raman spectroscopy for the detection and classification of various viruses by simply changing the recognition element, thereby improving its user-friendliness and reproducibility (Pahlow et al., 2023).

SERS takes this a step further by enhancing the Raman signal through nanostructured surfaces, thereby increasing sensitivity to trace amounts of biomolecules. SERS analysis encompasses two distinctive approaches: label-free and labelled methods. In the label-free SERS technique, bacteria are directly attached to either a solid SERS substrate or an active SERS nanoparticle substrate in a solution. Conversely, the labelled SERS method involves the attachment of a Raman reporter to the surfaces of plasmon resonance silver (Ag) or gold (Au) nanoparticles, followed by a subsequent modification with specific antibodies or aptamers of BA as recognition molecules to generate SERS tags that produce enhanced Raman signals (Zheng et al., 2018).

Recently, a novel SERS-based aptasensor, linking Au nanopopcorn as the substrate and a spike protein DNA aptamer as the receptor, has demonstrated superior sensitivity and specificity in SARS-CoV-2 detection, achieving a detection limit of less than 10 pfu/mL within just 15 minutes (Chen et al., 2021), in contrast to NAAT (Nucleic Acid Amplification Test) or serological tests which require at least 30 minutes. In addition, SERS can detect both live and dead SARS-CoV-2 viruses at any phase of infection, while NAAT and serological tests are most suited for pre-infection and post-infection, respectively.

TERS system is based on metallic tip, typically composed of Au or Ag, to concentrate the incident light field at its apex. The tip serves as a nano-scale light source and local field amplifier, significantly enhancing Raman sensitivity by factor of 10^3 - 10^7. It also minimizes the probed volume to the "nano" region immediately below the tip (Chen et al., 2019). TERS has been effectively used to detect various BA, including bacteria, viruses, and toxins. Dou et al. (2020) presented an innovative diagnostic method for the label-free identification and structural analysis of individual viruses which combines nanoscale Raman and infrared spectroscopy techniques. By employing atomic force microscopy-infrared (AFM-IR) spectroscopy, the researchers successfully examined the structural organization of the virions of Herpes Simplex Type 1 viruses and bacteriophage MS2. Additionally, authors showed that TERS could be used for revealing the protein secondary structure and amino acid composition of the virus's surface. The results showed that AFM-IR and TERS offer different yet complementary insights into the structure of complex biological specimens. The authors also noted that this structural data can be used for fast and reliable identification of viruses, as well as for investigating the origin of viral polymorphism and study mechanisms of virion assembly (Dou et al., 2020).

Mid-IR spectroscopy is based on the principle that different molecules have distinct vibrational modes, resulting in unique absorption spectra in the Mid-IR region (4000–400 cm^{-1}). Absorptions in midIR spectroscopy are linked to the fundamental vibrations of chemical bonds within molecules. When a molecule interacts with midIR light, its chemical bonds vibrate more vigorously, causing changes in molecular vibration and rotation. MidIR spectra typically display multiple absorption peaks, which are categorized into four main regions: X–H stretching (4000–2500 cm−1), triple bonds (2500–2000 cm−1), double bonds (2000–1500 cm−1), and the fingerprint region (1500–600 cm−1). The fingerprint region is a complex area with numerous bands that reveal specific molecular structural details, often overlapping. Moreover, valuable quantitative data can be extracted from mid-IR spectra by measuring the absorbance (band height or, more precisely, band area), which is proportional to the number of functional groups, following Lambert–Beer's law (Türker-Kaya & Huck, 2017). By identifying biomarkers that are specific for given BA, researchers can also create a spectral fingerprint that allows its precise identification. The success of Mid-IR in detecting BA depends on the careful selection of biomarkers - specific molecular components or functional groups that are characteristic of the agent of interest. For biowarfare detection, biomarkers could include proteins, nucleic acids, or lipids unique to the target organism. The obtained Mid-IR spectra are then subjected to rigorous data analysis techniques, often involving pattern recognition and machine learning. By comparing the sample's spectral

data to a database of known biomarker signatures, the presence of a specific BA can be confirmed (Farrugia et al., 2023). This targeted approach not only improves sensitivity but also minimizes false positives. Another great advantage of Mid-IR combined with biomarkers is its usefulness for real-time monitoring. This is particularly important in biowarfare scenarios where quick and accurate identification is crucial for response and containment efforts.

Combining two standoff technologies, Laser-Induced Fluorescence (LIF) and Light Detection and Ranging (LIDAR), enables a robust and complementary approach to enhance the accuracy and reliability of BA detection. The identification and classification of microorganisms is based upon fluorescence properties of specific biomolecules within subcellular structures (fluorophores) when exposed to appropriate wavelengths of light. LIF-LiDAR system employs a laser source emitting light of specific excitation wavelengths toward an object, such as bioaerosols. A receiving system collects and amplifies signals, including scattered light and fluorescence, from the target which are visualized using data acquisition platform (Owoicho, Olwal & Quaye, 2021).

The integration of LIF and LIDAR technologies in biosecurity demonstrates a significant improvement in our capacity to detect and respond to biological threats. These methods are not only non-invasive but also offer several advantages over traditional detection methods, including the ability to detect and identify BA from a safe distance, minimizing the risk to personnel and the environment. Additionally, the superiority of remote techniques compared to point detectors results from the possibility to survey large territories, up to tens of kilometres, with a fine spatial resolution of several meters, and without the need to physically approach the target (Kwaśny et al., 2023). Currently, extensive defence research has been undertaken worldwide to develop LIF-LIDAR technology for remote detection of BA attack (Li, Huang & Sun, 2019).

Artificial Intelligence

The rapid progress in artificial intelligence (AI) and robotics has expanded possibilities for strengthening bioterrorism response strategies. In an ever-evolving bioterrorism landscape, it remains imperative to leverage state-of-the-art technologies to stay ahead of potential attacks and minimize their impact on public health and safety. AI-driven technologies have the potential to revolutionize the field of bioterrorism response by enhancing not only detection, but also prevention, and mitigation strategies.

AI-powered technologies hold considerable promise in bioterrorism response, particularly in the early detection of biological threats. These algorithms adeptly analyse extensive data to unveil patterns and anomalies indicative of the presence of biological risk. For instance, machine learning algorithms can analyse data from environmental sensors, social media sources, and medical records to identify uncommon disease outbreaks or symptoms that may herald a bioterrorism event.

Group of authors (Jo et al., 2017) presented an optical method for fast and label-free screening of *Bacillus anthracis* spores using the combined application of holographic microscopy and deep learning (a state-of-the-art machine learning technique based on deep multilayered neural networks). These authors designed a deep convolutional neural network, HoloConvNet, capable of classification of holographic images of living cells. After training with quantitative phase images of single *Bacillus anthracis*, the network identified new anthrax spores with single-spore sensitivity and subgenus distinctiveness. Its outstanding learning ability enables direct training from raw images by automatically recognizing key biological characteristics encoded in the images (for example, dry mass in the anthrax problem), and presents exceptional accuracy that exceeds previous approaches in all accuracy

measures. Moreover, in addition to *Bacillus anthracis*, this method is applicable to the classification of various single cells without any modification, as the authors demonstrated for the diagnosis of *Listeria monocytogenes*.

Beyond mere detection, AI-driven tools are also poised to contribute to the prevention of bioterrorist acts. AI-powered surveillance systems can monitor high-risk areas such as transportation hubs, public spaces, and critical infrastructure, deploying sophisticated sensors and cameras capable of real-time identification of hazardous BA. Through analysing the accumulated data, AI algorithms can identify potential threats and promptly alert authorities for proactive measures.

In the unfortunate cases of a bioterrorism incident, AI technologies stand primed to mitigate its consequences and expedite response efforts. AI algorithms can model the dispersion dynamics of a BA, thereby aiding authorities in making informed choices pertaining to quarantine protocols, distribution of medical resources, and calibrated public communication. Furthermore, AI-powered robotics can assist in decontamination activities, mitigating risk exposure for first responders and expediting recovery procedures.

An interesting example illustrating the comprehensive role of AI in biological warfare is presented in the work of Su et al. (2021) who examined the potential role of information technologies in preventing and mitigating Biodisaster X. Term "Biodisaster X" is defined as disasters caused by the accidental or intentional misuse of biotechnologies by state or nonstate actors. The primary objective of investigation was to identify: 1) the possible risks Biodisaster X poses to the entire society; 2) solutions employing emerging 6G and AI technologies to help surveillance and manage Biodisaster X risks (6G technologies are the next generation of wireless communication systems following 5G networks) (Su et al., 2021).

Investigation findings showed that Biodisaster X has the potential to destroy economies, lives, and livelihoods, displaying an approaching risk for civilizations on a global scale. To uncover the risks associated with Biodisaster X, authors presented effective AI and 6G-based strategies ranging from natural language processing to deep learning-based image analysis to manage challenges that include early Biodisaster X detection (for example, identification of suspicious behaviours), remote design and development of pharmaceuticals, public health interventions (for example, reactive shelter-at-home mandate enforcement), along with disaster recovery (for example, sentiment analysis of social media posts to clarify the public's feelings and readiness for recovery building) (Su et al., 2021).

The study conclusively demonstrated that for the mitigation and management of Biodisaster X hazards, it may be more economically efficient and operationally feasible to implement technology-based solutions, rather than relying exclusively upon the strained capacity of healthcare practitioners and governmental authorities.

Conclusion

The present study underscores the pivotal role of innovative and multidisciplinary strategies in revolutionizing the detection of BA through the exploitation of contemporary technologies. Current MS-based, nucleic acid-based, and advanced imaging techniques have demonstrated remarkable proficiency in enhancing the sensitivity, specificity, and rapidity of detection processes. Moreover, the integration of AI algorithms empowers real-time data analysis, pattern recognition, and predictive modelling, contributing to the robustness of the detection process. As technology continues to evolve,

the continued exploration, refinement, and integration of these contemporary technologies hold great promise to transform biosensing, biosecurity, and public health surveillance on a global scale.

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EVIDENCE-BASED POLICING IN SERBIA – EVALUATING DETERRENT EFFECTS OF FOOT PATROL IN ONE HOT SPOT OF CRIME

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Introduction

Crime tends to concentrate in space and time (Weisburd, 2015). Accordingly, police try to focus their resources. This kind of place-based approach is called hot spot policing (HSP), which focuses on hot spots of crime. Reiss (1985) defined a hot spot as a small cluster of addresses with frequent "hard" crime calls (such as burglary, shootings, thefts, assaults, rapes) and/or "soft" crime calls (break-in alarms, disturbances, noise, vandalism, fights, petty thefts, etc.). Policing the crime hot spots has been criticised as uninfluential to crime levels, for crime dispersion in the nearby areas, and unjust towards particular groups or disadvantaged neighbourhoods. However, police patrolling and, thus, HSP still present one of the major strategies of policing where much of the resources have been deployed.

The pioneering study of police patrolling was the experiment in Kansas City by Kelling et al. (1974). It found no difference between proactive, reactive, and controlled areas. However, studies later discovered the positive effects of patrolling high-crime areas. Sherman and Weisburd (1995) have found a reduction of calls for service from 6 to 13 per cent due to the policing of 110 hot spots in Minneapolis (USA). Afterwards, many studies evaluated HSP, some of which found significant crime reductions: England (Basford, Sims, Agar, Harinam & Strang, 2021; Bland, Leggetter, Cestaro & Sebire, 2021), USA (Caplan, Kennedy, Drawve & Baughman, 2021; Ratcliffe, Taniguchi, Groff & Wood, 2011; Weisburd, Telep, Vovak, Zastrow, Braga, Turchan and Rosenfeld, 2022), Canada (Andresen and Malleson, 2014), Sweden (Gerell, 2016), Australia (Barnes, et al., 2020). Besides, it has been found that police presence in high-crime areas benefits their neighbourhoods (Bowers, et al., 2011; Braga, Papachristos and Hureau, 2012).

A significant part of crime prevention comes from the preventive patrolling of the police, which should deter those who may act unlawfully. Since crime tends to concentrate in space and time (Weisburd, 2015), it is expected that police follow this rule. However, this may not always be the case, and everyday police activities such as patrolling may rely on past experiences and instincts. On the other hand, evidence-based policing is a principle which considers a scientific approach. Sherman (2013) defines it as a decision-making method about "what works" in policing, meaning which practices and strategies accomplish police missions most cost-effectively. It contrasts the decision-making process based on assumptions, traditions, conventions, or theory because it allows continuous impact assessment of the policing using empirical research findings (Sherman, 2013).

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Purpose

Considering the above, this study has two main objectives. The first one is to promote evidence-based policing and thus improve policing in general. By adopting practices of evaluation and continuous impact assessment using scientific principles, employment of resources should be enhanced (e.g., cost-benefit analysis), crime reduction should be achieved, police relations with the public should be improved, and job satisfaction among police officers should be higher. Therefore, current research evaluates the effects of a foot patrol in one crime hot spot to promote further studies in the field and adoption of these practices by police management in long-term strategic plans and short-term or everyday activities and scheduling.

Secondly, this study aims to evaluate the effects of foot patrol on crime in one hot spot. As discussed, previous research has shown that police presence deters from committing a crime and reduces crime levels in space and time. However, it has mostly been done in the West (USA, United Kingdom, Australia, and Western Europe), and there seems to be a lack of similar evaluations in the Balkan region. Furthermore, different contexts in Southeastern Europe, considering culture, socioeconomic conditions, urbanism, policing and police-citizen relations, may provide different outcomes of hot spot policing.

Hypotheses for the research were developed considering previous evidence. Firstly, this study will test the deterrent effects of police presence on street visible crimes and disorder. Secondly, it will test if the patrol presence results in a residual crime effect considering the time after the patrol was in the hot spot. Sherman (2022c) proposes that hot spot policing has cumulative and residual deterrence effects on crime. Cumulative deterrence has been found by Bland et al. (2021) when the fifteen minutes per day patrol reduced public place violent crime for each additional consecutive day, with the largest differences after the third day. However, the current study's design and available data from police practices did not provide enough information to investigate this hypothesis. Instead, it has been tested to see if patrol presence in a hot spot has had any residual effects on crime for the rest of the day.

Considering the context-specific characteristics and policing in Serbia, the research questions (RQ) this study could answer were formulated as follows:

RQ 1: How does police presence in a hot spot of crime and call for service influence their levels (by reducing or increasing registered incidents)?

RQ 2: Does the police presence in a hot spot of crime and call for service have a residual effect in time (has deterrence been achieved in some time after the foot patrol)?

The research questions have been answered through the evaluation of foot patrolling in one hot spot of crime in an urban city area for three months. Crime levels have been examined by considering all recorded incidents by the police and dividing them into violence and public order incidents on the one hand and property-related incidents on the other.

General Crime Deterrent Effects of Hot Spot Policing

The objective of preventive patrolling is to deter those who would behave unlawfully or delinquently from doing so. Preventive patrolling is thus mostly performed by police visibility in public, where and when those who consider doing some criminal or delinquent acts would be deterred. This kind of policing aims to be visible to potential criminals or delinquents, which is mainly achieved by police uniforms and marked police vehicles. Thus, foot patrols or vehicle patrols may perform patrolling, and it

is assumed that both would result in crime prevention benefits. According to the knowledge of crime concentration in space (see Law on Crime Concentration in Weisburd, 2015), preventive patrolling is thus focused on high-crime areas or risky places at specific times.

In the systematic review by Braga et al. (2019), it is found that 62 of the 78 hot spot policing studies reported noteworthy crime and disorder reductions. This review also found crime prevention benefits to surrounding areas when accounting for displacement and diffusion effects of hot spot policing. The recent systematic review on the effectiveness of police presence (Dau, Vandeviver, Dewinter, Witlox & Vander Beken, 2023) finds that it mainly reduces motor theft, property, violence, and gun crimes. Moreover, findings derived from 49 studies showed that it reduces calls for service and improves traffic behaviour. However, evidence on the effects of hot spot policing has not always been so straightforward.

The Kansas City Experiment, published by the American Police Foundation (Kelling, Pate, Dieckman, and Brown, 1974), conducted during one-year period 1972–1973, with settling "reactive" patrol areas which received police only after a call for assistance, proactive patrol with increased police visibility and control patrol areas with a normal level of patrolling maintained. Analysis revealed that three areas experienced no significant differences in the level of crime, followed by citizens' attitudes toward police services, citizens' fear of crime, police response time, or citizens' satisfaction with police response time. Although Kelling et al. (1974) did not call for less policing but for better allocation of resources, further research and implementation of proactive policing within high-crime areas have mostly been discouraged by this research.

The results of the Kansas City Experiment have been contested by later studies of hot spots and geographically focused initiatives in policing. Sherman and Weisburd (1995) criticised the Kansas City Experiment for the design's substantial statistical, measurement, and conceptual problems. Sherman and Weisburd (1995), building on previous research findings that crime concentrates in a few places, proposed that patrolling should also be focused on small areas, not diluted to larger patrol beats. They conducted a randomised controlled trial in 110 crime hot spots in Minneapolis, reducing calls for service from 6 to 13 per cent and positively affecting a disorder. Afterwards, many randomised controlled trials found positive effects of police presence on crime reduction (see studies in Braga, Papachristos, and Hureau, 2012).

A few studies on foot patrols confirmed their efficiency in crime and disorder reduction. One of the most influential, the foot patrol experiment in Philadelphia (Ratcliffe et al., 2011), found a significant reduction of violence due to targeted patrols in treatment areas. In recent trials, foot patrol experiments in England reduced violence (Basford et al., 2021; Bland et al., 2021). In Vancouver (Canada), Andresen and Malleson (2014) have also found a decrease in criminal activities in areas where foot patrols have been conducted. Alternative to foot patrolling wider areas, focused patrol visits to businesses identified as hot spots (crime attractors and generators) reduced violence by more than 20% in the USA (Caplan et al., 2021).

Evidence supports the crime reduction effects of foot patrols even in the neighbouring areas and the lack of crime displacement. A systematic review found that geographically focused policing initiatives were associated with significant reductions in crime and disorder in targeted and nearby areas (Bowers et al., 2011). Therefore, critics that hot spot policing has a dispersive crime effect, that it makes crimes "just move around the corner", have been contested.

Although much of the recent research finds that hot spot policing has been effective in crime prevention, one study finds that this may not be so straightforward in unusual circumstances such as COVID-19

pandemics or the post-George Floyd murder atmosphere in the USA (Taylor et al., 2022). Therefore, specific tactics for policing hot spots and high crime areas should be further studied and developed.

Recent studies have also found that hot spot policing strategies may improve citizens' safety and perceptions towards the police. For example, in a multicity randomised trial in the USA, police officers received procedural justice training (Weisburd et al., 2022). This led to increased knowledge about procedural justice and more procedurally just behaviour by the officers on the field. Alongside, these police officers made fewer arrests, and residents of those areas where they patrolled were significantly less likely to perceive police as harassing or using unnecessary force. This study has also found a reduction of 14% in crime incidents in the hot spots where patrolled assigned police officers who received procedural justice training (Weisburd et al., 2022). Therefore, criticism of hot spot policing and other geographically focused strategies (on places, neighbourhoods, etc.) may be contested by developing practices that secure equal justice and community- or citizen-oriented services according to their needs. However, the current study was limited in the resources to include aspects of citizen perceptions of policing in the hot spot.

Spatio-Temporal Crime Analyses in Serbia and a Necessity for Evidence-Based Policing

Although crime mapping and spatiotemporal analyses of crime have been rare in Serbia and the region, some studies still use geographical approaches to crime. Milić (2015) geocoded armed robberies recorded by one police station in Belgrade and analysed their density according to the security sectors – geographical areas determined by the Serbian police as significant unities due to which police resources should be assigned. He found that one-third of the robberies were concentrated in one out of twelve security sectors and proposed further analysis to investigate if the human resources were allocated according to this distribution. Milić (p. 111, 2015) also found that only three of 156 locations were responsible for 13% of crimes and identified "top 6" locations (three sporting bets, one post office, one bank, and a casino) for resource allocation as a problem-oriented approach that should lead to a crime reduction of 23%. In 2019, Milojković and Petrović mapped armed robberies in Zrenjanin from 2008 to 2019, distinguishing three hot spots and identifying their characteristics, such as the weekday and hour of occurrence, or victimisation of persons and targeting businesses.

Besides studies on hot spots of crime, there have been some studies on the spatial distribution of crime. Baić and Kolarević (2015) analysed the whole territory of Serbia for the criminal offence of rape from 2006 to 2012. They found some differences in the spatial distribution among the regions. However, rates of rapes per 100,000 population were equally distributed to these regions. On the other hand, they found that most rapes were committed in the summer, during the mid-week, from 6 PM to 12 PM. Considering the spatial distribution of crime on a lower level, Stanković (2022) confirmed that crime in Serbian urban city area (Niš) has been concentrated at levels similar to those found in the rest of Europe and worldwide (Andresen & Malleson, 2011; Vandeviver & Steenbeek, 2019; Weisburd, 2015). This study found that, depending on the level of analysis (grid cells of 100x100, 500x500, and 1000x1000 metres), 50 per cent of both property and violent crime have been committed in approximately 0.3 (100x100m) to 8.9 (1000x1000m) per cent of all cells. Using the Spatial point pattern test, it has been found that spatial patterns have been stable throughout the study period – during 2008, 2013, and 2018 (Stanković, 2022).

Some studies have identified hot spots of crime, spatial distribution, and crime concentration in Serbia. However, no research in the region seems to evaluate the effects of the geographically focused initiatives

of policing micro places such as hot spots. Furthermore, the effects of policing, in general, have been an understudied topic, and bringing an evidence-based approach to practical policing work would close this gap. Only by adopting evidence-based approaches and bringing science into practice could we know if policing works and how it works. This should be applied to every aspect of it: in creating crime prevention strategies, conducting crime investigations, or dealing with traffic issues. It could be applied in day-to-day work (to evaluate patrolling, as in the current study) or on a longer scale (for example, to evaluate if a training in domestic violence for police officers has contributed to their practices).

Design and Methods

Data

This study uses data on crime and disorder incidents recorded by the police (mostly called in literature as *calls for service*) at the permanent hot spot of crime in an urban city area in Serbia (hereafter hot spot).[2] Besides these incidents, the data includes dates and times of police foot patrols conducted in this hot spot. The area is partly residential but mostly business, consisting of a central bus station, shops and stores, and an open market. In addition, on the edges is a tourist attraction and promenade, all in a range of less than half of the square kilometre. Since police managers have recognised this area as a permanent hot spot of crime and disorder in recent decades, shift-length foot patrols have been assigned accordingly.

Foot patrolling in a hot spot comprises general police duties: prevention-oriented activities such as high visibility, communication with the citizens and gathering intelligence information, responding to calls and reported events, or proactivity such as stop and search. Usually, a police officer would spend the whole shift in the hot spot, except when they would be deployed from the hot spot to some other tasks due to the lack of human resources.[3] In the hot spot area, they move from one spot to another by visiting the open market, bus station, or businesses and making their visibility on the street. They were unaware of this study evaluation because the research started afterwards, so it could not influence their working routine and results. Shift-length foot patrol is usually 8 hours long. About five to six hours would be spent in the hot spot, while the rest is spent in the office doing administrative work if not deployed on other tasks.

In addition to the spatial concentration of crime and disorder incidents, there are some temporal considerations. Most of the incidents happen in the first part of the day, when the area is crowded by the open market, shop customers, and bus passengers. These would include property-related offences, like pickpocketing, thefts or frauds, and violent incidents, like assaults or fights, as well as public order violations. However, some incidents have been reported in later hours since the area includes a few casinos and, at the edges, a few bars and a park. In addition, a socio-economically disadvantaged residential area is nearby, and residents come to a hot spot for shopping, business, or leisure. Therefore, except for the ambient population (temporal residents), permanent residents have often been involved in the incidents. For these reasons, it has been valuable to consider foot patrol influence at any time of the day.

2 Further information is undisclosed for data confidentiality reasons of the police organization. The information on the data is available for sharing upon a reasonable request.

3 Information on these cases has not been available. However, even if during some of the foot patrol days, officers have been deployed to other tasks, they would usually have spent at least some time in the hot spot. Even if other tasks would take a few hours, a foot patrol shift at the hot spot lasts 8 hours. Therefore, it has been hypothesised that even if police officers have been assigned to some other tasks, they have spent at least some time of the day in the hot spot, doing initial crime prevention tasks.

Organisational resources usually do not allow police managers to assign officers for 24 hours a day in this hot spot.[4] Most commonly, one police officer would do a foot patrol shift in the first part of the day, from 7 a.m. to 3 p.m.. This is the time of the day when open market and retail stores are open; thus, the ambient population and mobility in the area are high. It can be during both working days or weekends because mobility is sometimes heightened during the weekend days when people used to shop or travel. Criminological research also suggests that this time of the day is the most common for criminal offending. For example, Sherman and Weisburd (1995) have found that around 50 per cent of all crime calls were between 7 a.m. and 3 p.m. Other examples of the foot patrol shift may be from 10 a.m. to 6 p.m. or 12-8 p.m. if some afternoon events in the area attract the attention of the police (e.g., public gatherings). The period for the analysis was three months in 2022: August, September, and October.

Analytical Strategy

The data was collected in Microsoft Excel and analysed using statistical and geographical methods in the R programming language. Firstly, all the recorded incidents within the police station during September were geocoded using the address of the incident in the GIS software – Google Earth. Spatial statistics have been conducted to determine the hot spot areas of the incidents registered within the police station. Then, hexagonal bins were laid on the map to make hot spots – show areas with clusters of events (Kaplan, 2023).[5] This confirmed that the geographical area to which foot patrols were assigned is indeed a hot spot for incidents registered by the police. In Figure 1, it could be seen as the bin filled with the darkest, orange-red colour, with more than ten incidents registered in September.

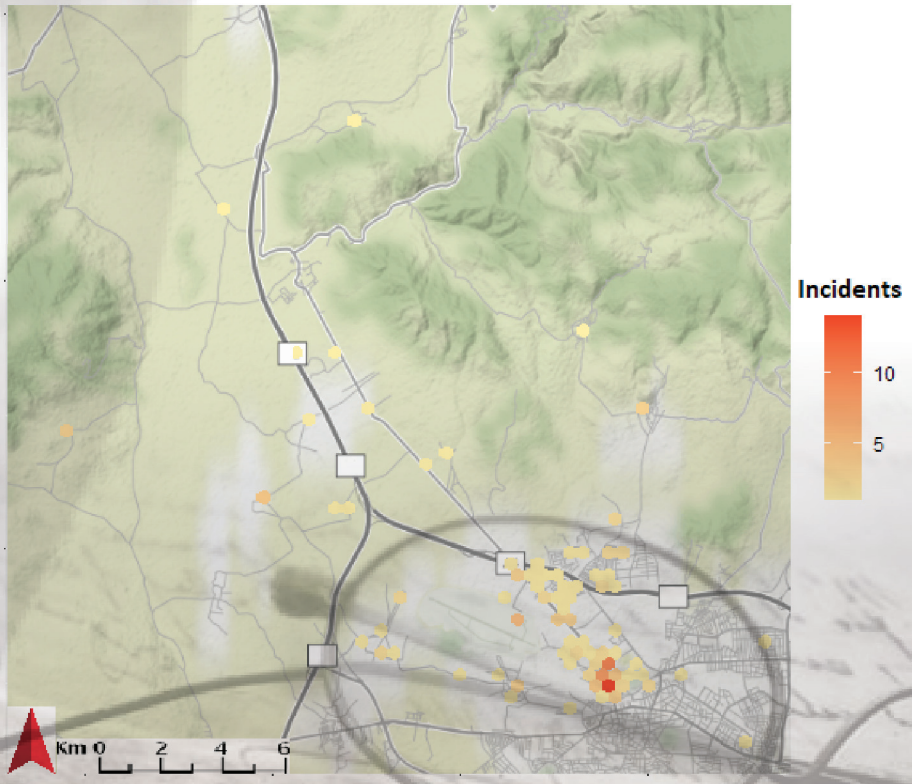


Figure 1 *Map of the Reported Incidents in September 2022*

4 Neither author implies that it would be the best solution.

5 More about this method and procedure to perform in the chapter *IV Visualize* in Kaplan (2023). *Crime by the Numbers: A Criminologists's Guide to R.* Available at: https://crimebythenumbers.com/

So far, evaluations of HSP have primarily been performed by using parallel track trials where patrols have been assigned to the experimental areas while those who were not patrolled served as control areas, and results between them would have been compared. Instead, this research uses the premise of the "repeat crossover" design of HSP, where each hot spot serves as its own control. Sherman (2022c) explains that "using each day in each hot spot as the unit of analysis (hot spot-days), each hot spot is randomly assigned to different treatments on different days. Crime outcomes on treatment days, on average, in each hot spot are then compared to average outcomes on no-treatment days, within each hot spot." However, this study analysed only one hot spot and compared treatment units (foot patrol conducted) with no-treatment units (no foot patrol). Therefore, it has limitations addressed in the conclusions.

Table 1 *Summary of Incidents and Police Foot Patrols in the Hot Spot During the Study Period*

	Units	Count	Mean	Max	Min
Incidents	92	78	0.85	4	0
Foot patrols	92	34	0.45	1	0
Inc. during FP	34	15	0.47	2	0
Inc. on FP day	34	27	0.79	4	0
Inc. no FP day	58	50	0.88	4	0
Inc. no FP (7-15h)	58	27	0.47	2	0
Inc. no FP (any time)	92	63	0.67	4	0
Inc. FP day no FP (15-07h)	34	13	0.38	2	0
Inc. no FP day FP (15-07h)	58	23	0.40	3	0
Violence (and public order) incidents	92	42	0.46	2	0
Viol. inc. during FP	34	8	0.23	1	0
Viol. inc. on FP day	34	18	0.53	2	0
Viol. inc. no FP day	58	25	0.43	2	0
Viol. inc. no FP day (7-15h)	58	14	0.24	2	0
Viol. inc. no FP (any time)	92	35	0.38	2	0
Viol. inc. FP day no FP (15-07h)	34	14	0.29	2	0
Viol. inc. no FP day (15-07h)	58	10	0.17	3	0
Property-related incidents	92	41	0.43	2	0
Prop. inc. during FP	34	9	0.26	2	0
Prop. inc. on FP day	34	13	0.38	2	0
Prop. inc. no FP day	58	28	0.48	2	0
Prop. inc. no FP day (7-15h)	58	19	0.33	2	0
Prop. inc. no FP (any time)	92	32	0.35	2	0
Prop. inc. FP day no FP (15-07h)	34	4	0.12	1	0
Prop. inc. no FP day (15-07h)	58	9	0.15	2	0

Table 1 summarises all the incidents and foot patrols conducted in the hot spot during the study period. In three months, there were 92 days during which 78 incidents occurred in the studied hot spot, making an average of 0.85 incidents per day. The maximum number of incidents recorded per day is

4, while there were 43 days without any recorded incidents. Foot patrols were conducted in 34 of the 92 days. Crime levels have been examined using all the registered incidents, violence and public order incidents, and property-related incidents (Table 1). Violence and public order were merged since these incidents comprise violence-related events like verbal and physical assaults, fights, bodily injuries, noise, and uproar. Depending on context-specific differences, these events can be qualified by prosecution as criminal or minor offences (misdemeanour). Therefore, these incidents have been merged into one category. The distribution among the incidents was almost the same: 42 incidents violence (and public order) and 41 property-related incidents. This makes 83, five higher than all registered incidents, which is unlikely. This is because we used five cases of robbery in both sets. After all, these cases have elements of both types of crime. They are motivated by gaining some property (money or goods), but perpetrators have used some form of violence (threat, physical force, or a weapon) to acquire it.

Units (groups or samples) of interest for the analysis were defined as (Table 1):

1. Incidents recorded during the foot patrol (*Inc. during FP*);
2. Incidents recorded during the day when there was a foot patrol (*Inc. on FP day*);
3. Incidents recorded during days without foot patrol (*Inc. no FP day*);
4. Incidents recorded during the days without a foot patrol, but at the usual time of foot patrolling (*Inc. no FP day, 7-15h*);
5. Incidents recorded at the time when there was no foot patrol (*Inc. no FP, any time*);
6. Incidents recorded on a foot patrol day when there was no foot patrol (Inc. FP day no FP, 15-07h);
7. Incidents recorded on the no foot patrol day and at the uncommon foot patrol time (Inc. no FP day, 15-07h).

Two-sided t-tests have been performed to check differences in means between different units (groups or samples).

Results

All the Incidents

During those 34 foot patrols conducted in a hot spot, 15 incidents occurred (mean 0.44), with a maximum of 2 incidents recorded during the shift. On the other hand, when there was no foot patrol (any time), there were 63 recorded incidents out of 92 days (mean 0.69). The unit here is 92 because even in those days when a foot patrol was conducted, incidents could occur in the other 16 hours of the day. Table 2 (Inc. during FP ~ Inc. no FP, any time) shows the difference in means between these two groups is 30 per cent (reduction in recorded incidents when foot patrol is present). However, the result of a t-test is non-significant (p=0.133).

The same has been observed when comparing the means of the incidents on foot patrol days (0.79) and days without foot patrols (0.88). 11 per cent of incidents occurred less on the days when a foot patrol was conducted. However, the results of the test are insignificant (p=0.677). The 6.4 per cent non-significant decrease in means has also been found between the time when foot patrol was conducted and the same time (7-15h) of the no-patrol days (p=0.532). When considering the time of the day when there is usually no foot patrol (15-7h), foot patrol days have experienced 5 per cent fewer incidents than no foot patrol days in those periods. However, the results of the t-test are statistically non-significant (p=0.869).

Table 2 *T-Test Results for the Treatment and No-Treatment Units Considering All the Incidents*

	Mean	Difference %	Signifi-cance	CI
Inc. during FP ~ Inc. no FP (any time)		-30%	0.133	-0.58 - 0.07
Inc. during FP	0.47			
Inc. when no FP (any time)	0.67			
Inc. on FP day ~ Inc. no FP day		-11%	0.683	-0.49 - 0.32
Inc. on FP day	0.79			
Inc. no FP day	0.88			
Inc. during FP ~ Inc. no FP (7-15h)		-6.4%	0.799	-0.28 - 0.22
Inc. during FP	0.44			
Inc. no FP (7-15h)	0.47			
Inc. FP day no FP ~ Inc. no FP day (15-7h)		-5%	0.869	-0.28 - 0.23
Inc. FP day no FP	0.38			
Inc. no FP day (15-7h)	0.40			

Violence and property-related incidents

The results of the separate analyses considering property-related (Table 3) and violent incidents (Table 4) are mainly like those when accounting for all the recorded incidents. Differences in means when foot patrol is present and when this is not the case (any time) are greater for violent incidents (40%) than for property-related incidents (26%). However, t-test results show that these differences are non-significant. Similar to all the incidents, property crimes experienced a 21 per cent non-significant (p=0.458) reduction during the foot patrol days than during days without a foot patrol. On the contrary, 19 per cent more violence (and public order) incidents were registered during the foot patrol days, although statistically insignificant (p=0.478). Considering the time of the day when foot patrols are usually conducted, from 07 a.m. to 3 p.m. (7-15h in tables), foot patrol days experienced a 21 per cent insignificant reduction in property incidents, while violence and public order incidents experienced a 4 per cent reduction. Considering unusual foot patrol time (15 p.m. to 07 a.m.), property-related incidents experienced a 26 per cent non-significant (p=0.673) reduction during the foot patrol days, while violence and public order experienced an insignificant (p=0.28) increase of 70 per cent more incidents recorded after the foot patrol took place (after 3 p.m.).

Table 3 *T-Test Results for the Property-Related Incidents*

Property	Mean	Difference %	Significance	CI
Inc. during FP ~ Inc. no FP (any time)		-26%	0.452	-0.3 - 0.13
Inc. during FP	0.26			
Inc. when no FP (any time)	0.35			
Inc. on FP day ~ Inc. no FP day		-21%	0.458	-0.37 - 0.16
Inc. on FP day	0.38			
Inc. no FP day	0.48			
Inc. during FP ~ Inc. no FP (7-15h)		-21%	0.57	-0.28 - 0.15
Inc. during FP	0.26			
Inc. no FP (7-15h)	0.33			
Inc. FP day no FP ~ Inc. no FP day (15-07h)		-26%	0.673	-0.21 - 0.13
Inc. FP day no FP	0.11			
Inc. no FP day (15-07h)	0.15			

Table 4 *T-Test Results for the Violence and Public Order*

Violence (and public order)	Mean	Difference %	Significance	CI
Inc. during FP ~ Inc. no FP (any time)		-40%	0.215	-0.38 - 0.08
Inc. during FP	0.23			
Inc. when no FP (any time)	0.38			
Inc. on FP day ~ Inc. no FP day		19%	0.478	-0.18 - 0.37
Inc. on FP day	0.53			
Inc. no FP day	0.43			
Inc. during FP ~ Inc. no FP (7-15h)		-4%	0.94	-0.2 - 0.19
Inc. during FP	0.23			
Inc. no FP (7-15h)	0.24			
Inc. FP day no FP ~ Inc. no FP day (15-07h)		70%	0.28	-0.1 - 0.34
Inc. FP day no FP	0.29			
Inc. no FP day (15-07h)	0.17			

Discussion and Conclusions

Originality and Value

As Sherman (2022c) points out, repeat crossover design "opens the door for police to practice evidence-based policing by 'testing-as-you-go' for continuous impact assessment (CIA)". Indeed, the purpose of the current study was to encourage and simplify these evidence-based practices in policing. Furthermore, repeat crossover design gives equal attention to every hot spot rather than excluding hot spot policing from some areas during the experiment. Current research applied these principles to one hot spot using a simplified methodology and offers this approach to police management.

Although the results of the t-tests are non-significant, this research still provides some theoretical and practical implications. At all levels of measurement, registered incidents dropped when foot patrols were conducted. Firstly, results showed a decrease in all the recorded incidents, violence (and public order), and property-related incidents when there was a foot patrol, opposite to when there was no foot patrol. This is expected since previous evidence also suggests that police presence, specifically foot patrolling, deters crime and delinquency (Bashford et al., 2021; Bland et al. 2021; Dau et al. 2022; Ratcliffe et al. 2011).

However, the solution was never to put the police patrol all the time at every single hot spot. Therefore, the difference is observed in the days (units) when there was a shift-length foot patrol and without it. It has been hypothesised that foot patrol days would experience fewer crimes (recorded incidents). Insignificant reductions have been observed during the foot patrol days considering all the recorded incidents (11%) and property-related incidents (21%). However, violence and public order have been recorded more often during foot patrol days. It might be implied that police officers in the hot spot area have been able to observe and register more of these incidents, so the increase is due to their proactivity. However, further research should be conducted to investigate this claim broadly.

Since shift-length foot patrols have usually been conducted from 7 a.m. to 3 p.m., reductions have been observed in all types of registered incidents. Still, property-related incidents have experienced a greater difference in means (21%) than all the incidents (6.4%) and violent incidents (4%). It might be implied that foot patrol officers indeed deter property crimes at this time of the day, when crowded open markets, bus station, and retail stores create more opportunities for pickpocketing, which is considered by the police as the most common crime in this hot spot. This is when the police's guardianship role is achieved, although two other elements of the crime triangle, motivated offenders and suitable targets, are present (Cohen & Felson, 1979). However, the insignificant results of current evaluations require further research for the conclusions.

Finally, considering the time when foot patrol is unusual, from 3 p.m. to 7 a.m., there are statistically non-significant reductions in all the registered incidents (5%) and property-related incidents (26%), suggesting residual deterrent effects of police presence as proposed by Sherman, 2022c. On the other hand, considering violence and disorder, a prominent increase (70%) has been observed in the days after the shift-length foot patrols have been conducted, compared to non-foot patrol days, suggesting that police patrols may not have a residual deterrent effect on violent crimes and disorder. Again, new studies should provide more evidence on this.

Limitations and Call for Action

The study has not been able to answer a few common questions that should be addressed when evaluating hot spot policing. Firstly, it does not explore crime dispersion to the nearby areas for a few reasons. The studied hot spot (foot patrol area) is in the city centre, sharing the borders with another police station, where probably another foot patrol area has been assigned at the same time. However, information on the recorded incidents and foot patrol shifts has been unavailable, and no further information could contribute to the analysis. Previous knowledge claims that geographically focused police initiatives do not inevitably lead to the displacement of crime but rather are associated with crime-prevention benefits (Milić, 2012). Therefore, further research should investigate if police patrolling hot spot areas in Serbia and the region would result in similar crime prevention benefits, such as in other parts of the world (Braga et al., 1999).

The current study uses shift-length foot patrol data, while some other studies have found that a smaller time dosage, from 12 to 15 minutes, achieves similar results (Bland et al., 2021; Koper, 1995). If this dosage would be enough for crime reductions in another context, it would save great resources for the police. Furthermore, further studies should deal with what the police do in the hot spots and how different strategies affect crime and delinquency. Problem-oriented policing (Goldstein, 1979) has particularly been connected to and applied in hot spots. Research finds it a practical approach for place-based crime reduction (Braga et al., 1999). However, it may not always be effective in exceptional situations, as Taylor et al. (2022) found in the pandemics or after the murder of George Floyd. In addition, policing in Serbia and the Balkan region should be more context-specific than in the West, and thereby, some strategies may work differently.

Lastly, it would be valuable to explore citizens' perceptions and attitudes towards crime and policing when geographically focused initiatives take place, such as in Weisburd et al. (2022), since such public surveying has not been so typical in the region. This knowledge would also contribute to creating strategies around a police role in society since police organisations in the region have been engaged in the reform processes for the last few decades.

Indeed, opportunities and ideas for the research are inexhaustible. However, they depend on many factors, such as data availability, compliance and cooperability of research subjects and decision-makers. As previously said, this paper aimed towards promoting it. The results of this study might have been more prominent with a greater sample: more units (days and shifts of foot patrol) and more places (hot spots) and police presence information in those. However, data on these was unavailable. Therefore, further explorative and experimental studies on hot spots of crime and police presence would be favourable in creating more robust evidence of the police's crime prevention effects in the region.

This switch to an evidence-based approach would contribute to better use of resources and capacities. For example, suppose the evaluation of permanent foot patrolling in one geographical area shows no effect on crime levels and fear of crime or that it contributes to police-community relations. In that case, human resources should be deployed to some other place. Ultimately, this approach contributes to the final "users of the policing" – citizens and their safety. Without an evidence-based approach, there is a threat that personal senses and experiences will still drive police practice. Although personal stances are critical in policing and contribute to the development of police officers and police organisations, the subjectiveness of one's point of view may lead to misconceptions. For example, Ilijazi, Milić, Milidragović and Popović (2019) assessed police officers' perceptions of residential burglary hot spots and found that police officers' perceptions of hot burglary areas did not coincide with the actual data. Therefore, it is critical to bring scientific approaches into policing. For practical reasons, that

would tell us about the quality of the policing services and contribute to developing evidence-based practices to improve it. For scientific reasons, it would tell us more about policing and crime, encourage further criminological research, and contribute to establishing evidence-based policing.

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