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– BOOK I“

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## On the Path<sup>1</sup>

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*Everyone says love hurts, but that is not true.  
Loneliness hurts. Rejection hurts.  
Losing someone hurts. Envy hurts.  
Everyone gets these things confused with love,  
but in reality, love is the only thing in this world  
that covers up all pain and makes  
someone feel wonderful again.  
Love is the only thing in this world that does not hurt.*

*Meša Selimović, Bosnian writer*

In 2001, I attended the international conference Days of Criminal Justice organised by the Faculty of Criminal Justice, Criminology and Security Studies (FCJCSC) in Sarajevo, B&H. The most distinguished professors of criminology, criminal justice and criminal law from the region came and spoke at the conference, and some of them have remained regular participants, turning these meetings into a generator of post-war cooperation between Bosnian, Croatian and Serbian scholars in the 18 years that followed.

I have spent a lot of time with my colleagues from the FCJCSC in Sarajevo since then. It was a challenge to learn their language and get acquainted with their academic and broader social environments. In 2001, Professor Ibrahim Bakić, dean, Vito Šafranjić, director, and I discussed my future cooperation with the faculty and their ambitions and plans regarding the future development of their institution: they put all their hopes on their young and promising students and helping them fully develop. They were successful, and some of those students notably Elmedin Muratbegović, Muhamed Budimlić and Almir Maljević are now professors and leading criminologists in the country.

Then I got a visiting professor grant in Sarajevo. The idea was to both learn about social disorganisation, social control and crimes in a post-conflict country and develop comparative criminological research. I recall a discussion on psychiatric problems in the post-war period by Slobodan Loga, a psychiatrist lecturing about the posttraumatic stress syndrome experienced by war survivors. After spending several months in Bosnia and Herzegovina, I had the impression that the consequences of war victimisation were seen everywhere some were visible (demolished buildings, physically disabled people) and some were felt (people suffering for the loss of their family members and friends; psychological

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<sup>1</sup> Author: Gorazd Meško. Published in: *Newsletter of the European Society of Criminology*, Freiburg, Germany, 2018., p. 2-3.

trauma, usually accompanied by sadness and disappointment). And the proverb that 'victims victimise' seemed the reality.

Further, the meetings and debates with Professor Alija Ramljak, who wrote the first victimology textbook in Bosnia, were intellectually very rich. In addition to 'regular' victimological topics, his book is also an account of crimes and victims of crimes against humanity, of genocide. A few years later, Professor Ramljak co-authored the updated and revised textbook with his Serbian colleague.

Working with Professor Ramo Masleša, following the model of the Slovenian legislation on private security, we drafted the Act on Private Security that was soon adopted by the Bosnian Parliament.

In addition to learning about their research and academic efforts, I spent a lot of time talking with local people who shared their views and stories about all kinds of deviance and crime, from being disorderly to pickpocketing, possession of contraband, and all sorts of interpersonal violence, not to mention the hate for other nationalities that had been victimising them.

My language skills were weak at first, but I was learning more and more every day. My colleagues even got me a very special present: three grammar books – for Bosnian, Croatian, and Serbian (in the Cyrillic alphabet), respectively. I studied them carefully and practised the language; I bought and read books by Ivo Andrić and Meša Selimović, both famous writers. I also had great language teachers: the receptionists at the faculty, the people who were already retired but worked there to support their grandchildren to get a proper education. I spent many evenings chatting with them for hours. They taught me a lot, mainly about the complex nature of people who can be friendly and loving, but when challenged they can turn into something else in no time ... Stories about the duality of human nature.

I also actively cooperated with Borislav Petrović, the first PhD graduate of the FCJCS, who later taught criminal law and criminology and became Dean of the Faculty of Law at the University of Sarajevo. We later co-authored a textbook on criminology and co-edited a book on crime against the environment in the Bosnian language.

Colleagues from the FCJCS also tried hard to catch up with other universities and similar schools in Europe. They developed a new master's programme, following the Ghent Criminology Programme, and invited the most prominent European scholars to teach courses in their programme.

Later, the university accredited a new doctoral programme on criminal justice, criminology and security studies. I had an opportunity to teach criminology and research methods in this programme and supervised a doctoral student, Elmedin Muratbegović, who completed his studies with merits. We also conducted their first comparative empirical fear of crime study, comparing Sarajevo and Ljubljana, Slovenia, and published a joint paper in the

Journal of Criminal Justice in 2007. The results implied that fear of crime factors differed significantly between the two cities. In Sarajevo, the respondents attributed the causes of fear of crime to ethnic variables, poverty, social differentiation and distrust for formal social control institutions.

Maljević, Datzer, Muratbegović and Budimlić (2006) published a book on police and corruption, featuring an impressive collection of papers showing challenges for the development of policing, especially with regard to the improvement of police integrity and governance in general. More recent research publications on trafficking in human beings in B&H (2014), violence against children in the digital environment (Muratbegović & Vujović, 2016), ISRD3 (Maljević, 2016), and migration and trafficking in people in the West Balkans (Muratbegović, 2018) prove that the ambition shared by the former dean Ibrahim Bakić and director Vito Šafranĳ from 2001 has come true.

I have been visiting Bosnia and Herzegovina regularly since 1999. If I compare my first experiences with what I see now, I can say that the FCJCSC has developed into a fully-fledged academic and research institution. Their involvement in national and international projects is impressive. Compared to a small number of young and promising scholars at the beginning of the 2000s, a new generation of researchers is now developing criminology in their country. Generally speaking, Sarajevo has also changed a lot, for the better.

It is also important to mention that in addition to research and teaching our colleagues have had some impact on policymaking, especially Elmedin Muratbegović. He conducted research on the protection of children in B&H and introduced the Code of Ethics in Research with and on children in B&H. Social scientists in the country formally adopted this code. Last but not least, the dean of the FCJCSC, Professor Nedžad Korajlić, is also well known for his public awareness raising in the field of crime prevention.

I wish the organisers of the 2018 ESC all a lot of success. As to the participants of the 2018 ESC conference, I hope they gain great experience from this multicultural social environment.

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## Criminology in Bosnia And Herzegovina: The Past, the Present and the Future<sup>2</sup>

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### FCCSS — THE HOSTING INSTITUTION OF THE SARAJEVO ESC CONFERENCE

#### The past

Although it is nowadays perceived as a non-legal science, like elsewhere in Europe, criminology in Bosnia and Herzegovina was initially taught only at the Faculty of Law of the Sarajevo University. The first criminology institute was established at the very same faculty in 1955. In its work, the institute focused on empirical research, not only in the field of criminology, but also other fields of criminal justice related sciences such as criminal law (material and process), criminalistics, and penology, among others, and the establishment of its own library. Empirical research at the time included projects on issues such as homicides in Bosnia and Herzegovina, racial discrimination and models of fighting for its eradication, and juvenile crime in industrial areas of Bosnia and Herzegovina. Understandably, the very first university textbook on criminology was authored (1972) by Rajka Mlađenović-Kupčević (1927 — 2012), professor at the Faculty of Law, University of Sarajevo. In 1973, the Faculty of Law, University of Sarajevo opened its department in Banja Luka, where professor Mlađenović-Kupčević taught criminology as well. In 1975, the University of Banja Luka opened its own Faculty of Law, and included criminology as an integral part of the curriculum. Therefore, it can be concluded that the initial, first phase of the development of criminology in Bosnia and Herzegovina is heavily marked by the Faculty of Law, University of Sarajevo and Professor Mlađenović-Kupčević.

The second phase starts in 1993, during the war, with the establishment of the Faculty of Criminal Justice Sciences (Fakultet kriminalističkih nauka — FKN), University of Sarajevo. FKN's curriculum, comprised of the courses that were taught at the John Jay College of Criminal Justice (NY). In addition to legal courses (such as Criminal Law, Criminal Procedure, International Criminal Law), taught by Rajka Mlađenović-Kupčević, courses taught at the time included Penology, Sociology of Violence, Forensic Psychology, Criminalistics, etc. It is the students of the first generation of this faculty that will, through their teaching and research, significantly contribute to the role and position of criminology in Bosnia and Herzegovina today. As the result of their work, as well as of the work of

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<sup>2</sup> Authors: Almir Maljević, Elmedin Muratbegović, Muhamed Budimlić. Published in: *Newsletter of the European Society of Criminology*, Freiburg, Germany, 2018., p. 4-5.

other colleagues at the FKN, criminology has spread to other faculties at the University of Sarajevo (Faculty of Political Sciences), University of Tuzla (Education-Rehabilitation Faculty), University of Zenica (Faculty of Law), and beyond.

### **The Present**

In 2008, the by then very diversified curriculum of the FKN prompted an internal reorganization, which led to the creation of three Departments: Criminalistics, Criminology and Security Studies. This change in organisation, which may have seemed purely administrative at the time, provided an impetus for the further strengthening of criminology as a separate science and marked the third phase in the development of criminology in Bosnia and Herzegovina. As a consequence, undergraduate, master and PhD programmes in Criminology have been developed. Nowadays, students can get their BA, their MA and their PhD degrees in Criminology if they study at the Faculty of Criminalistics, Criminology and Security Studies (FCCSS), University of Sarajevo, in Bosnia and Herzegovina. This makes the hosting institution of the 2018 ESC Conference unique in the Balkan region.

This third phase is marked by intensified international presence (attendance at the ESC and other conferences), networking with colleagues from Europe and the USA, and participation in numerous international and comparative research projects (Fear of Crime, ISRD, Eurogang, etc.) and initiatives (Max-Planck Partner Group for Balkan Criminology). At the same time, domestically, the FCCSS kept working on the relationship with various national institutions, ministries and governments, gaining a very influential and positive role in Bosnia and Herzegovina. Through all this international and domestic work, the FCCSS kept growing, within very short period of time, into an institution capable of organising the most important and the biggest criminological event in Europe: the ESC Annual Conference.

This year's Annual Conference of the European Society of Criminology, the 18th in a row, will take place from 29 August to 1 September 2018 in Sarajevo, Bosnia and Herzegovina, under the title *Crimes against Humans and Crimes against Humanity: Challenges for Modern Criminology*. A total of 1200 individual submissions (abstracts) were received, out of which a total of 300+ sessions have been organised. It is expected that the conference will be attended by more than 1300 participants. (For more on programme and social activities see [www.eurocrim2018.com](http://www.eurocrim2018.com).) This conference will mark the celebration of the 25th anniversary of the establishment of the Faculty, end "the present" and open doors for the future.

## The future

So, what can be expected in the future? What will the future Bosnia and Herzegovina bring to criminology? And what will criminology bring to the future Bosnia and Herzegovina? It is commonplace to observe that post-war Bosnia and Herzegovina is facing various challenges: cybercrime, ecological crime, migration flows, crimes against children, trafficking in human beings, terrorism, organised crime and corruption are only the first ones that come to mind. If these are to be addressed properly, they will have to be well researched and understood. So far, Bosnia and Herzegovina's investment into research amounts to ... nothing. Not a single Euro. Research has either been financed through international organisations (governmental or non-governmental) or implemented by enthusiastic young researchers running projects in their free time. It is hoped that the sheer number of criminologists present at this ESC Conference, and topics they cover and address in their respective countries, will lead governments in Bosnia and Herzegovina to recognise a direct link between criminological research, as a process of fact finding on one side, and as effective criminal justice and other security policies on the other. This, it is hoped, would lead to a dedication of budgetary funds for criminological research, which would provide a fertile ground for further development of criminology in the country and, later on, contribute to introduction of evidence based policies.

Impossible? Not really. In the words of Muhammad Ali: "Impossible is just a big word thrown around by men who find it easier to live in the world they've been given, than to explore the power they have to change it. Impossible is not a fact. It's an opinion. Impossible is not a declaration. It's a dare. Impossible is potential. Impossible is temporary. Impossible is nothing." So, dear friends and colleagues, welcome to Sarajevo, welcome to Bosnia and Herzegovina, and thank you for helping us dare, explore potentials and change for better.

### About authors:

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## Criminology and Crime in Bosnia And Herzegovina<sup>3</sup>

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*Summary: This paper addresses a number of issues related to crime and criminology in Bosnia and Herzegovina. First of all, it provides an overview of the development of criminological education and research in the country. The Faculty of Criminal Justice and Security, University of Sarajevo, has been identified as the institution at the forefront of both criminological education and criminological research. When it comes to education, curriculum of undergraduate, master and doctoral studies in criminology are in line with respective studies abroad, in Europe in particular. This paper provides evidence to show that researchers from this faculty have been involved in a number of world leading research projects and have published in some of the most renowned criminological journals. Despite being on a par with the European criminologists, the paper argues that criminologists in Bosnia and Herzegovina are yet to produce reliable figures on crime and criminal justice statistics for the country. For this to happen, governmental support and willingness to share data needs to be provided. Only once the data is provided, will criminologists be able to analyze the information and provide figures based on which it will be possible to view the country's significantly reformed criminal justice system as either a success or as a failure.*

### INTRODUCTION

Despite over hundred years of independence, response to criminology continues to be somewhere between acceptance arising from the real needs of modern societies and a refusal to recognize it as an independent academic discipline. This development is hampered by constant dilemmas about its origins, and legal and sociological roots. However, one thing is certain; criminology has recently been developing with great speed and primarily as an empirical discipline which treats its subject matter both inter- and multi-disciplinary. It is a multi-methodological, descriptive and empirical academic discipline, because it describes the phenomena, observes them as they develop and contributes to the pool of knowledge, primarily by researching and generalizing the facts it

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<sup>3</sup> Authors: Almir Maljević, Elmedin Muratbegović. Published in: Anna-Maria Getoš Kalac Hans-Jörg Albrecht Michael Kilchling (eds.), *Mapping the Criminological Landscape of the Balkans A Survey on Criminology and Crime with an Expedition into the Criminal Landscape of the Balkans*, pp 99-112. Berlin, 2014.

gathers. Limiting the subject of criminology only to crime is clearly outdated (the so-called narrow or legal scope of criminology). Contemporary criminology explores all punishable acts (delinquency) and not only criminal offenses, but deals with crime-related behaviors which are perceived as deviant (Siegel, 2006). Criminology is clearly not concerned with all deviant behaviors, but only those which are related to crime (prostitution, drug abuse, gambling, among others). Criminal law science only partially deals with these phenomena, leaving their further study to other scientific disciplines. That is exactly where the solution might be found to this dilemma about the nature of criminology.

Most contemporary experts from the West Balkan region perceive criminology as a non-legal science (Horvatic, 1993; Petrovic & Mesko, 2004; Ignjatović, 2005, Muratbegovic, 2008), which relies heavily on crime policy to fulfill its mission of crime reduction. The primary way to achieve this is by contributing its knowledge to development of an efficient, social and human crime policy. Criminology is not limited to providing information about the source of problems and efficiency of crime prevention programs. It can also act "ante delictum" by predicting and preventing crime. This aspect of criminology is reflected in its contribution to shaping and evaluating the system of norms, institutions, instruments and measures pertaining to social reaction to crime. It is thus that we can say that modern criminology reaches far beyond traditional criminal law science which once enjoyed the exclusive right to academic study of crime.

### **CRIMINOLOGICAL EDUCATION**

The development of criminology in Bosnia and Herzegovina can be traced through the development of scientific-research work and the overall functioning of higher education institutions in the country. The above is in reference to undergraduate and post-graduate university programs, production of textbooks, articles and discussions, as well as conducting surveys, initiating scientific conferences and pursuing specific scientific research projects. Two University Handbooks of Criminology were: Introduction to Criminology (1972) by Rajka Mladenovic, published by the Faculty of Law at University of Sarajevo, and Criminology, by Borislav Petrovic and Gorazd Mesko (2004, 2008), published by the Faculty of Law at the University of Sarajevo. Criminology was initially studied only at the Faculty of Law of Sarajevo University before penetrating other law faculties in Bosnia and Herzegovina. Recently it has also been introduced in a few additional institutions of higher education.

The first criminology institute in Bosnia and Herzegovina had been established as early as 1955 under the name "Criminology Institute of the Faculty of Law of the Sarajevo University." Work of this institute included: empirical research, establishment of its own

library with a substantial collection of periodicals, not only in the field of criminology, but also from other fields of criminal justice related sciences such as criminal law (material and process), criminalistics, penology, among others. Empirical research included important projects such as "Homicides in Bosnia and Herzegovina (for the 1962-65 period)," published in 1971 by the Faculty of Law of the Sarajevo University; "Racial discrimination and models of fight on its eradication" published in 1972 by the Faculty of Law of the Sarajevo University and "Juvenile crime in industrial areas of Bosnia and Herzegovina (for 1968 - 72 period)" Published in 1984 by the Faculty of Law of the Sarajevo University.

The Faculty of Law at the Sarajevo University, the oldest such educational institution in Bosnia and Herzegovina (founded in 1946), included a criminology course in its curriculum. It was an elective, one-semester course with two lecture hours and two practical training hours per week in the third or the fourth year of undergraduate studies. Development of higher education in Bosnia and Herzegovina included establishment of law faculties in all major urban centers, primarily in Banja Luka and Mostar which continue to be university centers. More recently, that is, over the past ten years, law faculties have been established also in Bihać, Zenica, Tuzla and Eastern Sarajevo. Since the above faculties had been established under patronage of the Sarajevo's Faculty of Law they nearly copied its curriculum. The criminology courses taught at these faculties are similar to that provided in Sarajevo. Over the sixty years that it has been studied in Bosnia and Herzegovina, criminology was both a core and an elective subject. Today it is a core subject in the first year of study at the Faculty of Law administered in accordance with the so-called Bologna process to include three lecture hours and one practical training hour per week. It is necessary to stress that criminology had always been a core subject in the post-graduate program of the Sarajevo's Faculty of Law. Criminology was among the studied disciplines in each of eight post-graduate courses offered by the Sarajevo's Faculty of Law. This is in reference to post-graduate program in the field of criminal law which regularly included selected chapters from the following subjects: criminal law, criminal procedure law, criminology, criminal investigation, international criminal law and penology. The same is true for current postgraduate course which includes criminology as part of etiology and phenomenology of organized crime courses. Situation is similar in postgraduate programs of other law faculties in Bosnia and Herzegovina. Having been included in the advanced program of studying, criminological topics have been treated and explored within a number of doctoral theses, as well as master theses. These theses represent a modest contribution to development of criminology in Bosnia and Herzegovina.

Such understanding by contemporary science undoubtedly led to the establishment of academic institutes within the world's leading universities where criminology is studied in detail, as both a theoretical and empirical discipline. It is in that context that one needs to

observe the establishment of the Faculty of Criminal Justice and Security at the Sarajevo University. The Faculty was founded in 1993, and as outlined in its curriculum, criminology reaches beyond the framework of legal studies. The curriculum includes all criminal justice subjects as does the curriculum of Sarajevo's Faculty of Law. Due to the enthusiasm of contributing professors of the Criminal Law Department of the Sarajevo's Faculty of Law,<sup>4</sup> "Criminal law" and "Criminal procedure law" are studied in as much detail as in the law faculties in Bosnia and Herzegovina. In addition to legal disciplines, the curriculum of the Faculty of Criminal Justice Sciences also includes about ten more disciplines directly related to the social, real content of delinquent and deviant behavior. It is necessary to mention here disciplines, such as: sociology of violence, social anthropology, social pathology, victimology, penology, restorative justice, forensic psychology and forensics science in general. Of course, criminology is also included and outlined in five inter-related but separate criminology modules: Criminology 1 - Introduction to Criminology, Criminology 2 - Criminological Theories, Criminology, 3 - Applied Criminology, Criminology 4 - Crime Prognosis and Prevention and Criminology, 5 - Research Methods in Criminology.

Starting in 2008, "criminology" transformed into an independent department which administers eight-semester bachelor's degree, two-semester master's degree and six-semester doctoral programs. Some of the most distinguished criminologists from nine different (European Union & South-East Europe) countries lecture the students of this department. Five doctoral dissertations in the field of criminology have so far been defended at the Faculty while two more are currently (2014) in the process; both in criminology. At this point, four Master's dissertations in the field of Criminology also deserve to be mentioned. However, nothing contributes more to development of criminology in Bosnia and Herzegovina as do the scientific-research projects some of which will be presented in the following text.

Further on, it is necessary to mention that the Faculty of Political Science of the Sarajevo University had in 1995 also included criminology in its curriculum; a one- semester course with two lecture hours and two practical training hours per week in the fourth year of study. The introduction of criminology course at this faculty was fully justified given the interdisciplinary nature of the studies at this faculty. Given the conceptual base of the Bologna process, criminology will, like other subjects, be organized as a one-semester course with two lecture hours and one practical training hour per week.

Finally, beginning in the 2005/06 school year, criminology had also been introduced at the Education-Rehabilitation Faculty of the University of Tuzla as a core one-semester course

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<sup>4</sup> In the early stages, Criminal Law, Criminal Procedural Law, International Criminal Law, Penology and Criminology were taught at the Faculty of Criminal Justice and Security by the distinguished Professor Rajka Mlađenović-Kupčević (1927-2012).

in the third year of study, with two lecture hours and two practical training hours per week. Curriculum of this faculty is also broadened by few more courses such as penology and basis of criminal law and procedure. Furthermore, this faculty introduced a post-graduate course in the 2006/07 school year covering selected chapters of criminology with focus on drug abuse, prostitution and alcoholism.

### **CRIMINOLOGICAL RESEARCH**

Doctoral and Masters theses form a significant share of criminological research in Bosnia and Herzegovina. It is particularly true at the Faculty of Criminal Justice and Security of the Sarajevo University. Future plans of the Faculty of Political Sciences University of Sarajevo and Educational-Rehabilitation Faculty of the Tuzla University include conducting more scientific research projects in the field of criminology.

The analyses of post-1991 scientific research projects in the field of criminology in Bosnia and Herzegovina reveal a radical shift in the approach to the research subject. The shift is, of course, from the dialectic-material approach to a more modern approach of the new "west oriented criminology." Social transformation obviously provided an impetus to criminologists here to independently change the discourse of their research projects. Another reason for this might be found in the fact that the criminology was not developing with sufficient dynamics prior to 1991 but was instead studied in larger venues within the former Yugoslavia. However, and as will be outlined further in the text, an increasing number of young researchers of different educational backgrounds became interested in criminology following the war in Bosnia and Herzegovina. The growing trend of socio-pathological phenomena in post-war Bosnia and Herzegovina, and particularly in the urban centers, generated a need for a more systematic approach to the problem: analyses, prognosis and prevention of asocial and antisocial behaviors.

Most scientific research projects in the field of criminology are conducted by the researchers of the Institute of Criminalistics, Criminology and Security Studies of the Faculty of Criminal Justice and Security in Sarajevo. A team of young professors and researchers: Elmedin Muratbegović, Muhamed Budimlić, Almir Maljević, Darko Datzler, Azra Adžajlić Dedović, Irma Deljkić, Eldan Mujanović and Marija Lučić- Ćatić from this Institute have conducted a number of studies in a relatively short period of time (between 10 and 15 years). Young criminologists here are slowly gaining acceptance into the "European Criminology" as confirmed by publication of their papers in relevant criminological journals and their cooperation with the leading criminologists of contemporary European Criminology.

Criminological research in Bosnia and Herzegovina is being conducted despite the fact that the State has not provided a "single Euro" for support of criminological research. Such research was possible either with the support of various donors (such as Swiss Agency for Cooperation and Development, Italian Agency for Cooperation, Open Society Fund Bosnia and Herzegovina, United States Department of Justice, Foreign and Commonwealth Office United Kingdom Embassy Sarajevo, etc.), or by researchers running projects in their free time, without any financial support.

Considering that these researchers' childhood and youth were set against the background of the "cataclysm of war in Sarajevo", the above can serve as a proof that "success incidents" in the form of independent development of criminologists and criminology are possible even in a quite disorganized country.

Some of the most significant projects and/or publications in Bosnia and Herzegovina over the past years are the following:

- "Comparing the Moral Values of Slovenian, American and Bosnian Criminal Justice Students, Police Officers and jail Officers" (Meško et al., 2001)
- "Trafficking in Women in Bosnia and Herzegovina" (Obradović, 2004)
- "Domestic Violence Developing Study in Bosnia and Herzegovina" (Adžajlić et al., 2004)
- „Privatisation of the Security Sector as a Part of Crime Prevention Strategy in Bosnia and Herzegovina“ (Muratbegović, 2006)
- "Overtly about Police and Corruption" (Maljević et al., 2006)
- „International Self-Reported Delinquency - ISRD 2" (Budimlić, et al , 2007)
- „Factors Influencing Police Officers' Perception of Corruption: a Bosnian Perspective“ (Datzer et al., 2007)
- "Youth-Gang Attitudes, Orientations and Outlooks: A Comparative Analysis of Five Nations (2007/2008)" (Winfrey, 2007)
- „Role of the family in emergence and prevention of undesired behaviors of children and adolescents in the Sarajevo Canton - social support models (2005-2007)" (Obradović, 2008)
- „Bosnian women and intimate partner violence“ (Muftić & Bouffard, 2008)
- „Primary Categories and Symbiotic Green Crimes in Bosnia and Herzegovina“ (Muratbegović & Guso, 2010)
- Enforcement of Alternative Measures for Juveniles: Legal, Institutional and Practical Issues (Budimlić et al, 2010)
- "Protective Effects of Parental Monitoring on Offending in Victimized Youth in Bosnia and Herzegovina" (Nash et al., 2011)

- „ Application of Alternative Measures for Juveniles in Sarajevo and Banja Luka “ (Muratbegović, 2011)
- „Neighbourhood Social Disorder and Safety Feeling in Pristine“ (Muratbegović et al., 2012)
- „Perceived Neighbourhood Social Disorder and Attitudes Toward Safety Feeling in Sarajevo“ (Muratbegović et al., 2012)
- „Exploring the overlap between offending and victimization within intimate partner violence in Bosnia and Herzegovina“ (Muftić & Deljković, 2012)
- „Gender attitudes and the police in Bosnia and Herzegovina“ (Muftić & Collins, 2013)
- „Gender integration and the police in post-conflict Bosnia and Herzegovina“ (Muftić & Rašić, 2013)
- „International Self-Reported Delinquency - ISRD 3“ (Maljević, 2014)
- „Policing intimate partner violence in post-conflict Bosnia and Herzegovina“ (Muftić & Cruze, 2014).
- “Attitudes toward electronic monitoring” (Maljević & Muftić, 2014; Muftić et al., In-Press)
- „Securing the border in Bosnia and Herzegovina: the impact of training on officers’ knowledge and experiences related to sex trafficking“ (Muftić, 2014)
- „The impact of life domains on juvenile offending in Bosnia and Herzegovina“ (Muftić et al, In-press)

## **FUTURE PROSPECTS OF CRIMINOLOGY IN BOSNIA AND HERZEGOVINA**

What are the future prospects of criminology in Bosnia and Herzegovina? First of all, it is hoped that the research efforts will extend to include other aspects of interest of contemporary criminology relevant for the needs of society. This primarily relates to research of etiology and phenomenology of various forms of contemporary crime, such as cybercrime, ecological crime and other deviant behaviors covered by contemporary European Criminology. This is of particular importance because problems such as migration, xenophobia, crimes against children, trafficking in human beings and other problems the country is facing that are hampering it joining the European Union. Also, in addition to self-reported delinquency studies already conducted to unveil juvenile delinquency, victimization studies would be needed to approximate the dark figures of adult crime and victimization. Second of all, with the implementation of the Bologna Process, merging of separate criminology departments of individual faculties within a single department should follow as this would contribute to further improvement in the quality of criminology education at the university level. Third of all, it is hoped that the governments in Bosnia and Herzegovina will recognize a direct link between criminological

research as a process of fact finding and effective criminal justice and other policies. This, it is hoped, would lead to a dedication of budgetary funds for criminological research, which would provide a fertile ground for further development of criminology in the country as well as to evidence based policies. Finally, due to the Bosnia and Herzegovina's geographical position (positioned in the heart of the Balkans), the most recent history (the war), as well as to the flourishing of various forms of contemporary crime in the aftermath of the war, it is unfortunately an interesting market for criminologists. Because of that, involvement of the country in many of the international criminology research project would be necessary and welcome.

### **CRIME TRENDS AND PROBLEMS**

As statistics on crime and criminal justice in the country are not collected by a single body, it is not possible to provide information about crime trends in Bosnia and Herzegovina. When it comes to police statistics, police agencies collect information based on their internal rules and procedures, and publish them in accordance with the relevant laws. In practice, police agencies do not utilise the same recording procedures, have different data flow processes, utilise different level of sophistication of data analysis and do not present to the public standardised information on processed crime reports. It is therefore impossible to present crime trends based on the police statistics.

Looking at the prosecution and judicial statistics, due to the fact that prosecutor's offices and courts apply different criminal codes, especially with regard to the special part of criminal codes, charging statistics as well as convictions statistics and punishment statistics are not collated on a state level. Instead, statistical breakdowns of charging and convictions are presented separately for each prosecutor's office and for each court. The data are collected and presented to the public once a year by the HJPC in their Annual Report. The reports are available on the website of the High Judicial and Prosecutorial Council of Bosnia and Herzegovina. Here, also, it is impossible to present crime trends based on the statistics provided by the HJPC.

According to available statistics and studies (World Prison Brief, 2010 est.), the total prison population in the FBiH was 1,671, with 73 prisoners per 100,000 of population, with the occupancy level of 78,1%. Similar figures have been found in the RS where the total prison population (World Prison Brief, 2010 est.) was 1,046 or 75 prisoners per 100,000 inhabitants, with the occupancy level of 96,4%.

## CRIMINAL JUSTICE SYSTEM<sup>5</sup>

### *Background*

Bosnia and Herzegovina as a State is composed of two entities: the Federation of Bosnia and Herzegovina (FBiH) and the Republika Srpska (RS) and one district, the Brčko District of Bosnia and Herzegovina (BDBiH). While the RS is a centralized entity, the FBiH is a highly decentralized territorial unit with 10 cantons, each of which has its own scope of exclusive and concurrent competences. Each level of government has its own legislative, executive, administrative, and judicial institutions. As a result, there are a total of 14 governments (comprised of ca. 180 ministries) and 14 lawmaking institutions (parliaments, assemblies, etc.). The criminal justice system in Bosnia and Herzegovina is thus significantly influenced by the constitutional structure and the division of powers in the country.

Until 2000, the fight against crime was primarily the responsibility of the autonomous entities, each of which had its own criminal justice system, while the State had only limited competences deriving from the Constitution (Art. III/1/g Const.). From 2000 onwards, with the support of the international community more sustainable, efficient, impartial, and independent judiciary, law enforcement and criminal justice sector was starting to be shaped. New institutions, especially at the State level, such as law enforcement agencies and judicial institutions (Court of BiH, The Prosecutor's Office of BiH, State Investigative and Protection Agency (SIPA), the High Judicial and Prosecutorial Council (HJPC), and the Ministry of Justice of BiH) have been established. At the same time, criminal law, both substantive and procedural was reformed. New codes were passed in 2003 at all levels.<sup>6</sup> This reform brought significant changes within the criminal justice system of the country. Whereas the changes within the substantive law relate to new institutions in both the

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<sup>5</sup> This section draws on Maljević and Smilagić, 2015.

<sup>6</sup> Criminal Code of BiH, Official gazette of Bosnia and Herzegovina No. 3/03, changed and amended in No. 32/03, 37/03, 54/04, 61/04, 30/05, 53/06, 55/06, 32/07, 08/10. Criminal Code of the FBiH, Official gazette of the Federation of Bosnia and Herzegovina No. 36/03, changed and amended in No. 37/03, 21/04, 69/04, 18/05. Criminal Code of the RS, Official gazette of the Republika Srpska No. 49/03, changed and amended in No. 108/04, 37/06, 70/06. Criminal Code of the BDBiH, Official Gazette of the Brčko District of Bosnia and Herzegovina No. 10/03, changed and amended in No. 45/04, 06/05. Criminal Procedure Code of BiH, Official gazette of Bosnia and Herzegovina Nr. 3/03, changed and amended in Nr. 32/03, 36/03, 26/04, 63/04, 13/05, 48/05, 46/06, 76/06, 29/07, 32/07, 53/07, 76/07, 15/08, 58/08, 12/09, 16/09, 93/09. Criminal Procedure Code of the FBiH, Official gazette of the Federation of Bosnia and Herzegovina Nr. 35/03, changed and amended in Nr. 37/03, 56/03, 78/04, 28/05, 55/06, 27/07, 53/07. Criminal Procedure Code of the RS, Official gazette of the Republic of Serbs Nr. 50/03, changed and amended in Nr. 111/04, 115/04, 29/07, 68/07, 119/08. Criminal Procedure Code of the BDBiH, Official Gazette of the Brčko District of Bosnia and Herzegovina Nr. 10/03, changed and amended in Nr. 48/04, 06/05, 12/07, 14/07, 21/07.

general and the special parts of the criminal codes, more radical change took place within the criminal procedure. Namely, previously inquisitorially-oriented mixed system changed to an adversarially-oriented mixed system.

### **INVESTIGATION AND PROSECUTION WITHIN THE CRIMINAL JUSTICE SYSTEM OF BIH**

With the adoption of the new criminal procedure codes in 2003, all investigative steps are now taken under the direction and close supervision of the prosecutor. Immediately after being informed of grounds of suspicion a criminal offense took place, the prosecutor must call for an investigation and lead all aspects thereof. During the investigation, the prosecutor can issue orders to law enforcement agents to perform specific investigative actions (such as taking witness statements, examining and interviewing suspects); issue orders and subpoenas in accordance with the law; file the indictment; and perform other duties in accordance with the law. However, despite being formally led by the prosecutor, the practice has shown that the investigation is in fact conducted by a number of agencies and authorized official persons (mainly criminal investigators) who assist the prosecutor. The organization of prosecutor's offices follows the organization of the criminal court system (see below) in three levels: State level, entity level, and BDBiH level. In order become a prosecutor, a candidate must be a law graduate, must have passed a judicial examination, and must have at least three years of relevant professional experience. All appointments of prosecutors are made by the High Judicial and Prosecutorial Council of Bosnia and Herzegovina (HJPC), an independent body composed of distinguished judges, prosecutors, defense lawyers, and representatives of the Council of Ministers (government of Bosnia and Herzegovina), Ministry of Justice BiH, and the Parliamentary Assembly BiH.

### **ADJUDICATION WITHIN THE CRIMINAL JUSTICE SYSTEM OF BIH**

As was the case with the prosecutors' offices, the judicial system of Bosnia and Herzegovina reflects the constitutional structure of the country. Thus, the system of criminal courts is structured in three levels: the State level, the entity level, and the Brčko District level. At the State level, the Court of Bosnia and Herzegovina has criminal jurisdiction over criminal offenses defined in the Criminal Code of Bosnia and Herzegovina and other State laws and over certain criminal offenses prescribed by entity laws. In the two autonomous entities, the criminal jurisdiction of the various courts (municipal and cantonal in the FBiH entity and basic and district courts in the RS) depends on the gravity of the criminal offense. Supreme courts of the FBiH and RS are appeals courts respectively. Brčko has a Basic Court (court of first instance) and an Appellate Court. The Court of Bosnia and Herzegovina will act as a "supreme court" in cases where a person appealed the decision of an Appellate Court in BDBiH. Bosnia and Herzegovina, as a State, does not have

a Supreme Court on the state level. In order to become a judge, a candidate must be a law graduate, must have passed the judicial examination, and must have at least three years of relevant professional experience. Appointments of judges are made by the HJPC.

### **EXECUTION OF SANCTIONS WITHIN THE CRIMINAL JUSTICE SYSTEM OF BIH**

Criminal sanctions, including punishment (long-term imprisonment, imprisonment, fines), security measures (mandatory psychiatric treatment; mandatory medical treatment for addiction; prohibition on the carrying out of certain occupations, activities or duties; forfeiture), and alternative sanctions (suspended sentence, judicial admonishment, community service) are prescribed in the criminal codes in BiH. The execution of custodial penalties is regulated by separate laws at the State level, entity level, and Brčko District level. Imprisonment and long-term imprisonment are executed in 11 penal and correctional institutions of different level of security throughout the country.

### **CONCLUSION**

Compared to other countries, criminology is a relatively newly developed science in Bosnia and Herzegovina. Although initially developed within the curriculum of the Faculty of Law, University of Sarajevo, it is the Faculty of Criminal Justice and Security of the same university that at the leader in both criminological education and research nowadays. Topics that are in the criminological focus of the researchers from this faculty at the moment cover juvenile delinquency, corruption, organized crime, asset forfeiture, trafficking in human beings, and domestic violence.

Despite the fact that the country is burdened by some of the most sophisticated crime as well as by everyday crime, which makes the EU accession process complex and daunting, governmental response in terms of investing funds in criminological research has been lacking so far. As a result, although individual crime phenomena have been subject to research, more general information about crime and crime trends in the country are missing. The system of institutions generating crime and criminal justice statistics is fragmented. At the same time, institutions do not have standardized ways of data recording, collection, analysis and dissemination. It is exactly in these fields that researchers could most appropriately contribute to the governments by assisting them to develop a system of crime statistics collection and processing which will enable production of figures on crime trends and consequently provide for better, evidence based policies.

In the end, the criminal justice system of Bosnia and Herzegovina has been significantly reformed so as to be in line with the latest developments of a modern criminal justice

system; a system which is hoped to be efficient in the fight against all forms of crime, but at the same time a system that serves as the best safeguard for human rights and basic freedoms. It is, however, not possible at moment to argue whether this mission has been accomplished already or is only yet to be accomplished. It is because an adequate overview of the functioning of the criminal justice system, an overview based on facts and figures is missing. Hopefully, in the years ahead further development of criminology in Bosnia and Herzegovina and in the Balkans will bring about the necessary change.

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## Criminalistics Scientia Sui Generis – Arguments Pro Et Contra<sup>7</sup>

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*SUMMARY: Criminalistics, "Science" or "Technique" of methods of revealing a crime and its offender, crime prevention and generally research of criminal occurrence is a discipline which in contemporary theory exists misunderstanding what criminalistics really is. Is it a stand-alone science or a subsidiary discipline in the frame of wider area of crime research, or only a technical part of forensic sciences? The authors intend to show criminalistics through non-favor light and they give an answer, what criminalistics really is, from the point of its concept and place in different systems of criminal justice, its scientific object and methods, relations with other cognate disciplines, institutionalization and finally perception by social ambience.*

### INTRODUCTION

Criminalistics is a discipline that has been a long time discussed in theoretical circles from a point of auxiliary discipline in the wider frame of crime research to points that gave criminalistics an attribute of stand-alone scientific discipline. Mentioned controversy is at the, first place result of the fact that criminalistics in its existence partly use methods and achievements of other sciences and with that about criminalistics mostly discuss lawyers, criminologists, and scientists from the other areas of crime research, but the criminalists less. As well to that status of criminalistics has contributed different solutions accepted in different system of criminal justice that are direct consequence of various theoretical approaches. In work which follow we will try to show criminalistics from the points of its different considerations and place in certain systems of criminal justice, object and methods of its research, relations with other cognate disciplines, also some other points and due to this make some conclusions. There is no intention that these conclusions be final and only one because of complexity of this question, but in any case, to be a contribution for one clearer attitude toward this discipline.

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<sup>7</sup> Authors: Haris Halilović, Nebojša Bojanić. Published in: *Policing in Central and Eastern Europe – Dilemmas of Contemporary Criminal Justice*, Book of Papers, Ljubljana, Slovenia, pp 372 – 380. 2004.

## CRIMINALISTICS, NOTION, DIVISION AND PLACE IN DIFFERENT SYSTEMS OF CRIMINAL JUSTICE

Word Criminalistics coming from Latin word *criminalis* what in word to word translation means criminal, culpable, while word *crimen* derive from Latin *crimen*, in other words crime. Word *crimen* is a rote of name of some other to criminalistics cognate sciences as a criminology, criminal law, criminal policy etc. Generally, by the one part of contemporary scientists and practitioners, criminalistics has been defined as a discipline of methods of revealing a crime, but there are also authors who emphasize crime prevention as a one of fields of criminalistics scientific (practical) comprise. Criminalistics intend to clarify the phenomenon of criminal offence, in this sense criminalistics is activity of all subjects of criminal repression in compliance with role which every of them realize, (Pavišić, 1997).

Retrospectively criminalistics doesn't have long history. In literature there are claims that criminalistic as a standalone scientific discipline arises at the end of XIX century, with emphasize that some non-scientific approaches of revealing and lightning up the crime already arises at the end of XVIII century (prescientific period of criminalistics), (Pavišić, Modly, 1999). Austrian prosecutor and Judge Hans Gross (1847-1915) had been recognized as a founder of Criminalistics. Gross has written a first work on application of science for purposes of criminal investigation (*Handbuch fur Untersuchungsrichter*).

Traditional division of criminalistics is on criminalistic tactic, criminalistic technique, and conditionally criminalistic methodics. Some authors don't recognize criminalistic methodics as a particular field of criminalistics. They point out that criminalistic methodics are only particular criminalistic tactics. This division is characteristic only for some theoretical circles, and as we shall see some determinations of this discipline in certain systems of criminal justice.

Criminalistic tactic deals with methods and means that are not technical natures, and those tactics methods are studied and established for purpose of revealing and clarifying committed criminal offense, as well as in crime prevention, (Vodinelih, 1976). Criminalistic technique deals with methods and procedures of technical, and other sciences with purpose to find, secure, research and offer evidences for purposes of criminal procedure. Finally, criminalistic methodics, if we accept them as a separate field of criminalistics, are directed at research of some groups of criminal offences and specific criminal offences.

Also, it has to be mentioned that in a last time some new areas of criminalistics appear and significant number of authors from the field of crime research accepts them. These areas

are criminalistic strategy, criminalistic prognosis and others with its theoretical and practical background.

By the question of its place in different system of criminal justice we can talk about a few models of criminalistics. These models go from those which exist on repudiation even toward name of this discipline, and where its content has been put under other discipline or disciplines, to these in which this discipline comprise wide area of theoretical and empirical approaches to problem of crime and criminality and has complex structure. Further, we will try to express the elements of three of them we think main and enough to give a complete picture of different considerations and role of this discipline. These three models are those adopted in Roman countries, hereupon Germany and Russia and countries under its theoretical influence on this area, and finally in anglosaxonian countries particularly United States so we can call it Anglo – American model of criminalistics.

In countries of German law model, especially in Germany (Ger. *kriminalistik*) and in Russia (Rus. *криминалистика*), as well in countries which accepted Russian concept of criminalistics, or it was the case earlier, this discipline has been mainly recognized as an emancipated discipline of crime research with exactly defined object and methods of research. For criminalistics in these countries is characteristic a long history and tradition as well-developed theory and practice of this discipline. Very similar perception of criminalistics can be found in Bosnia and Herzegovina and also other countries of ex-Yugoslavia, what is a consequence of former German influence in law sphere and Russian-Soviet former ideological influence. This environment recognizes criminalistics as a science that study, finds and perfects scientific, and on practical experience established methods and means, which are the most suitable to reveal and convict a crime offender, to provide and fix up all evidences for settle a real true and to prevent omission of future planed or non-planed criminal offences, (Vodinić, 1976). That recognition mainly includes the division we mentioned above.

Second model of criminalistics is the one that doesn't recognize content of criminalistic under this name. In these systems of criminal justice, the content of criminalistics is settled under other sciences or techniques or has a different name. In Italy for example instead criminalistics used term is *polizia scientifica*, term that comprise field of application of technical and methods of other sciences in research of criminal offences, (Modly, 2002). This model of criminalistics can be found mostly in states of Roman law circle, (Pavić, Modly, 1999).

Finally, there is a third model. This model can be found in countries of anglosaxonian law circle particularly US. This model has a characteristic of exclusive connection of

criminalistics with forensic science. In this context some of the considerations of criminalistics are that this discipline involves discernment, acquisition, identification, individualization and evaluation of material traces using scientific techniques in questions of law importance, and technically criminalistic find itself as a part of overall area of forensic sciences, (Lee, Labriola, 2002).

In some Anglo-American sources of literature criminalistic is defined as a science of crime detection, involving application of chemistry, physics, physiology, psychology and other sciences, (Rush, 1986). Criminalistics in this system of criminal justice also has been used for describing the services of a crime laboratory (Saferstein, 1998).

As we can see, each of these models offers different concept of criminalistics, and as a most affirmative seems to be the first one. In the framework of this model criminalistics is a unique area, which comprise application of technical and other sciences in research of criminal offences for needs of criminal procedure, as well as tactical-methodic procedures in criminal investigation. Those systems of criminal justice which accepted Anglo-American kind of considerations of criminalistics, unlike previously mentioned, under criminalistics don't have a whole area of crime detection but exclusively application of technical and other sciences in criminal procedure, in other words forensic sciences. Other aspects of criminalistics are comprised with "so called" criminal investigation and don't create a unique entity with forensic sciences. This concept of criminalistics doesn't negate scientific establishment of criminalistics.

## **OBJECT AND METHODS**

The existence of every scientific discipline is absolutely conditioned with possession of its own object and method(s) of scientific research. To give a complete answer on question does criminalistics comply with mentioned conditions, we need to answer on a few questions:

First, what is an object of criminalistic research? The majority of authors see object of criminalistic research in revealing a crime, its offenders and its proving. Also, some authors emphasize that area of scientific comprise of criminalistics is crime prevention, in the sense of prevention of future criminal offences (criminalistic crime prevention, crime prevention in criminalistics). Prevention, proving and revealing of crime and its offenders from the point of crime combating is an area placed before legal lighting up of these categories and their legal determination in criminal procedure, or at least area that goes side by side with it. Without scientific approach to problems of prevention and revealing of crime and its

offenders it cannot be possible to go ahead at this area and to comply with requests which society sets up through the institution of legal order.

Second, whether the object of criminalistic research is object of research of some other disciplines? The phenomenon of *crimen* by its physiognomy is research object of many disciplines but every in its sporadic segment. So, from the point of *crimen* as a social occurrence deals sociology, with its causes and its phenomenology deals criminology, with determination of criminal offences and conditions for criminal liability, prescribing of criminal sanctions deals criminal law and so on. But orientation of any other science is not at lighting up a crime and partly its prevention as it is case with criminalistics. As we see there is no other discipline that has for research object this part of crime research. But there are some intermixtures of content of criminalistic research, about it we will discuss more when we are analysing relation of criminalistics with other cognate disciplines.

Third, what methods of research criminalistic use? Unlike of research object of criminalistics which undoubtedly separate criminalistics from the other disciplines that research crime, and which as such represent important argument *in favorem* to criminalistics as a science, at the same time on the field of methodology of criminalistic research exist significant disputes. These disputes find rotes in fact that criminalistics in its theoretical and practical approach use together with its own, methods, cognition and achievements of other disciplines. Claims that criminalistics still is not on this level of development to be recognized as a standalone science, or that criminalistics is only a functional totality of connected particular scientific disciplines, (Pavišić, 1997), are mainly consequence of the fact of multidisciplinary methodological approach in criminalistics.

However, when criminalistics use methods of other sciences, it does that on very specific way, customizing them to specificity of criminalistic research objects, rules, and needs. As its emphasized it isn't a word about clean mechanical application of these methods, but those methods have been transformed and actively customized to needs of criminalistic science, (Modly, 2002).

Finally, it can be very difficult to imagine science that doesn't use achievements, cognition and methods of other sciences. It is well known example of medicine that uses methods of chemistry, biology and other sciences however nobody disputes medicine as science.

But there is a one moment that we didn't find in literature that can play a significant role in evaluation of criminalistics scientificity from the point of its methodology. This moment is carriers of this approach. Every scientific approach if we consider it as a "*...seeking the most trust-worthy answers possible to certain kinds of interesting or important questions*", (Fitzgerald, Cox, 1994), except its object and methods requires appropriate subjects that

will lead it. If we want to perform some criminalistic research, it is logical that it must be led by subjects that dispose with criminalistic cognition and knowledge. In this moment there is no these subjects, and scientists from other scientific areas perform a research on the field of criminalistics. That is a main reason why the criminalistic have the least benefit from researches at its own area, but that is not the case with other disciplines. In one of his works 1898 Gross said: "*Undoubtedly it can be considered that criminalistics has arrived at level of stand-alone discipline and has won a right for a place in science*", (this citation is from: Schurich, 1998). However more than hundred years past from this claim and thanks to criminalistics other disciplines are emancipated, unlike criminalistic that still has been disputed.

### **RELATION WITH OTHER COGNATE DISCIPLINES**

Modern theory of crime research usually connects criminalistics with sciences that have research object *crime* in general, or particularly, like criminology, forensic sciences, criminal procedure, criminal law, crime control policy and others. In this work we will especially pay attention to relation of criminalistics with criminology, criminal procedure and forensic sciences. This we will do because criminalistics is very close to these sciences, more than to others, and because the majority of problems for criminalistics date from inconsistent relation with other sciences particularly mentioned.

Criminology is a discipline, that has a longest tradition in crime research, and not without reason has an attribute of mother of all criminal sciences. The object of research of criminology, in shorter, is etiology and phenomenology of crime. It has been considered that between criminology and criminalistics exists mutually relation regarding to a question why crime is committed and in what way. On the first question criminology gives an answer, because the problems of crime causes are object of research of criminology. On the second question criminalistics gives answer because criminalistics has to fix up all models of committing of some specific crime, (Mladenović-Kupčević, 1997). Of course, relation between these disciplines can't be observed exclusively through this, because criminalistics is interested in content and cognition of the fields of etiology and phenomenology of crime, as well criminology in achievements of criminalistics, but it is important because it represent one of the fundamental bases for distinction between two disciplines. In literature it hasn't been unknown that criminalistics by one part of the authors has been consider as integral part of criminology.

Criminal procedure is a law discipline that has the closest place to criminalistics. Reason for that is simple; the purpose of this procedure is "*apprehension, trial, prosecution, and sentencing the criminals*", (Rush, 1986). And criminalistics has function just to give

appropriate cognition for realization of this purpose, to be a "*Queen of investigative procedure*", (Soine, 1998). About relationship of these two disciplines, there are claims that criminalistic is a subsidiary discipline of criminal procedure. These claims are founded on argumentation that measures of criminalistics are fulfilling the frame of rules proposed by criminal procedure, and in fact make the content of these rules. However, content of criminalistic procedures are wider than rules of criminal procedure, and in this sense it's difficult to talk about criminalistics as subsidiary discipline of criminal procedure. The rules of criminalistics cover more area than rules of criminal procedure, and one of the reasons for that is because these rules are based on principles on technical and other sciences, (Modly, 2002). This fact as well disputes points about criminalistics as a legal discipline. We are standing at standpoint that criminalistics and criminal procedure have a lot of mutual interest, but there are separate disciplines.

Under the notion of forensic sciences (Lat. *forum* -public place) connote application of science in law, in other words sciences which have been used for the need of judicial procedure. A more detailed definition is that forensic sciences are application of science to criminal and civil law by the police agencies in a criminal justice system, (Saferstein, 1998). Under these definitions, and this is what has been said earlier in discussion about place of criminalistics in different systems of criminal justice relation between criminalistics and forensic sciences can be perceived throughout a few points. First criminalistics is a technical part of forensic sciences, (Lee, Labriola, 2002), second forensic sciences are part of criminalistics so *called criminalistic –technique*, and criminalistics is other name for forensic sciences. In literature can be find claims that criminalistics and forensic sciences are usually identified, (Swanson, Chamelin, Territo, 2003).

### **INSTITUTIONALIZATION OF CRIMINALISTICS**

One of the more important components of every science is its academic and research institutionalization. This component of science is very important because of a provision of cognition, which should be a guaranty of its existential and development in the future. Today many educational and other institutions like research institutes, laboratories etc. study appropriate criminalistic contents. Some authors emphasize that criminalistics as a science has come up to level of institutional science, which has been shown by fact that in the world exist many institutes and scientific centres that realize many numbers of research projects with purpose of solving many theoretical and methodological problems of criminalistics, (Bakić, 2001).

But the same can't be said for criminalistic institutionalization in context of its studying at the academic level. Contemporary approach in which criminalistics has been studied, as a

secondary subject on universities, under our opinion is a mistake. Except a few high educational institutions in the world (Faculty of criminalistic sciences of Sarajevo University – also called Faculty of criminal justice sciences, California State University, Los Angeles and University of Illinois Chicago which offer a degree of Master of Science in criminalistics) there is no interest for criminalistic studies as a main discipline. In a greater number of cases criminalistics has been studied at colleges that don't have character of the universities (and without possibility for postgraduate education) or at the universities but in the frame of other faculties especially law (Department of criminalistics at Law Faculty of Moscow state university, Criminalistics as electoral subject at the Law Faculty of University in Zagreb etc). This situation contributes to contemporary status of criminalistics and we think that this is a direct consequence of unclear postures about criminalistics discussed in this work.

### **CRIMINALISTICS AND MODERN SOCIETY**

Significant factor in understanding of criminalistics is society by itself. One of the greatest challenges of contemporary society is crime with immense proportions and the way that will settle towards. Criminalistic can play great role in a system of disciplines that deals with that problem. Up today experience undoubtedly shows that there has been inadequate attitude of society toward criminalistics and its development in autonomous direction, with a perception of criminalistics as a police skill and proceedings which under strict law rules and due to application of methods and cognition of other sciences has to be functional. Is that point appropriate or not, that is difficult to say, although it seems that between a few main approaches to research of crime occurrence society always chooses that one with no justification of criminalistics as a standalone scientific discipline, favouring multidisciplinary approach in which criminalistics should be an scientific inactive field for application of achievements of other research entities, without wish and possibilities to settle things differently.

Certain changes can be seen in last time. Demonstration of that is modification of earlier and application of completely new and differing forms of combat of crime that directly or non-directly affirming criminalistics, its methods and procedures in contemporary conditions at national and international levels. New approaches simply doing that criminalistics no matter how we considering it a science, technique or skill more and more arising in a global field of knowledge which achievements use all subjects of law enforcement.

## CONCLUSION

After all what has been exposed in this work the question about criminalistics scientificity arising as a very difficult for an exact answer and we thought partly under influence of situational observations. It is very hard to get over the impression that in existing circumstances it can be absolutely impartial. Accepting points that consider criminalistics as a subsidiary discipline, system of knowledge in a system of criminal justice, but not as a science, the whole network of scientific approaches to crime detection and prevention, though has scientific foundation stay without its materialization in context of separate scientific area. On the other side points which see criminalistics as a total scientific emancipated science suffer from incapacity to ontradict some claims regarding to fact that many methods which criminalistics use are methods which belong to other sciences and other areas of scientific research, and to give an answer on some other questions about it researches.

To this can be added many disagreements in terminology and as well considering of content of this discipline. Anglo-American model shows as quite affirmative approach to criminalistics as a scientific discipline, which unfortunate comprise only forensic part of criminalistics as a substantial its field and in fact other name for it. Some other models, which consider criminalistics as a unique area of application of technical and other sciences for purpose of criminal procedure and criminal investigation at theoretical and institutional level, don't hold clear point about its status.

Anyway, we think that problems mostly generate just insufficient level of academic institutionalization of this discipline. Fact that there is a small number of institutions of universities nature at which criminalistic can be studied as a main discipline at graduate and postgraduate level, produce a logical consequence of insufficiency of subjects that need to be a carrier of criminalistic scientific and practical cognition, and with that a main factor in its development. Expectation that to this discipline and its autonomy will contribute scientists and practitioners from other areas is really unthankful. Criminalistic should be allowed to develop and reproduce its cognition creating subjects who will contribute to its individuality, and the question of its scientific or non-scientific nature will become unnecessary.

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## Theory of Probability and Criminal Procedure: A New Perception of Interpretation of Evidences and Court's Ruling<sup>8</sup>

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*Summary: The purpose of the paper is to consider whether it would be possible to introduce the so-called Bayes' rule in a contemporary criminal procedure of a civil legal tradition. The Theory of probability, usually discussed within mathematics or statistics is rather marginally, if at all, discussed in the Bosnia and Herzegovina legal literature in general, and in criminal law literature in particular, especially with regard to its implementation in criminal trials for the purpose of getting a court's ruling. On the other side, this theory is well known in Common Law countries, and as such is in the focus of legal theory for a long time. According to purpose several questions are asked in this paper, such as: Is it possible to use the Bayes' rule in the application of the law of evidence for the purpose of obtaining court's judgment? If yes: under what conditions? And finally: What would be consequences of the introduction of such rule? Use of Bayes' rule in Criminal procedure wasn't been deeply researched in Bosnia and Herzegovina, so the practical implications are better understanding possibilities of its use particularly for interpretation of some kind of evidences.*

*Keywords: Bayes' rule, criminal procedure, evidence law, interpretation of evidences, court's ruling*

### INTRODUCTION

As is well known, the implementation of science-based achievements of different scientific disciplines for the purpose of criminal and judicial process in general, is one of the more prevalent tendencies of contemporary justice. In criminal proceedings, implementation of science-based achievements, in modern times, is expressed in two areas. First, is the area of obtaining evidence, and second, the area of interpretation and evaluation of probative value. In the area of obtaining evidence, scientific and technological development has reached such a level that they not only significantly facilitates the search for evidence thanks to sophisticated forensic procedures, but it also makes it possible to actively generate evidence, as is the case of technical recordings in special investigative techniques,

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for example. For the purpose of this paper, we are specifically interested in the second area of applying scientific and technological development for the purposes of criminal justice and that is the area of interpretation of evidence and the assessment of its probative value. Although in this area, the application of modern science has increased to such an extent that it has led to the phenomenon being described as the *scientification of courtroom* in the legal literature, there are still many open questions remaining. One of them, which will be the subject of the discussion in this paper, is the possibility of applying a specific mathematical model of probability theory, also known as *Bayes' theorem*, in the interpretation of evidence and the assessment of its probative value. In domestic criminal proceedings, and especially in general legal theory, theory of probability and its implementation in the judicial proceedings has been, marginally or not at all, the subject of consideration. In Common law theory, however, it is the issue very generously treated in academic and professional circles, and that is very conclusive experienced in the few cases that have been argued by high courts of some states. In this context, the aim of this paper is to introduce to scientists and professionals to the basics of this mathematical model, and also the possibilities of its implementation in the framework of interpretation of evidence, and the judicial decision-making process. In this regard, the paper introduces the need for a better understanding of these issues connected with basics of probability theory. The paper findings will analyze a theoretical point of view on the possibilities of its application in criminal proceedings, as well as the relevant court rulings that have direct connections to specific criminal cases in which this and some other probability models are implemented. Also, it will refer to some empirical studies that have been conducted on this topic. Finally, it is very important at the introduction of this paper, to note how none of the authors is a mathematician or statistician, rather criminal law and investigation researchers and professionals. Accordingly, this paper should only be considered from the criminal law and investigation point of view, and not from the view of mathematics or statistics. This can be a limiting factor, but in general this is also a limiting factor for every investigator, prosecutor or judge who makes decisions on a daily basis in the real world. Because of that, we are aware of our weaknesses and will use them to learn more about the issues we highlighted in this paper, and on the other side, therein, where we are on our scientific and professional field we will try to be more critically oriented, all for purposes of the better understanding of this matter.

## **UNDERSTANDING PROBABILITY AND ITS CONNECTION TO CRIMINAL JUSTICE**

In general, the theory of probability in modern science can be considered as the study of mathematical models of random phenomena (Parzen, 1960: 5–8). Learning about probability started to develop in the Middle Ages, driven by gambling. Among the first written works that have referred to this issue are the works of Girolamo Cardano, then the

correspondence between Blaise Pascal and Pierre de Fermat, prompted by a letter addressed to Pascal by the Chevalier de Méré, and later Bernoulli's work, as well as other authors (Bertsekas & Tsitsiklis, 2008: 17; Ore, 1960: 411–412). It is believed that the modern arithmetic system developed by the Hindus and Arabs, together with new Renaissance ideas facilitated the development of the first scientific „thinking« in this area (Bertsekas & Tsitsiklis, 2008: 17). The essence of the above works mainly addressed solving probability problems in games of chance.<sup>9</sup> It has been noted that despite the long history of defining probabilities, thanks to Russian mathematician A. N. Kolmogorow in 1933, we received the first satisfactory definition of probability theory in which probability figures as a function on subsets of so-called sample space, where sample space represents the set of all possible outcomes of the experiment (Tijms, 2012: 229). Today the mathematics of probability has a wide field of application in physics, biology, engineering, medicine, economics and great many other areas.

Now we can ask a question: what is the connection between mathematical probability and criminal justice? Probability theory, as we mentioned above, has found its range of applications in virtually all areas of human life, and almost any event can be calculated and predicted by applying the appropriate formula. All of this, of course, speaking in the language of mathematics. In this sense, one can imagine guilt as a specific event. So, through using specific principles of probability theory, it is possible to accurately calculate the probability of someone's guilt; again, in mathematical not legal language.

As a particularly good tool for this calculation, modern scientists use the achievements of Thomas Bayes (1701–1761), an English priest, philosopher and mathematician who in *An Essay towards solving a Problem in the Doctrine of Chances*, which was edited after his death, and then published by his friend Richard Price, developed a model based on the principle of probability. In addition to a large number of other scientific areas, it can also be applied to the interpretation and evaluation of evidence in judicial proceedings.

As R. Price explained in his letter to John Canton: *»In an introduction which he (Mr. Bayes) has writ to this Essay, he says, that his design at first in thinking on the subject of it was, to find out a method by which we might judge concerning the probability that an event has to happen, in given circumstances, upon supposition that we know nothing concerning it but*

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<sup>9</sup> A good example of that is de Méré letter to Pascal in which he explains his confusion about the so-called dice problem, or when one throws with two dice, how many throws must one be allowed in order to have a better than even chance of getting two sixes at least once. De Méré believed this number has to be 24, but his own experience had shown him that 25 throws were required. As it was latter resulted from correspondence between Pascal and Fermat, de Méré was right, (Ore, 1960: 411–412).

*that, under the same circumstances, it has happened a certain number of times, and failed a certain number of times.» (Bayes & Price, 1763: 1–2)*

The work of Thomas Bayes presented in the aforementioned essay as Bayes' theorem or Bayes' rule, is one of the most significant achievements in the field of probability theory and so-called conditional probability. Some authors refer to Bayes' approach using the term »likelihood approach« or »likelihood *ratio* approach«, (Aitken, 2012; Ligertwood, & Edmond, 2012; Nordgaard & Rasmusson, 2012; Robertson, & Vignaux, 1995). It is important to note that Bayes' rule can be used for interpretation and evaluation of evidence in criminal procedure. In general, this rule allows us to correct the so-called »prior probability« of an event after we subsequently brought some evidence, and in this way to receive the so-called »posterior probability« of that event. According to O'Hagan, (2007), most legal systems, and we are in agreement, acknowledge that guilt can rarely (if ever) be established beyond any doubt at all, instead we use phrases like »beyond all reasonable doubt« or »on the balance of probability« which make explicit reference to probability as a basis for judgment, (O'Hagan, 2007: 18). Today, there is a great number of variations in presenting Bayes' rule for the purposes of its application in criminal justice, as we found in the literature. Here we choose a few of them considered as simple and understandable to everyone with at least a basic knowledge of mathematics.

The first one discussed comes from O'Hagan, (2007) and it is shown below as:

$$\frac{PG \times LG}{(PG \times LG) + (1 - PG) \times LI}$$

Where the PG is *prior* probability of guilt, 1 - PG, *prior* probability of innocence, LG, likelihood of guilt and LI likelihood of innocence. Using this formula, it is possible to compute someone's guilt in light of the evidence here noted as *posterior* probability (See, O'Hagan, T. 2007: 18–19). He also noted that probability for a proposition can be a number between 0 and 1, where 0 means that the proposition is certainly false and 1 means that is certainly true, and probabilities between these limits measure different strengths of the belief of the proposition.

There is also Thompson and Schumann's (1987) presentation of the same rule for the »computation« of someone's guilt and it is shown as:

$$p\left(\frac{H}{D}\right) = p(H)p\left(\frac{D}{H}\right) / [p(H)p\left(\frac{D}{H}\right) + p(\bar{H})p\left(\frac{D}{\bar{H}}\right)]$$

Where: p(H) presents *prior* probability and reflects one's initial estimation of the probability that suspect is guilty in light of everything that is known before receiving

evidences D; D presents associative evidence; and  $p(H/D)$  presents *posterior* probability and indicates what one's revised estimate of probable guilty should be in light with everything that is known after receiving D (Thompson & Schumann, 1987: 170–171).

Finally, one of the recent and very comprehensive approaches in presenting the possibilities in the implementation of Bayes for the purposes of interpretation of evidence is one from Robertson and Vignaux, (1995). In their example:

*Prior odds* x Likelihood *ratio* -----> *Posterior odds*

*prior odds* (*prior* probability) presents our assessment without the evidence; likelihood *ratio* is the probability of the evidence supposing that our assertion is true divided by the probability of the evidence that the assertion is not true; and *posterior odds* (*posterior* probability) is the probability we want to know, and the odds in favor of the hypothesis after taking into account the new piece of evidence, (Robertson & Vignaux, 1995: 17).<sup>10</sup>

As to how all these variations of Bayes and probability in general can be implemented in the courtroom and what impact it would have on interpretation and evaluation of evidence, we shall discuss later in this paper. However, it should be noted that Bayes' approach can be used not only for the purposes of interpretation of evidence at trial, but in criminal investigations as well. One of the examples of this is the study conducted by Blair and Rossmo (2010). In this study, using three types of evidence: »witness«, »confession« and »physical evidence« (because of few justified reasons, they decided as a physical evidence to take a fingerprint), they made a complex analysis of a single element of evidence, multiple elements of evidence in agreement and conflicting elements of evidence, using Bayes, which resulted with very interesting findings. For example, in the analysis of single elements of evidence, the presence of fingerprint evidence resulted in *posterior* probability of guilt over 95% at an *a priori* probability of 28%, confession evidence at an *a priori* probability of 45%, and eyewitness evidence at an *a priori* probability of 49% (Blair & Rossmo, 2010: 126–132).

If probability over 95% in the aforementioned example, we bring in context with the fact that probability for the proposition can be any number between 0 and 1 it is not hard to conclude how the stated hit rate is very close to which can be »mathematically« concluded as certain. They emphasized that for an accurate assessment of someone's guilt, given a particular element of evidence using Bayes' rule, it is necessary to know three numbers: First, the hit rate of the tool that generated the element of evidence (i.e., how likely is it

<sup>10</sup> According to mentioned authors if the likelihood *ratio* is more than 1 the evidence tells in favour of the hypothesis, if the *ratio* is less than 1 then it tells against hypothesis, finally if the *ratio* is exactly 1 in that case evidence is neutral. For more details and particularly good explanations of many parameters in the field of Bayes use in forensics see Robertson and Vignaux (1995).

that a suspect would be identified in a photographic lineup when the suspect is in fact the person who committed a crime); Second, the false positive rate of the tool (i.e., how likely is it that a suspect would be identified in a photographic lineup when the suspect is in fact not the person who committed the crime); and Third, the *a priori* probability that the suspect is guilty (Blair & Rossmo, 2010: 125). However, the same authors also noted limitations of the study connected to the overestimation of hit rates and underestimation of false positive rates.<sup>11</sup> As we can see, the mathematics of probabilities and Bayes' rule can be a very useful tool in interpretation of evidence during the criminal investigation stage. Although we see at this stage using mathematics of probability for any assumption of someone's guilt, even for the lower degree of guilt of the sort required in the course of the investigation, can be disputed and we can't neglect the potential benefits of using this approach. For those who know what a criminal investigation means, it is well known that rarely is the investigation black or white and commonly needs to be composed of great number of pieces that should be put in their places. The modalities of connecting these pieces into a single logical unit usually can be mind »heavy«, and are sometimes unconventional. It rarely happens that we start the investigation full of useful information that interested us. So regarding the question: does probability approach need to be used in investigation on the way mentioned above or similar, we can ask another question. For example, in Bosnia and Herzegovina police agencies conduct polygraph testing at the pretrial stage to get any possible information in the course of investigation, but at the same time, cannot use the results of testing as legally admissible evidence. So why conduct it at all?

But using Bayes' rule at this stage of the criminal proceedings is not our current concern, although it is very difficult to separate investigation from the trial, especially in the criminal proceedings in Bosnia and Herzegovina, and we'll go on mathematics of probability at criminal court, leaving all outstanding issues regarding the investigation likely for our subsequent work.

### **PROBABILITY IN CRIMINAL COURT**

It is very important to note that the probability in criminal procedure, as any other science or knowledge we are using for the purposes of interpreting evidence, must be used in accordance with the procedural rules in the case. Only then in our case of use of mathematics of probability, can one talk about the so-called probabilistic evidence which can be accepted or not by a court or jury. Generally, any information might be used as evidence in the proceedings, but it first must meet certain, very rigorous, procedural, and

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<sup>11</sup> For detailed account of their findings and limitations see Blair and Rossmo (2010).

evidence rules. There are differences if we consider criminal procedure and evidence rules in Civil or Common law tradition. Generally speaking common for both is that the expertise must be conducted in the form of expert testimony as party or court evidence, and it has to be based on appropriate professional knowledge and provide answers to factual not legal questions.<sup>12</sup> For the purposes of this paper, we assumed that these rules, in the case of using Bayes are accomplished, so that further in the paper we can focus on substance, but there could be a problem. Sometimes, it is not easy to make distinction between formal admissibility of expert testimony as evidence, and a court's willingness to accept that expert testimony on the grounds of believing in a specific scientific approach used to provide the testimony. A good example of this is the opinion of Court of Appeal in *R v T* in which: *»The principles for admissibility and provision of expert evidence are clear, but courts cannot apply them if they are not made aware of the way in which an expert has reached his opinion through the provision of a full and transparent report.«* (*R v T* [2010] EWCA Crim 2439, 109) Whenever we talk about the implementation of these and similar techniques in criminal procedure, we should bear this in mind.

One of the earliest reported cases in the literature of the use of probability for the interpretation of evidence was the case of Alfred Dreyfus, French artillery officer in the General Staff, from 1894. In this case, Dreyfus has been convicted for espionage for Germany on the basis of a comparison of the frequency of certain words from his correspondence with his brother, with the content of the disputed document that ended up in German hands. Based on the existence of obscure lexicographical and graphological coincidences in the document itself, the prosecution witnesses indicated that there is a high probability of its disguised character and of its use to convey coded information (Tribe, 1971: 1332). Few years later, Dreyfus was pardoned. A subsequent review of the expertise conducted by the prosecutor's witnesses established that the mathematical basis for the assumption of the high probability that Dreyfus was the author of the document was pointless.

Another of the known cases to incorporate probabilities evidence, and later suffered a reversal at the California Supreme Court, is the case of *People v Collins* from 1968. In this case, an interracial couple (black male and white woman) was accused of robbery. This case is curious because there was no clear evidence that this specific couple committed the alleged offense, and from the testimony it was said that a young blond white woman

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<sup>12</sup> In general, rules in Civil law tradition bind experts for non-biased testimony, strictly based on the rules of their profession or knowledge, and on the other side, for example in US criminal law, there are rules of evidences and specific standards, *Frye* and *Daubert* which define conditions of admissibility of expert testimony in criminal procedure.

with a ponytail ran from the crime scene and entered a yellow car driven by a black male with a mustache and beard. A few days later police arrested Mr. Collins and his wife Mrs. Collins as the couple who matched the description provided by the witnesses. In the proceedings that followed, the prosecutor urged the mathematical instructor to determine if the robbery was committed by a blond white woman with a ponytail accompanied by a black male with a mustache and beard, and that there was an overwhelming probability that the accused couple were guilty because they matched the detailed description. Without entering further into the explanation of a very complex process of calculating the probability that followed, it was determined by the expert that the probability that any couple possesses the characteristics of the accused are 1 in 12 million, which significantly impacted upon the jury and resulted in a conviction for second degree robbery (People v. Collins 68 Cal. 2d 319, 438 P.2d 33, 66 Cal. Rptr. 497, 1968).

But how did prosecution witness, an instructor of mathematics from a state college, come to the aforementioned degree of probability of 1:12 million? First, he determined the probability for each of the 6 characteristics of identification as follows:

Characteristic:	Probability:
Partly yellow automobile	1/10
Man with mustache	1/4
Black man with beard	1/10
Girl with ponytail	1/10
Girl with blond hair	1/3
Interracial couple in car	1/1000

Subsequently, he used the criteria of the so called »product rule«<sup>13</sup> of those probabilities as it is shown below:

$$\frac{1}{10} \times \frac{1}{4} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{3} \times \frac{1}{1000} = \frac{1}{12 \times 10^6}$$

The final result indicated that the chances that some other randomly chosen couple would possess these same characteristics as the accused couple are, as mentioned before, 1 in 12 million (People v. Collins 68 Cal. 2d 319, 438 P.2d 33, 66 Cal. Rptr. 497, 1968). After the Court performed its own probability test, it concluded that: *»Even if we should accept the prosecution's figures without question, we would derive a probability of over 40% that the couple observed by the witnesses could be duplicated by at least one other equally*

<sup>13</sup> According to noted rule the probability of the joint occurrence of a number of mutually independent events is equal to the product of the individual probabilities that each of the events will occur (People v. Collins 68 Cal. 2d 319, 438 P.2d 33, 66 Cal. Rptr. 497, 1968).

*distinctive inter racial couple in the area.*« Using this and other arguments that: *»The testimony itself lacked an adequate foundation both in evidence and in statistical theory and that the manner in which the prosecution used it distracted the jury from its proper and requisite function of weighing the evidence on the issue of guilt ...«* the Court reversed judgment of conviction and held: *»That defendant's trial by mathematics so distorted the role of the jury and so disadvantaged counsel for the defense as to constitute in itself a miscarriage of justice that mandated reversal.«* (People v. Collins 68 Cal. 2d319, 438 P.2d 33, 66 Cal. Rptr. 497, 1968) It is important to note that in this case, the implementation of Bayes' rule as a model for computing probability, and in general, criteria of conditional probability were ignored, instead the expert used the method of so called *»product rule«* as we mentioned earlier.

Also one of the recent and well analyzed cases that involved similar controversy about the use of probability at trial is the case R v T and the judgment of the Court of Appeals in the English High Court of Justice relating to it. Despite the obvious differences between this case and the People v Collins case (i.e. cases being tried in different legal systems, under different charges, expert testimony related to different facts, and different probabilistic method used, product rule in People v Collins and Bayes in R v T), the final results in both cases are pretty similar. The higher courts did not accept the expert's interpretation of evidence, considering them inadequate in the process of interpretation, and also in terms of the mathematical models used for their interpretation.

In the R v T, the appellant was tried for the murder, was convicted and appealed on issues connected to the extent to which expert evidence on footwear marks is reliable as well as the way in which it was put before the jury. As it was noted, the real issue in the footwear marks was the use of likelihood *ratios* in forming an evaluative opinion on the degree of likelihood that a mark had been made by a particular item of footwear (R v T [2010] EWCA Crim 2439 15). As stated in the judgment: *»Appeal raised an issue of some importance in relation to the use of likelihood ratios in the provision of an evaluative opinion where statistical data available were uncertain and incomplete.«* In short, the expert in this case came to his conclusions by examining the marks and the footwear regarding four factors: 1) the sole pattern, 2) the size, 3) the wear and, 4) any damage noted. His formula is shown below:

$P \times C \times W \times D$  with values of  $5 \times 10 \times 2 < 1 = \sim 100$

The values P, C, W, and D represent appropriate frequencies of these four factors, which he then multiplied the likelihood *ratios* for each of the factors to get an overall likelihood *ratio* of 100. His conclusion presented to the jury was that there is a moderate degree of

scientific support for the view that (the Nike trainers) made those marks, (R v T [2010] EWCA Crim 2439 29., 35., 36.,37., 41.). Similar to *People v Collins*, the Appeals Court in this case also overturned the previous judgment arguing against the way the expert testimony has been presented, the non-transparency of using likelihood *ratios* in this specific case, and lack of a proper statistical basis for that kind of expertise. However, it should be noted that Court opinion recognized the importance of Bayes for DNA analysis, when stated that: »Acceptance of a mathematical approach to the calculation of a match probability in DNA cases is based on the reliability of the statistical database, though an element of judgment is required.« (R v T [2010] EWCA Crim 2439 80.)

The cases analyzed here are not the only ones which incorporate the probability controversy. There is a great number of other cases which can be found in judicial archives and literature, like for example *R v Clark* (R v Clark [2003] EWCA Crim 1020), where a mother was convicted of the murder of two her babies and the Court of Appeals in The Supreme Court of Judicature of England and Wales concluded that the convictions were unsafe and must be set aside. But we found that questions arose in those we presented were completely enough to understand the whole complexity of the issue of probabilistic evidence and its use in court.

## REPERCUSSIONS

In consideration of all possible outcomes with the use of Bayes in criminal trials, and in general in criminal procedure, it has to be noted that debating the accurate nature of the court's judgment is a difficult task. That task has two sides, that from the standpoint of legal system for our purposes we call objective and one subjective, from the standpoint of parties at trial. From an objective point of view, the final court decision (*res iudicata*) is correct and we can accept this on the level of principle. The legal system of each country that respects fundamental human rights and freedoms, incorporates a large number of formal mechanisms that should provide a fair and equitable trial along with the required presumption of innocence, *the in dubio pro reo* principle, *the* right to appeal (right to legal remedies), along with many others. By meeting all of these requirements in each particular criminal case its objective nature will be realized. On the other hand, from a subjective point of view a court judgment will never be correct, except in some cases for example where the accused pleads guilty or in the case of plea bargaining. The party that loses the case will represent the idea that it has been impaired and that the judgment is neither fair nor legally correct. In criminal trials, objectivity is therefore based on the parties' subjective standpoints carefully reviewed by a court or jury. Those standpoints have to be based on evidence and now we arrive at the question, what if the evidence is based on probability? Some authors think that there could be a problem and that the costs of

attempting to integrate mathematics into the fact-finding process of a legal trial outweigh the benefits (Tribe, 1971: 1377). As it can be seen, having analyzed some relevant cases in this paper, it seems safe to conclude that the judiciary is not prone to such experimentation with evidence in criminal trials.

What does this practically mean? Does it mean that the mathematics of probability should be considered as some sort of number playing game commonly used in criminal procedure when one side in trial (the prosecutor, but also the defense), does not have other convincing evidence, and by the way of so-called »mathematical tricks« tries to prove its claims? No it does not. In connection with that, it has to be noted that in legal theory misusing probability by the prosecutor, to prove questionable facts is known as a »prosecutor's fallacy«. This term identifies the logical mistakes of treating the probability of the occurrence of the available evidence given the innocence of the accused as if it were the probability of innocence given the available evidence (Pundik, 2013: 95). The corresponding term relative to the defense is known as »defense attorney fallacy«. But the mathematics of probability is also a serious scientific discipline and scientists and professionals from that field have to be taken into serious consideration. Some of them share the opinion that in some cases, the Bayesian approach may not be an appropriate model for the interpretation of certain evidence, but that does not mean that essentially probability needs to be rejected in criminal proceedings. This is particularly evident in the debate that developed after the ruling in the *R v T* case. In his response to the court's opinion and critics of the Bayes approach in the *R v T* case, Aitken (2012: 255) stated: »As a strong advocate of the likelihood approach, I was anxious to learn more about other approaches to evidence evaluation and interpretation and understand them better.« Contrary to Aitken (2012), Ligertwood and Edmond, (2012) are willing (under specific conditions) to accept different approach but they expressing their disbelief that this is possible because of minor judicial support for converting the standard of proof into mathematical terms (Ligertwood & Edmond, 2012: 290).

Also, very important is the question of the way in which the court makes its decision and the possibility that the decision is, in the end wrong. Or what if mathematical formulas are right, but the court cannot interpret them as such? One of the studies related to considerations of possible errors in judicial rulings suggested that judicial decision making is generally qualitative and often intuitive, and thus far apart from the theory of decision making under uncertainty, with its quantitative and rational orientation, and its game theory extensions, (Sonnemans & van Dijk, 2011: 687). It is exceptionally significant to emphasize the seriousness of the review of the judgment by a higher court. »What would happen if the defendant in the case of *People v Collins* did not appeal as did his co-defendant wife?« The answer is simple: »The Collins couple would stay in jail for some

time and that would be a thing that fears all of us.« In this sense, some authors see the importance of the decision in *People v Collins* because the judges took the prosecutor's statistical sortie seriously enough to comment at length on the problem of statistical evidence and to attempt a mathematical demonstration of the correct form for such analysis (Finkelstein & Fairley, 1970: 489). Although in all cases that we have had the opportunity to analyze, the judgments have been reviewed by higher courts which rejected expert testimony that were based on probabilities, and on Bayes as well; this does not mean that cases where such expert testimonies were upheld by courts do not exist or will not appear soon.

Accordingly, we would agree with Friedman (1996) who in his review of three books significant in the field of understanding probabilities in criminal law, referring to Robertson and Vignaux contend that logic, probability and inference provide the language in which lawyers and scientists should communicate with each other: *»I agree, though, that this is more easily said than done.«* (Friedman, 1996: 1838)

## CONCLUSION

As we have seen in this paper, the mathematics of probability and Bayes as well, have their places in contemporary science but whether on the basis of so-called probabilistic evidence we can establish a fair and fact-based judgment. This is not an easy question to answer. In criminal procedure the interpretation and evaluation of evidences must comply with the rules of logic. Sometimes, in a storm of arguments and counter arguments as well as complex procedural rules, it may be difficult to see logic but the process of judicial decision-making in all its parts has a syllogistic nature. According to that, a court's judgment has to be a logical judgment. Logic is always connected with truth, or we can say logic is truth. In criminal procedure, logic often does not mean real, material truth but so-called procedural truth or as we call it *»proved truth«*. The rules of criminal procedure, irrespective of the outcome of the proceedings, strictly forbid taking some evidence which could potentially significantly contribute to establishing the truth. In this respect, it should be noted, for example, the right of the accused to remain silent, also the procedural impossibility to question some other persons whose statements could serve as a valuable source of factual knowledge, inadmissibility of evidence because of formal reasons and such like. Due to that, the difficult task of determining the truth becomes even more complex and more demanding for judicial bodies. Some of the tools they use for decision-making and achieving the truth, at least *»proved truth«*, are scientific approaches and (whether we are willing to admit it or not) the court's decisions in the future will become more quantitative than qualitatively based, and more scientific than intuitive.

This fact in the case of probabilities and Bayes on one hand means that lawyers, more specifically judges, and in some systems the jury will probably be incapable of dealing with complex formulas and that is worrying. On the other hand, scientists and non-legal professionals who are good at their fields are probably not as good in dealing with the criminal law and investigation. But there is a difference, in criminal cases expert witnesses are giving their specific professional expertise, not legal opinions, based on the rules of appropriate science. They are not worried about law *ignorantia* because the application of law is not their task. This is the judges' task. This brings us back to the beginning; somehow mathematics is a coldly exact science, where errors are rare and can be easily solved once you recognize them. In criminal cases, errors resulted with victims of injustice and rarely are there ways to correct them after the injustice has been done. It is for this reason that our thinking through the analysis presented in this paper has changed after we experienced a series of arguments against our initial attitude which was on some way perhaps *in favor* of Bayesian approach. We are now very cautious about the possibility of its application generally in criminal proceedings and specifically in criminal justice in Bosnia and Herzegovina. And it is very difficult to predict what would be the consequences of its use in our system of criminal procedure apart from nowadays commonly used DNA evidence. It seems paradoxical, but it is precisely the rule which permits the correction of *prior* probability with subsequent evidence, which in our case turned out to be accurate. However, we still think that Bayes' rule and probability should not be excluded from the process of making judicial decisions, nor it would of course be possible given that there are areas such as DNA analysis, for the purposes of criminal and other legal proceedings, which has proved to be one of the most important and reliable sources of evidence today, and which is based on the principles of mathematical probability. On the other hand, neither decision makers should be bound by the *a priori* acceptance of expert opinions, even when it is clearly in line with the best knowledge and points to only one, certain result. Finally, we see this paper as the first step in consideration of this very intriguing field of research. Our next step will definitely be an empirical study in connection with some specific implication for the use of Bayes in criminal procedure in Bosnia and Herzegovina. At least it seems soothing that the Bayes approach, despite all the criticisms made against it, nevertheless gave us the boundaries of 0 and 1, and in between we can seek the truth.

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## Prosecuting Foreign fighters: Challenges of Judicial Professional in Bosnia and Herzegovina<sup>14</sup>

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*Summary: Legislation in Bosnia and Herzegovina (B&H) criminalizes various offences related to terrorism and foreign fighting. As a part of global action against terrorism and a way to address the foreign fighter phenomenon, the Criminal Code of Bosnia and Herzegovina was amended in 2014; according to which also the establishment of, or association with, foreign fighting forces are criminalized. Departures of Bosnia and Herzegovina citizens to Syria for the purpose of foreign fighting began in 2012. Thus, one of the problems prosecutors are facing when indicting foreign fighters is the principle of “nullum crimen, nulla poena sine lege” (no crime, no punishment without law). This article will analyze problems Bosnia and Herzegovina prosecutors face in cases of foreign fighters, as well as prosecutorial successes. Indeed, despite many challenges, prosecutors in Bosnia and Herzegovina have been pioneers in the region when it comes to successfully prosecuting foreign fighters.*

*Keywords: foreign fighters, prosecution, jurisprudence, trial, court decision*

### INTRODUCTION

The first departures of Bosnian-Herzegovinian citizens to battlefields in Syria and Iraq were recorded in the spring of 2012. At that time, departures to fight in foreign wars were not criminalized. According to Azinović and Bećirević (2017) in total, over 240 Bosnian adults are believed to have departed for Syria and Iraq between 2012 and 2017, 172 men, 58 women and 57 children. Officials report that 53 Bosnian men (including 4 foreign citizens of Bosnian origin), as well as 3 women and 4 children, have subsequently left Syria and Iraq, but 10 have returned to countries other than Bosnia and Herzegovina.<sup>15</sup> However, Syria and Iraq are not the only battlefields that attracted some Bosnia and Herzegovina citizens. According to the last official estimate at least seven Bosnia and Herzegovina

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<sup>15</sup> These figures were provided to the authors by police sources and security officials interviewed for the research.

citizens went to that battlefield having joined pro-Russian military formations (Žurnal.ba, 2017). Yet, according to media reports only one individual is being officially investigated in relation to fighting in Ukraine (Avaz.ba, 2017). It is important to mention that officials interviewed for this article were cooperative when discussing the foreign fighters phenomenon associated with Syria and Iraq, and rather un-cooperative on the issue of the same phenomenon associated with Ukraine. Also, as one of the problems in investigating and prosecuting individuals who fought in Ukraine, interviewees stated the lack of cooperation of Republika Srpska Ministry of the Police on this issue, as well as their unwillingness to investigate those who work on recruitment of new fighters in Republika Srpska, the majority Serbian entity in Bosnia and Herzegovina.<sup>16</sup> This is also the main reason this article deals only with the prosecution of individuals who fought in Syria and Iraq.

In addition to the main features of the foreign fighters phenomenon, both general and those that are specific to Bosnia and Herzegovina, this article lists the actual problems in prosecuting the Bosnian-Herzegovinian citizens who joined the terrorist formations in Iraq and Syria, along with the necessary normative analysis of substantive provisions as well as procedural criminal law provisions. As it will be obvious from the court cases, processing foreign fighters in Bosnia and Herzegovina is mostly reduced to criminal prosecution and punishment of individuals who joined the foreign paramilitary, that is, terrorist formations in Iraq and Syria, thereby, practically to the mere repairing of consequences. The main cause - individuals and organized groups who used the distorted religious interpretations, radicalized, incited and finally organized departures to foreign battlefields are still, one way or another, far from justice or just mildly punished. The evidence of financing networks of all the mentioned activities is especially limited; although, without these networks, there would not be any departures to foreign battlefields or would occur on a significantly smaller scale. It seems, however, that this is not only the case with the criminal judiciary in Bosnia and Herzegovina, but also in developed Western democracies.

## **PHENOMENOLOGY OF FOREIGN FIGHTERS IN BOSNIA AND HERZEGOVINA**

Foreign fighters are not a recent phenomenon, in literature they are most often mentioned in relation to the Spanish Civil War in the 1930s, Arab-Israeli Wars, Afghanistan in the 1980s, as well as Chechnya and other places (Williams, 2011; Malet, 2013; Hegghammer, 2010). The war in Bosnia and Herzegovina (1992-1995) also attracted foreign fighters who joined different sides. Estimates on numbers vary, from 500 to 5000, while most agree that it was between 1000 and 2000 (Galperin Donnelly, 2016). The mentioned figures, however,

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<sup>16</sup> Based on interviews with security officials, conducted in March and April 2018.

do not only refer to foreign fighters of Muslim origin, but also to other volunteers who during the 1992-1995 war fought on the side of Bosnian Serbs and Bosnian Croats.

Some foreign *mujahideen* who fought on the side of Bosnian Muslims, remained in the country after the end of the war and are widely believed to have been responsible for efforts to spread Salafism among the Bosnian Muslim population. This ultra-conservative Islamic doctrine had been unknown to Bosnian Muslims – who have historically followed the Hanafi legal tradition (*fiqh*) and have practiced an inclusive and open interpretation of Islam that is rich in local tradition, tolerant of other communities, and compatible with liberal Western values. Thus, the ultraconservative message of Salafism was never expected to take hold in Bosnia and Herzegovina; and certainly, it was not foreseen that the ideology would spread among the Bosnian population even after most of the foreign *mujahideen* had left the country. Still a small number of Bosnian Muslims have accepted Salafism, and the majority of them, while adhering to ultra-conservative lifestyles are peaceful and are not deemed a security threat. Even though most Salafis do not present a security threat, it has been shown that foreign fighters for the conflict in Syria and Iraq are recruited from the Salafi community (Bećirević, 2016).

According to Beslin & Ignjatijevic (2017) Western Balkan countries primarily identify and categorize Islamist foreign fighters as terrorists whereas Ukrainian fighters remain just "ordinary extremists". One should, however, have in mind, as Hegghammer (2010) stated, that Muslim foreign fighters are significantly larger in numbers and more involved in different conflicts around the world than foreign fighters of different ideological orientations, and in that sense, are an especially significant threat to modern international security. One should also take into consideration the fears of Western, particularly European governments that the returning ISIL foreign fighters, "who are battle hardened, skilled in handling arms and explosives, and ideologically radicalized, pose a clear and present threat to national and international security." (Azinović & Bećirević, 2017). Yet according to a study conducted by the Center for the Analysis of Terrorism (2017), which examined terrorist activities occurring between 2013 and 2016, only "3 out of 100 returnees have been involved in actual terrorist attacks in the West". An examination of the profiles of individuals involved in terrorist attacks in the West points to the individuals best described as failed unaccomplished or frustrated foreign fighters-those who desired to travel to Syria and Iraq but who were unable or failed to do so" (Byman, 2017; Lister, 2015; Van Zuijdewijn, 2017).

In Bosnia and Herzegovina there were no incidents related to the returned foreign fighters, yet significant attention is paid to this issue in the Bosnia and Herzegovina security community. Besides retribution-focused approaches, international community projects are

focused on discussing possible appropriate modes for the returnees social re-inclusion. The politics of the penitentiary system in its present condition can hardly respond to this request, as there is minimal success in the re-socialization of perpetrators of general crime; not to mention foreign fighters who are already by their status characterized by an extremely high level of indoctrination with radical ideologies.

## LEGAL FRAMEWORK AND CRIMINALIZATION

The criminalization of foreign fighters as a special criminal offense related to terrorism was accomplished in 2014 through amendment 47/14 to the Criminal Code of Bosnia and Herzegovina introducing the incrimination, "Unlawful forming and joining to foreign paramilitary or para-police formations" (Criminal Code of Bosnia and Herzegovina, 2015). It was a quick response by Bosnia and Herzegovina legislation to the obligations under Resolution 2178 of the Security Council of 24.08.2014, which, among other things, referred to the implementation of legislation to ensure the processing of: (a) foreign terrorist fighters, (b) those who willfully fund or receive funds to finance the travel of foreign terrorist fighters and (c) those who willfully facilitate the travel of foreign terrorist fighters (United Nations Security Council, 2015).

The same Resolution also defined 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. (United Nations Security Council, 2015). In our article, we will keep the term foreign fighters as it is broader in meaning and, essentially, follows the incrimination, "Unlawful forming and joining to foreign paramilitary or para-police formations", which in its legal meaning, it is significant to note, does not include the characteristics of terrorism. In other words, a foreign fighter is not necessarily a foreign terrorist fighter except in circumstances when his belonging to a designated terrorist formation is proven beyond any doubt.

The legal description of Article 162b (paragraph 1. to 4.) criminalizes several types of offense. Primarily, incriminating is "...organizing, managing, training, supplying or recruiting of individuals or group of people with the purpose of association in any way with foreign military, foreign paramilitary or foreign para-police formation active outside of B&H against the Law on Defense of B&H or the Law on Service in Armed Forces of Bosnia and Herzegovina..." (Criminal Code of Bosnia and Herzegovina, 2015). Furthermore, incrimination is joining in any form a foreign military, foreign paramilitary or foreign para-police formation (Criminal Code of Bosnia and Herzegovina, 2015).

This criminal offense is also perpetrated by “whoever procures or renders operable the means, removes obstacles, creates plans or makes arrangements with others or recruits another person or undertakes any other action creating the conditions for direct perpetration of this criminal offence...” (Criminal Code of Bosnia and Herzegovina, 2015).

Finally, one of the types of this criminal offense is also perpetrated by “whoever publicly, by way of public media, distributes or in any other way conveys a message to the public, which has the purpose of inciting another person to perpetrate this criminal offence...” (Criminal Code of Bosnia and Herzegovina, 2015).

The prescribed punishments for each of these types of offenses are different and range from not less than 5 years of imprisonment for the offense of para. 1, which is the most severe penalty; not less than 3 years for the offense of para. 2; a term between 1 and 10 years of imprisonment for the offense of para. 3; and between 3 months and 3 years of imprisonment for the offense of para. 4, as the mildest prison sentence.

Criminal Code of Bosnia and Herzegovina (2015) also authorize a possible softer punishment of imprisonment for a term of 6 months to 3 years, and even the release of individuals who expose the group and prevent the perpetration of the criminal offense or expose a criminal group prior to the perpetration of the criminal offense (Art. 162b. para. 5). Such a measure in fact stimulates early detection of a foreign fighters group and the prevention of criminal offense committed by such a group.

Finally, provisions of the Criminal Code of Bosnia and Herzegovina (2015) also include that the provisions of Article 162b shall not be applicable to persons who have acquired in a lawful manner citizenship of a foreign country recognized by Bosnia and Herzegovina and in whose army or military formation they serve, or they serve in the military formations under control of governments internationally recognized by the UN, established on the basis of law.

Basically, we can discuss four types of this criminal offense, including the joining into a foreign military, foreign paramilitary or foreign para-police formation, which we usually describe as foreign fighters, which is only one of the forms of the offenses - and understandably not the most severe one. It seems that legal description of this criminal offense is quite comprehensive, but, on the other hand, the request for incorporation of a larger number of incriminating acts constituting the criminal offense leads to the fact that it is very complex to prove and to adequately prosecute it. In addition to the above mentioned, it is very difficult to have an objective position on what the legislator was guided by in differentiating more serious and milder forms of this criminal offense. An

averagely reasonable person can wonder why public incitement of another person to join any foreign military, foreign paramilitary or foreign para-police formation is a significantly milder form of criminal offense, judging by the rendered punishment sentence (hypothetically, for such charges sentence can only be 3 months in prison), although such a form of prohibited behavior in the context of a criminal offense of terrorism or related to terrorism, abuse and manipulation with religion can have and had enormous consequences in the fight against terrorism not only in Bosnia and Herzegovina but also abroad. Unfortunately, public radicalization, including through the use of internet and various social media, nowadays assessed as one of the most important tools in spreading extremist ideologies does not seem to pose an important social threat in the eyes of the Bosnian-Herzegovinian legislator. A similar remark can be said about recruitment of individuals to join foreign military, foreign paramilitary or foreign para-police formations. We think that this is especially difficult and one of the main preconditions of association, but yet the legislator dictated a less severe punishment than, for example, for equipping or mobilizing individuals to become foreign fighters. Not to mention that there is no provision of more severe punishment in the cases of recruiting and inciting children, that is minors, who, due to their psycho-physical age and immaturity, are especially vulnerable and exposed to different forms of radicalization and as such targeted by radicals. Finally, we can ask the question why identical punishment prescribed by law should be given to both a member of a terrorist group as a foreign fighter (Art. 202d. para. 2) and to someone who is a member of a foreign military, foreign paramilitary or foreign para-police formation as a foreign fighter without terrorist characteristics (Art. 162b. para. 2). These are some of the remarks we present. At the same time, they are a problem for judicial officials when adequately processing this type of criminal offense. They refer to specific legal definition of foreign fighters and substantive criminal law. On the other hand, there are many problems related to proving such cases and procedural criminal law itself; problems which are not specific only to foreign fighters but also to other criminal offenses which we will talk about in our next presentation.

Here we would like to add that, in addition to the mentioned incrimination, the Criminal Code of Bosnia and Herzegovina (2015) includes many other incriminations used by the Prosecutor's Office of B&H in processing foreign fighters including: public incitement to terrorist activities (Art. 202a), recruitment for terrorist activities (Art. 202b) and organizing a terrorist group (Art. 202d). The mentioned incriminations are harsher by their legal nature, because they also incorporate the features of terrorism and thereby require more severe punishment. As we will see further in the presentation, most foreign fighters in Bosnia and Herzegovina were prosecuted on the grounds of the mentioned incriminations, and only few of them (5 cases in total) on the grounds of incrimination in 162b.

## FOREIGN FIGHTER TRIALS AND CHALLENGES

As of 2017, 23 persons were tried before the Court of Bosnia and Herzegovina in a total of 14 cases involving Bosnian-Herzegovinian citizens as foreign fighters on the battlefields in Syria and Iraq, or Bosnian-Herzegovinian citizens who organized, recruited for and publicly incited to terrorist activities and are directly linked with foreign fighters (Table 1).

Table 1

*Number of court cases and prosecuted foreign fighters as of 2017*

<b>Cases in total:</b>	<b>Prosecuted foreign fighters in total:</b>
14	23

*Source: Bosnia and Herzegovina Court Content Management System (CMS).*

The common characteristic of all these cases was largely based on charges of other criminal acts of terrorism or related to terrorism, and not the criminal offense of Art. 162b, then difficulties arose to prove these criminal offenses and finally apply penal policy for the criminal offense of joining foreign military, foreign paramilitary or foreign para-police formations. The prosecuting of foreign fighters and terrorism in general was one of the most demanding challenges appearing in the Bosnian-Herzegovinian judiciary, both on the side of the Prosecutor's Office, which had to adequately corroborate charges, which meant providing adequate and sufficient evidence material, and on the side of the Court whose function is reflected in making a just, legal and fair decision.

## ISSUES RELATED TO FOREIGN FIGHTER LEGAL QUALIFICATIONS

The issue of legal qualification of charges in the foreign fighters' cases, because of the fact that criminalization of this activity was made only in 2014, while the first Bosnian-Herzegovinian citizens started coming to Syria and Iraq back in 2012, is the first problem the judiciary was faced with in processing this type of criminal offense. According to our analysis, out of 14 processed cases, only 5 are based on charges of Art. 162b. The remaining 9 are based on the charges of organizing a terrorist group (Art. 202d.), and/or recruitment for terrorist activities (Art. 202b.), and/or public incitement to terrorist activities (Art. 202a.), as well as some other related criminal offenses such as illegal possession of arms and similar.

One of the most obvious examples is the case of the Court of Bosnia and Herzegovina (2016), which in its indictment contained the most serious charges in the group of foreign fighters cases, and which was not grounded on charges related to Art. 162b, but charges of other criminal acts of terrorism related to the Criminal Code of Bosnia and Herzegovina as

follows: Public incitement to terrorist activities (Art. 202a.), Recruitment for terrorist activities (Art. 202b.) and Organizing a Terrorist Group (Art. 202d.). The factual description of the indictment in this case referred to the charges that, *“During 2013 and 2014, the defendant H.B, as a member of Salafi community in B&H organized on the territory of B&H, outside of official institutions of the Islamic Community of B&H, in several towns ... for promoting and spreading Islamic radicalism in B&H, consciously, from the position of a religious authority in the so-called Salafi community publicly performed activities characterized as criminal offenses – public incitement to terrorist activities, recruitment for terrorist activities and organizing a terrorist group ... In that respect, at public gatherings of members of Salafi community, he held his speeches published on YouTube and conveyed messages to the public aimed at inciting members of the so called Salafi community to join the organized terrorist group ISIS in the so called Islamic State, and to participate as members of that group in the activities organized by the terrorist organization ISIS (which was proclaimed as a terrorist organization by the UN) ... and after such public incitement by the defendant H. B, a larger number of members of the so called Salafi community in B&H – citizens of B&H left B&H. E.P, S.B, A.C, I.M, A.A, M.Š. et. al. who attended the public lectures of H. B. were killed as members of the terrorist organization, while the others still take part in the activities of the terrorist organization they joined, thereby posing a threat to Bosnia and Herzegovina in the way that they are trained and prepared for conducting terrorist activities upon their return to Bosnia and Herzegovina, (Prosecutor office of Bosnia and Herzegovina, 2014). Hence, these were the charges with factual relation to public incitement, recruitment and organizing of foreign fighters, although the indictment was based on completely different grounds. The timing of the indictment coincided with the adoption of the amendments to the Criminal Code of Bosnia and Herzegovina in 2014. However, because it was not possible to prosecute the defendant for his activities in 2013 and 2014 on the grounds of foreign fighters, because the provisions were not in force then, which is the results of the principle *nullum crimen nulla poena sine lege*, it was done on other grounds to include the facts of his activities. Probably, in addition to this principle, the reason why the prosecutor opted for the charges according to these legal qualifications, is the fact that more severe punishment is implemented for these qualifications. Legally, there was no obstacle for such a decision by the prosecutor. In clear foreign fighters’ cases, the legal qualification organizing a terrorist group (Art. 202d) in the sense of belonging to a terrorist group, was used to a larger degree than the legal qualification from Art. 162b. Particularly, because the qualification from Art. 162b only came into force in 2014, legally, there was no risk of the defense referring to the accusation of an act that was not criminal at the time it was committed. Still, although the use of this legal qualification enabled more serious punishment, as we will see later, the difference in foreign fighters’ cases was not emphasized.*

## ISSUES RELATED TO EVIDENCE

Code of Criminal Procedure of Bosnia and Herzegovina (2013) belongs to the system of Civil Law, yet with elements of Common law, that is, the adversarial system. This is especially obvious in the provisions on direct and cross-examination, as well as the possibility to interrogate a defendant in their capacity as a witness, which is one of the options provided by the criminal procedural legislation in Bosnia and Herzegovina. Regarding their legal nature, problems with proving in foreign fighters' cases can be divided in to the ones referring to public calling, inciting, organizing of foreign fighters and, in general, all other activities related to this criminal offense, but not the mere joining in paramilitary formations, and the ones referring to joining or association with paramilitary formations. The differences are multiple, noting that only very few cases referred to the former, and most cases were basically in reference to prosecuting associations with paramilitary formations.

In regard to public calling, inciting and organizing foreign fighters, one of the most important defense arguments was based on the allegations that this was "... a trial to faith and interpretation of religion ...". As a response to this defense allegation, the Appeals Court held, "Namely, during the first instance procedure, it was clearly proven that the actions of the individual, that is, the defendant who interpreted religious teachings, and openly misused certain quotations from the Holly Book concept, skillfully using language formulations, had a clear and unambiguous intention to directly and suggestively incite and recruit others, as well as create and strengthen their decision to join terrorist organizations of ISIS in Syria and Iraq. Hence, it is beyond doubt that the court trial which was initiated and is led at the moment is a trial to the defendant B, and not religion, religious beliefs or different religious movements, as the defense appealed" (Court of Bosnia and Herzegovina, 2016). We have to say that the observation of the court in this case was decisive also for all *pro futuro* cases of a similar nature in which the defense and defendant might appeal to freedom of religion and present such cases as trials of the religion they belong to. Salafism in Bosnia and Herzegovina is not punishable, and belonging to the Salafi community does not mean a criminal offense per se, as the defense tried hard to prove in this case. How high the level of abuse of religion is, we can see in an excerpt from evidence material from the prosecution, various "khutbahs" with which the defendant targeted especially young people to go to the battlefields in Syria and Iraq, such as, "Who fights there ... young men at their best age fight there ... Brother from Sarajevo (Š.M.) died as a shahid and not as a coward..." "This is preparation for introducing Islamic Law in the whole country, and it will start from Sham. The best armies will gather there. The best shahids will die there." (Court of Bosnia and Herzegovina, 2015).

Unlike the previous case, in the cases in which the fact of membership in paramilitary, that is, terrorist formations was to be proven, the biggest problem was to prove the fact that the defendant actually went to Syria or Iraq, and that as a member of ISIS formation he took part in the armed conflicts there. Digital evidence and statements of main witnesses proved to be of the utmost importance in such cases. In quite a number of cases, the evidence of a digital nature, such as Viber communication, YouTube clips, Facebook profiles were presented together with material evidence such as photographs and similar, to prove beyond doubt the participation of the defendants in foreign fighters' formations and stay on the territories of Syria and Iraq. When proving the fact of their stay in Syria in several cases, the testimonies of main witnesses who themselves took part in fights on the battlefields in Syria and Iraq were used, former fighters themselves who turned witnesses for the prosecution against their fellow combatants, were used.

Special investigative measures implemented in the criminal justice system in Bosnia and Herzegovina in 2003 had an important role in processing foreign fighters. These are the measures which are in fact directed to the collecting of evidence in cases of terrorism, organized crime, corruption and other serious criminal offenses. Hence, the activities that are extremely difficult to prove in the everyday practice of the law enforcement agencies and judiciary. They are: (a) surveillance and technical recordings of telecommunications; (b) access to computer systems and computerized data processing; (c) surveillance and technical recordings of premises; (d) covert following and technical recording of individuals, transport means and objects; (e) use of undercover investigators and informants; (f) simulated and supervised purchase of objects and simulated bribery and (g) supervised transport and delivery of objects of criminal offense (Code of Criminal Procedure of Bosnia and Herzegovina, 2013). Their application proved to be unavoidable also in the foreign fighters' cases. In court documents and material evidence, it can be seen that practically there is no case in which some of these activities were not undertaken. This only contributes to the need of their further improvement not only in cases of this type but in general when collecting evidence and processing serious criminal acts.

## **ISSUES RELATED TO PUNISHMENT**

Based on our analysis of Court decisions all pronounced sentences in foreign fighters' cases are imprisonment for a term between 1 and 7 years. Out of a total of 14 cases, the 8 of them which were related to joining terrorist formations were finalized with plea bargains, each with a one-year imprisonment sentence. Only in one case of joining a terrorist formation, the Court pronounced a four-year punishment, and the longest sentence of 7 years in prison was pronounced in another case of a criminal offense of inciting, recruiting and organizing a terrorist group. Although the legal minimum of Art. 162b para. 2, as well

as the one of Art. 202d. para. 2 is not less than 3 years, such mild punishments are undoubtedly a result of plea bargains allowing the prosecutor in Bosnia and Herzegovina to propose a sentence under the legally defined minimum or even replace a more serious punishment with a milder one, for example – to substitute an imprisonment sentence by a fine.

The issue of penal policy in one state is not just a legal issue and as such is not only in the lawyer's domain. It always depends on how a society in its entirety observe the punishment and what is considered to be the purpose of the punishment. Are the prevailing elements of the punishment, retribution, prevention, re-socialization or something else? However, we will agree that the punishments in these cases are more than lenient. Especially, when one has in mind that the Criminal Code of Bosnia and Herzegovina (2015) in Article 42a, para. 1 allows the possibility of substituting an imprisonment sentence of up to one year with a fine. In other words, the possibility is given to each foreign fighter sentenced to one year in prison to substitute their punishment with a fine in the amount of about 18,500.00 EUR. In some cases such a substitution did occur. However, even if there is no such substitution, the institute of parole (conditional release) upon serving one-half or even just one-third of the sentence will enable these perpetrators to leave the penitentiary institutions quickly. Now, we ask what is the purpose of such punishment to the persons who were completely aware of their actions and decisions, and in the name of radical ideology departed to another continent, took weapons ready to take lives of the others and joined terrorist organizations to achieve the goals of terrorism which are, in the simplest explanation, an absolute negation of all the rights and freedoms a human being can have? We are completely aware that in some cases the absence of a clear evidence was the main reason for such light punishment. This is basically the only objection we have related the work of judges and prosecutors today, because even in circumstances when the prosecutor and the defendant agree on a plea bargain and the respective punishment, it is not binding for the court. Hence, we can hold both prosecutors and judges equally responsible for such light punishments.

## **OUTCOMES AND STILL OPEN QUESTIONS**

Judging by the court files considered in the article, it is not an easy task to prosecute foreign fighters at all. A special burden is on the Prosecutor's Office which, along with the general legal principle on burden of proof on the side of prosecutor, as we saw, quite often had qualitatively and quantitatively insufficient evidence substratum to adequately process these cases. Especially related to the fact that the defendant belonged to designated terrorist or paramilitary/para-police formations. Still none of the indicted cases, except the

one case of a co-suspect against whom charges were early dismissed, were finalized with a release or another procedural solution, such as a dismissal of charges, which could be viewed as a defeat for the Prosecutor's Office. These are encouraging facts. On the other hand, penal policy in these cases is not encouraging. Especially fearsome is the fact that even in the cases in which it was proven beyond reasonable doubt that the defendant had belonged to terrorist formations in Syria and Iraq, it cannot be seen in the court files what he was doing there. Did he commit any crimes and if so, what kind? We can only speculate what individuals were doing there and, in turn, how lucky they are with the light punishments received for belonging to a foreign fighters formations. Now, after all, the fact that foreign fighters had such easy access to the battlefields in Syria and Iraq not only to go there, but also to come back from there and go again is quite disturbing. All these circumstances should improve the knowledge and experiences of the intelligence–security and police agencies in Bosnia and Herzegovina and also their international cooperation in order to prevent such cases *pro futuro* on some other battlefields. We live in a complex world and something like this should not be dismissed.

Finally, there is the pending issue of the overall low number of prosecuted foreign fighters. If one takes into consideration estimates about the number of Bosnia and Herzegovina citizens on battlefields in Syria and Iraq and estimates on the number of returnees from the beginning of this article, the number of the prosecuted does not exceed 10% of the estimated number of participants, or 50% of the estimated number of returnees. All these facts are quite concerning. In countries which respect the rule of law, indictments can be based exclusively on founded arguments, that is, evidence. However, it seems that it was not possible to provide more indictments in these cases. We note, however, that the subject of this study was only those cases completed by the Court of Bosnia and Herzegovina with valid decisions and not the cases, which are still going on or are in the phase of investigation.

At this moment, criminal legislation in Bosnia and Herzegovina does not practice any kind of specific post-penal measures targeted at the de-radicalization of former Bosnia and Herzegovina foreign fighters prosecuted by the judiciary who are already released or will be released in the near future. Nor are there any specific criminal legislation security measures undertaken along with the penalty or after release from prison, which would be designated for the needs of de-radicalization and social re-inclusion. These are still problems inadequately addressed in Bosnia and Herzegovina society by criminal legislation. Yet, there are some promising examples. At present, there is a pending procedure to change the provisions on special investigative measures, according to which the period of investigations of terrorism or criminal acts related to terrorism is extended from 6 to 9 months. Our opinion is that this change will improve the investigations of this

and similar criminal acts and result in better quality evidence. Still, there is an option that the mentioned measures can exclusively be declared by pretrial judges only, although, in our opinion, such a possibility should also be given to prosecutor in the instances of risking a postponement. Such or a similar solutions, which already exists in different legal systems, even in our closest neighborhood would greatly contribute to the quality of evidence on the prosecution side. For example, both Croatia and Serbia legislation, authorize prosecutor in specific circumstances to declare some of those measures. In Croatia, if there is a risk of a postponement, prosecutor has been authorized to pronounce almost all of special investigative measures for the duration of 24 hours (Code of Criminal Procedure of Republic of Croatia, 2017). In Serbia one special investigative measure is under complete authority of prosecutor with no need for the authorization by the court (Code of Criminal procedure of Republic of Serbia, 2014).

## CONCLUSION

As already stated at the beginning of this article, it is very difficult to avoid the impression that in legal fight against foreign fighters and terrorism in general in Bosnia and Herzegovina, legal regulations still do not contribute to the efficiency of the fight and have no far-reaching positive effects in the prevention of such forms of criminal behavior. The problems existing in the legal qualifications of this type of criminal offenses, in evidence mechanisms and in penal policies, which we presented in this article, contribute to that. They are, first of all, a consequence of the inappropriate arrangements regarding substantive and procedural criminal law. Such arrangements should be changed and there are already some steps in this direction. We have mentioned the current work on the amendments in criminal procedural legislation which will lead to a wider and more efficient application of special investigative measures in the fight against foreign fighters and terrorism in general. In addition, the possibility of a limitation on legal provisions regarding court leniency towards punishments for certain criminal offenses should be considered. Such arrangements for example exist in entity legislation, such as the Criminal Code of the Republic of Srpska, which prevents the lessening of a punishment, among other offenses, also for the criminal offense of terrorism. It should be noted that these problems increased due to objective circumstances too such as the inadequacy of not only Bosnia and Herzegovina but also much more superior security and legal systems to predict the scope of such a terrorist organization presented in the form of ISIS and prepare their national legislations accordingly. It should however be noted that there are certain omissions, primarily regarding penal policy, which, as we already established, are extremely soft in these cases, and in that sense, adequate changes to the law have to be provided, especially in the context of substituting the imprisonment sentence of up to 1 year with a fine. In such criminal offenses, it is very difficult to justify such a substitution

from any point of view. On the other hand, using the appropriate mechanisms, with full respect to the professional independence of prosecutors and, even more so, judges, a balanced penal system should be established corresponding to European and world standards. However, Bosnia and Herzegovina and its judiciary continue this battle. Unfortunately, each new case is a new challenge and experience for the police agencies and the judiciary in their fight against terrorism, and thereby, also more knowledge and professional capacities, which will finally lead to a European judicial system in its full meaning. There is no doubt that the judiciary of Bosnia and Herzegovina, in spite of its problems, is on that track.

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## Intuition In Criminal Investigation: Critical Observations<sup>17</sup>

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*Summary: Purpose: Intuition represents one of the most controversial but in criminal justice science marginally studied area of decision-making within the criminal investigation. By definition, intuition as the ability of immediate cognition, a perceptive insight is contradictory to a rational cognitive process and as such can be always questioned. However, certain works on this topic points that intuitive judgment can have impact on specific aspects of criminal investigation and as well on judicial process and making court judgment. Having in mind previously stated, the purpose of this paper is to critically examine the question of intuitions possible impact on criminal investigation. Design/Methods/Approach: In paper used approach is analysis of the available theoretical knowledge and results of research studies conducted on the topic of intuition with focus on examining its meaning, implications in real life and finally the possible implications of it in process of detection and investigation of crimes and their perpetrators. Findings: Intuitive reasoning in terms of specific segments of criminal investigation undoubtedly exists. Often this kind of judgment is an element of the "crime investigation reasoning process". Practical Implications: The practical implications of the paper are better understanding of role of intuitive judgments in the framework of "crime investigation reasoning process" through identification of forms in which such reasoning can appear in criminal investigation.*

*Keywords: Intuition, cognitive process, criminal investigation, decision-making.*

### INTRODUCTION

Rare are those who at one point in life did not made a decision on the basis of some kind of inner feeling or sudden knowing that was not result of rational, logical process of reasoning or that was even in contradiction with it. We made this decision with more or less hesitation and did not regret it. This kind of thinking and decision making is called intuitive. Today, intuitive thinking is indisputable part of decision-making in everyday human life. However the question is can we rely on such kind of reasoning? Given the free will that we have, in personal life we do not have to follow rational reasons and analytical approach in process of making our decisions. In fact, humans do this permanently. But, not

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every non-rational thinking is intuitive thinking it can be just irrational or result of some other processes of human mind like for example reflexes or instinct. Intuitive reasoning on the other hand is way of non-rational reasoning only when it is result of immediate cognition or knowing, which is not preceded by any previous analytical process of thinking. In essence, we know something, but we do not know why or how we know that. In that sense misuse of rules of logical reasoning cannot be identified with the intuition. Nevertheless, in this paper we are not specifically interested in logics and its misuse but in intuition and its possible use for decision-making. In focus of this paper is dilemma whether such thinking is allowed and acceptable in institutionalized, strictly formalized, processes and procedures, which by their nature and resulting consequences require decisions based on rational judgment. One of such procedures is a criminal investigation whose objectives are detection of crimes and their perpetrators, i.e. finding, collecting and interpreting evidence in order to ultimately reach a decision on an indictment. A criminal investigation should be distinguished from the trial. From the standpoint of criminal justice and the rule of law, these are two quite distinct stages of establishing the existence of the crime and the existence of criminal responsibility of the person suspected of or charged with its execution, as per its legal content and in its legal effects. But both procedures have one common feature and that is that every decision must be based on the relevant facts.

Discovering the relevant facts during a criminal investigation cannot be equated neither in form nor substance with the way of their determination and the degree of confidence in their existence at the trial. However, the fact-finding in the course of an investigation is not deprived of the basic categories of logical reasoning and its immanent methodology. But can we out of the categories of logical reasoning and scientific methodology gain knowledge of the existence of the relevant facts *via* the intuitive judgment and reasoning? The subject of this paper is precisely such form of knowledge, which is of interest for the criminal justice system in the part related to the investigation of crimes. The results of many recent studies show that intuitive reasoning is present in decision-making processes which are preceded by very detailed and rigorous process of acceptance, implementation and evaluation of factual knowledge as is the case with the judicial process. If this is true in the case of judicial process then we can reasonably believe that this kind of reasoning also exists on some lower "legal" levels of judgment such as criminal investigation that has to create a basis for the conducting lawful, fair, objective and impartial court process that will result with decisions on someone's guilt or innocence. Through the analysis of theoretical knowledge, but also the results of various empirical studies, authors will try to answer some of following questions: is intuitive reasoning really part of crime investigation process and if it is what its actual influence on decision-making is at this stage of the criminal proceedings? Given this, authors will also present their critical observations that

are result of analysis of the possibilities of intuitive thinking usage in the investigation of crimes and their perpetrators.

### **INTUITION AS A SUBJECT OF PHILOSOPHICAL, SCIENTIFIC AND SPIRITUAL OBSERVATIONS**

Analysis of pretty plentiful literature in this area shows that intuition as a form of knowing has always occupied the attention of philosophers and scientists and was the subject of their studies. So Bennett (1916: 45) in his considerations of "Doctrine of intuition" of the famous French philosopher Henry Louis Bergson (1859-1941) talks about his distinction of "*two profoundly different ways of knowing a thing - the way of analysis and the way of intuition*". Betsch makes a difference between philosophical and somewhat mystical concept of intuition as a competence, distinguishing it from a psychological and more scientific conception of intuition as automatic or implicit process of thinking or consideration of intuition as something what we know without knowing how we learned it (Betsch, 2008: 3 - 4). Within psychology, where intuition by its nature belongs at least from the point of view presented in the relevant research, observation of intuition as phenomenon was, as observed by Hodginson et al. (2008: 19) scientifically weak and marginal until the recent years where this concept became a legitimate subject of scientific testing with important ramifications for education, personal, medical and organizational decision making, personnel selection and assessment, team dynamics, training and organizational development. Beside the philosophical and scientific approach there is also great number of spiritual understandings of intuition as a kind of specific sense, inner voice or inner feeling, which is beyond our cognitive ability to comprehend it.

The question what is intuition today represents one of the fundamental issues in the field of study of this phenomenon not only from the point of view of psychology but also from large number of other disciplines. Many of them however still cannot give the exact answer what is the intuition and on what kind of cognitive process is based. One of the examples is neuroscience, which trying to give us some of the answers but as it is been noted by Volz & von Cramon (2008: 82) neurobiologically oriented researches on intuition are at its beginnings. This actually tells us how contemporary science seriously considers this issue.

Beside the question what intuition is, there are also questions can we trust it and under what conditions. Such questions already imply a conclusion about the existence of this still scientifically completely unexplained mechanism of knowledge, which is present by its consequences in objective reality. Certainly a phenomenon that cannot be fully explained by science will cause that different people will have different understandings of it, such as somewhat science-based, philosophical or even spiritual in the above mentioned forms

connected to the mystical sources. Here we do not want to go further in differentiation of philosophical, scientific or spiritual meanings of intuition, we just want to point out the different understandings of this phenomenon. But, one still agrees that difficulty to scientifically explain the sources and mechanisms of this kind of human thinking does not necessarily mean that it does not exist. As we will see later in this paper, this statement seems to be truth.

### **SOME DEFINITIONS**

In the introduction of his book titled "*Intuition its office, its laws, its psychology, its triumphs and its divinity*" Weston called this phenomenon as a: "*sense or faculty in the human mind by which man knows (or may know) facts of which otherwise he would not be cognizant, facts which might not be apparent to him through the process of reason or so-called scientific proof*". Not without reason same author also notes that: "*it is easier to tell what intuition does than what it is.*" (Weston, 1920: 54). Modern authors have somewhat different and more analytical approach. Betsch on the base of fundamental theoretical concepts in his study defines intuition as a "*... process of thinking. The input to this process is mostly provided by knowledge stored in long-term memory that has been primarily acquired via associative learning. The input is processed automatically and without conscious awareness. The output of the process is a feeling that can serve as a basis for judgments and decisions.*" (Betsch, 2008: 4). In their comprehensive analysis Dane & Pratt defining intuition as: "*affectively charged judgments that arise through rapid, nonconscious and holistic associations*" basing it on the integration of its four main characteristics a) nonconscious information processing; b) holistic associations; c) affect and d) speed. Same authors with regard to different approaches of various researchers to functions of intuition as a means of problem - solving, as input for making moral decisions, and as an instrument facilitating creativity, identifying different types of intuitions (problem solving, moral and creative intuition) stating that except by function these types of intuition may vary by three previously listed their features: holistic associations, affect and speed (Dane & Pratt, 2009: 4-5).

In connection with all aforementioned definitions it is very important to stress the distinction between intuition and some other psychological processes with which it could be wrongly identified. In this sense Betsch (2008: 5) from the frame of intuition excludes reflexes and instinctive patterns of behavior, noting that not every kind of elicitation of feelings can be attributed to intuition.

Above we cited only a few definitions of intuition but we have opportunity to see that literature abounds with a large number of approaches in the study of this phenomenon

which results in a large number of definitions based on the same or different methodologies but whose common basis is distinguishing intuition from decision making process to which precedes the analytical, rational way of thinking. Our intention in this paper is not to deal with the review of all available approaches. We believe that we have presented enough serious considerations of this issue and its understanding, perhaps not in terms of how it is considered by Bastick (1982: 2) as: " ... *a powerful human faculty, perhaps the most universal natural ability we possess*", but certainly in the sense that intuition should not be ignored as a way of thinking and decision-making in everyday life with all the consequences that may arise from it. Some of the concepts mentioned above like problem solving, moral and creative intuition are deliberately avoided here and will be approached later.

### **INTUITIVE THINKING AND COMPLEXITY OF CRIME SOLVING**

A criminal investigation depending on the legal model of criminal justice that belongs can be a formal part of the criminal proceedings as is the case in the civil law traditions or part of the so-called pretrial procedure as is the case in the common law. However, regardless of its legal nature, main purpose of criminal investigation is to gather evidence to press charges and in this sense as we mentioned in introduction it must be distinguished from that part of the procedure that is called trial and in which fair, lawful and evidence based court decision should be delivered. From the legal point of view, trial is the most important part of the criminal proceedings that entails a very rigorous decision-making process to which precedes very detailed and tightly controlled process of acceptance, implementation and evaluation of factual knowledge. The investigation and trial belong to different legal decision-making levels, as per the criteria of subjects (for example prosecutor and police agencies in investigation, court and / or jury at trial), and by criteria of decision (the first will result in a possible indictment, the other with judgment except few cases for example where prosecutor dismiss the indictment, etc.), where the final legal effects still have more weight at trial. But often the results of the investigation and the decisions taken in its framework will play a major role at the epilogue in the court proceedings. In this paper we are not dealing with trials but we wanted to warn about the impact that investigation can actually have on trial. Here it is worth mentioning regarding the intuitive decision-making that some of the studies that we have consulted indicate that intuitively driven reasoning is not unknown in court proceedings as well, and in criminal law in general, such as the study of Guthries et al. Within this study, the authors considering anchoring phenomenon, representativeness heuristic and hindsight as the forms of intuitive judging conclude that the judges despite their best efforts, as well as other people use two cognitive systems in decision-making deliberative and intuitive and that actually intuition has a very strong effect on their decision-making (Guthries et al., 2007: 43). Similar study of Robinson &

Darley (2007: 66) in its concluding observations on the implications which intuition has on the criminal law and justice policy in general contains opinion that morality intuitions have a considerable claim to be incorporated in criminal codes.

Based on the foregoing it is easy to conclude that criminal investigation as well as the other parts of the human living is not relieved of intuitive reasoning. In that sense, Pavišić & Modly (1999: 79) consider intuition in criminal investigation as direct internal observation, understanding that occurs at a certain point without the participation of reason as a final result of speculation or skip of the chain of logical judgment making conclusion that it occupies a very important place in the cognitive process of the criminal proceedings.

Hypothetically it is easy to assume a large number of situations in which such form of decision-making come to the fore. In fact, the very substance of a criminal investigation is research of the circumstances surrounding the offense, such as: motive, possible suspects, changes in objective reality caused by criminal act (for example material evidences), witnesses, accomplices, etc. Frequently, investigation of all these factors is limited by a lack of relevant information that is reflected in impossibility to make appropriate decisions based on the rules of logical reasoning. Searches for such information, it is expected that investigators will have to make decisions that could be qualified as intuitive.

#### **INTUITION AS A PART OF DECISION-MAKING IN CRIMINAL INVESTIGATION**

In principle, every investigation unless it is a rare case that all the relevant facts are known and practically there is nothing to investigate, starts with assumptions, hypotheses about the way in which criminal event has occurred. The main rule in situations like these is: the less we know the more hypotheses we set. This teaching is in domestic criminal law and criminal investigation literature known as the doctrine of the versions. Pavišić & Modly observe versions as a specific types of hypotheses that explains the formation, properties, reciprocal links, relationships and circumstances of the crime, the features, status and relationship of perpetrator and victim, etc. At the same time they point out that the starting point for setting the versions are collected (previous) knowledge and intuition (Pavišić & Modly, 1999: 66). Without going deeper into the consideration of these instruments as a part of so called „crime investigation reasoning process“, we will highlight only that they should be in accordance with the rules of logical judgment implementing analogy, induction and deduction as it was correctly stated by Vodinelić (1985: 186). However, in situations where there is little or no information which can direct investigation or when there is no time (in criminal investigations time is always of the essence) or no resources for detailed analytical approach to those information or when the information are ambiguous or when there is need to prioritize several possible choices or options, intuition appears to be one of the tools for decision-making.

In this sense in the context of a criminal investigation intuitive decision-making can be viewed as multidimensional. In the first place it can be used for making initial decisions regarding further investigation (e.g. in the case of the first encounter with the crime scene when we still do not know the details, but it is very important to make fast decision) and to prioritize options if we are unable to explore all possibilities (e.g. in the case of more suspects) or when we do not have enough time for a comprehensive rational approach for resolving the case. The latter actually follow almost every investigation. In terms of investigation what gives special weight to intuitive thinking are so called burden of proof standards. In the framework of the investigation they range from reasonable suspicion as a first degree doubt that tells us about the possible commission of a crime to the probable cause as a higher degree of suspicion that justifies us to take appropriate legal measures in search for evidence. The space that exists between these two standards leaves unimagined possibilities for intuitive reasoning. Therefore, intuitive decision-making can be used in a context of criminal investigation in various ways. Practically there is no investigative mechanism or procedures within which it would be impossible to make decisions based on this tool. It could be used from the levels of street policing to the levels of solving serious crime. Completely different question is how much is it permissible and ultimately good especially when out of circumstances mentioned earlier. So intuition can be used in deciding who to suspect and also whether someone should be arrested and during the interrogation of suspects or witnesses and in great numbers of other investigation procedures. Pavišić & Modly emphasize the importance of intuition in approach to suspect during interrogation using the so called "touching", a method that is applied when the examiner is short with evidence or when the evidence is not strong. As a part of this method fine psychological mechanisms such as the transfer of responsibility, sense of honor, sense of guilt, conflict with super ego and others are used on the base of prominent experience and intellectual intuition of examiners (Pavišić & Modly, 1999: 167). Also, intuition could have widespread use in crime profiling which is pretty specific way in approach to investigation of crime but unfortunately fully neglected in our criminal justice practice and literature.

An important factor in criminal investigation decision making on the basis of intuition is certainly the previous experience of investigators. This leads to the next and very important issue and that is the ability of intuitive reasoning of those conducting the investigation. We can assume that each person has the ability of intuitive reasoning to a certain level. Some people are characterized by it more others less but this is universal natural ability as Bastick pointed out. To a large extent we think that this ability will depend on previous experience. And investigators prior experience will really play a role in the accuracy of their intuition. Although there are opinions according to which the criminal investigation experience is strong predictor of intuition it is also emphasized that individual

perceptiveness is not solely determined by experience (Martin, 2010: 146). In connection with the presented is the fact that processing of prior knowledge is not a sufficient condition to identify a mental activity as intuitive (Betsch, 2008: 5).

Finally, we have to return to the terms of problem-solving, moral and creative intuition. Every of these intuitions as been studied and described by many authors presents specific form of intuitive thinking. Problem-solving intuition is most common form of conceptualization and intuition used when individuals are faced with problem-solving or decision-making dilemma (Dane & Pratt, 2009: 5). Other two concepts include intuition as a basis for moral reasoning and intuition which leads to creative outcomes (Dane & Pratt, 2009: 7 – 9). We are not far from the conclusion that problem-solving intuition makes a great part of intuitively driven judgments in criminal investigation. In that course intuition used in investigation we can freely call crime investigation decision-making intuition. On the side of moral intuition it is practically without signifance what a source of investigative ethics is as long as acting of investigators is according to rules of this profession. Although we certainly believe that creative intuition has a stake in making decisions during the investigation because of its specific nature and because it is probably limited to a small number of people it would be difficult at this time to present some special attitude about it.

### **CRITICAL OBSERVATIONS, FOR AND AGAINST INTUITIVE THINKING IN CRIMINAL INVESTIGATION**

In connection with fact that there is intuitive thinking in investigation arose a question about the accuracy of this kind of thinking and in general about the acceptability of intuitive based decisions in criminal investigation. A large number of authors have not benevolent attitude when it comes about consideration of intuitive reasoning in the criminal investigation. Rossmo so concludes that different situations can basically require different types of decision-making. While intuitive decision-making which is often error prone, can be justified when we have an unreliable and incomplete data or in specific chaotic situations, such a conclusion should not be placed as long as we have adequate and reliable data and time for proper analysis (Rossmo, 2006: 3).

Also, in their considerations of memory factors and procedures recommendations in context of eyewitness Turtle & Want conclude that the best practices for eyewitness evidence procedures are actually those based on logic and research, not on the apparent intuition and past practice. Among the examples is the lineup constructing where intuition and common sense appear to suggest that the photos chosen as foils lineup should look like the suspect, and that view does in fact drive the procedures in many, if not, most

police services. The result is "clone lineup" where even a witness who got a good look at the offender has difficulty to pick him or her out, and as the final consequence this results in difficulties in identifying the real perpetrators (Turtle & Want, 2008: 1255).

In the field of criminal profiling there are also warnings that intuition and gut instincts no matter how seductive, represent an extreme danger to the investigation and always should be bypassed in the investigative strategy, proposals and final profiles, unless there are reasonable grounds for their inclusion (Turvey, 2011: 129). It does not say, however, what would it be reasonable grounds for their inclusion, and in the case of reasonable grounds as the basis for the decision, whether there ever comes to intuition.

On the other side there are also authors who see intuition as highly prized tool in the management of serious crime (See Martin, 2010: 146). Also as been noted by Bennet & Hess (2007: 11) though some deny the existence or worth of intuition, hundreds of experienced investigators attest to its value.

It seems pretty difficult to form any judgment on intuitive decision-making in general or as a part of criminal investigation in specific. Whatever we conclude there is always danger to be evaluated subjectively and disputed because we did not conduct any kind of appropriate empirical research on that topic. At this stage of the consideration our thinking can only be at the level of hypothesis. Perhaps for that reason we are not burdened by the potential danger that somebody characterized as frivolous if we opt for the hypothesis that intuitive decision making exists in criminal investigations, and not only there, and as well is welcome and useful in the process of discovering, collecting and interpretation of evidence. But it has to be noted that there are traps like representativeness heuristics, which can lead investigators to so-called cognitive illusions excellently described by Guthries at al. (2007) with the final consequence expressed in form of wrong conclusions. We should always be aware of that.

Good example of it is situation when suspect use right to silence. Law forbids us to qualify „remain silent“ as a sign of suspects guilty. So today we have a constitutional right to silence and elsewhere this is one of fundamental legal rules. But will this kind of suspects behavior tickle our investigative minds and intuitively will we think about the possible involvement of the suspect in the crime in full conformity with the old Roman expression "*qui tacet consertire videtur*" - he who is silent is consider to agree. And not only investigators, perhaps we could forgive them such kind of thinking, but what with other subjects in procedure. However, this seems to be more important question for the trier of fact in the court proceedings in circumstances where the defendant decides to use right to silence.

If we look at the whole problem from another standpoint, perhaps there is a lot more intuitive thinking in criminal proceedings than we can imagine. How can we describe making conclusions based on circumstantial evidence? Is it intuitive or rational? Certainly more intuitive than rational, but at least both. The fact that the suspect has prior convictions for rape does not give us the right to conclude on the basis of the logic about his involvement in the rape we are investigating. Our intuition still tells us otherwise. But if there is more circumstantial evidence in presented example, more our thinking will be logically based. Very easy therefore we can conclude that between circumstantial and intuition exist direct connection. In essence, we would be free to conclude that any decision based on the circumstantial evidence is actually intuitive. Only issue here is how much intuitive. And there is such decision many in the investigations, and not only in the investigation.

After all the above stated, we can establish that the possibility of intuitive reasoning in the investigation is enormous, especially bearing in mind that specific "crime investigation reasoning process" often in the initial stages suffers from a large number of factual gaps. We of course do not claim that any decision in the investigation should be based on intuition but when we have no or have very few information and in an imaginary situation as it Maver (2000: 115) described where theoretically all the inhabitants of our planet could be suspects, intuitive thinking under our opinion could possibly take us in the right direction.

It is important at the end of our short and certainly insufficient exposure of intuition in a criminal investigation, in which we opened more questions than we answered, something to say about one very important aspect of the investigation. That is its legal framework. In principle, it does not matter how you get to the information, it is important that you come to it in accordance with the law, in the manner and procedure laid down in the relevant procedural provisions. So, no matter what our decisions are logical or intuitive of crucial importance is legal norm and we have to comply with it. In other words, in criminal procedure everything that happened objectively and as such was accessible to our senses is practically meaningless if is not in accordance with the relevant formal procedures.

Ultimately, the only one truth that comes in a criminal proceeding, firstly in the part of the investigation and secondly at trial is the legal truth and often as we have many times witnessed it is not objective one.

## CONCLUSION

In this paper, our intention was not to make possible differences between philosophical, scientifically or perhaps spiritual meaning of intuition, we just wanted to point out the different understandings of this phenomenon and its possible presence in our daily lives specifically regarding the crime investigation. In that sense we had the opportunity to review some of the basic philosophical and more importantly scientific views on intuition and intuitive thinking. We must admit that we were amazed with number of recent and legitimate research on this topic, which convinced us that intuitive thinking should be seriously understood as a specific process of human perception and reasoning about the world around him. Therefore, there is no doubt that intuition as a specific mode of reasoning and decision-making has a science-based value and we were wrong to underestimate it.

To make things more interesting, our analysis of few studies and papers showed that phenomenon of intuitive reasoning is not only evident in the investigation but at trial as well. And this part of criminal proceedings from the standpoint of legal rigorosity and demands for justice should not been in any way characterized as intuitively driven.

Accordingly, intuitive decision-making in criminal investigation not just only exists, but it basically should be considered as one of the specific forms of "crime investigation reasoning process". This specific form often contributes to the knowledge of certain facts which would due to application of sometimes rigid rules of logical reasoning remained hidden, and therefore unavailable to bodies of criminal proceedings. In the earlier stages to the prosecutor and investigators and in the later stages of the proceedings to the court / jury and parties. In principle intuitive thinking within crime investigation, could be justified in a number of situations where investigators do not have information and evidence, or they are incomplete, or ambiguous, or simply when there is not enough time to conduct decision-making process based entirely on rational categories.

In addition to the aforementioned, without specifically customized real-time research based on scientific methodology, conducted for this purpose we certainly do not want to claim that intuition should take place in the framework of crime investigation. Therefore the value of this study needs to be viewed primarily through the attempt of actualization of this unconventional phenomenon in investigative and judicial practice to which was not given more attention in the literature, at least in this region.

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## Fear of Crime in Urban Neighbourhoods – A Comparative Analysis of Six Capitals<sup>18</sup>

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*Summary: Purpose: The purpose of this paper is to present general findings of a survey on fear of crime on a sample of 2377 respondents in the capitals of republics and one autonomous region of Former Yugoslavia in 2009. Design/Methods/Approach: A survey was conducted in households by trained interviewers. Statistical methods utilized are factor and regression analysis. Statistical tests show that the used model is valid and reliable as well as sampling was adequate. Findings: The main findings resemble with other Western European and American studies on fear of crime. The results imply that fear of crime depends on weak social networks in a neighbourhood, worry about crime, probability of victimization in the next 12 months, severity of consequences of victimization, low ability of self-defence, impact of victimization on one's life, preventative measures (precaution), gender (women), education, low position in a labour market, and recent victimization influence one's fear of crime intensity. Research Implications: The research results have implication for policy making in the fields of crime control and crime prevention and especially imply social and situational preventative measures to be undertaken. Practical Implications: The article is also useful for community policing in practice, especially in dealing with the elderly, women and the socially and economically marginalized. Originality/Value: The research project presented in this article is the first comparative research using socio-demographic and social psychological model in the region of South Eastern Europe. Nevertheless, it is also a replication and test of models used for fear of crime research in Western Europe.*

### INTRODUCTION

Fear of crime or measures of people's perceptions of insecurity is not a simple phenomenon that follows a linear path (Bilsky & Wetzels, 1997). Many criminologists have argued that the discourse on crime and fear of crime is more of a problem in people's everyday lives than crime itself (Ewald, 2000). It is a multi dimensional issue that has been

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divided into fear, anxiety, vulnerability, risk assessment, concerns, and perceptions of safety/insecurity (see Ferraro & LaGrange, 1987; Gibson, Zhao, Lovrich, & Gaffney, 2002; Hollway & Jefferson, 2000). Fear of crime is so a very complex and not clearly defined concept. What we measure with instruments of Fear of crime is a mixture of different "fears", one part might be fear of crime (Sessar, 2010; Kury, Lichtblau, Neumaier, & Obergfell-Fuchs, 2004). Fear of crime as measured by standardised instruments, regularly questionnaires, is more fear of social change than fear of crime. Crime surveys have expanded rapidly since the late 1960s in the United States of America and also the United Kingdom. Surveys shed light on attitudes toward policing, victimization, perceptions of risk, and people's fear of crime. A plethora of studies have concluded that the fear of crime impinges upon the wellbeing of a large proportion of the population. Some have even gone as far as to suggest that the fear of crime is now a larger problem than crime itself (Warr, 1984; Bennett, 1990; Hale, 1992, 1996; Beckett & Sasson, 2004). Especially in the United States the discovered problem of fear of crime by victim surveys started a debate of this problem on a political level. The politicians found out that crime and especially fear of crime can be a means to win elections (Lee, 2001). Longitudinal Surveys in Germany show clearly that since the beginnings of the 1990s fear of crime became less important than fears of unemployment, money shortage to pay everyday costs or having incompetent governments to solve economic problems (Kury & Obergfell-Fuchs, 2008). As Beckett and Sasson (2004: 47) point out, "the construction of the crime issue as a consequence of excessive permissiveness has been extraordinarily useful to conservative opponents of civil rights and the welfare state".

Chambers and Tombs (1984), reviewing the 1982 British Crime Survey (Scotland), reported that "more than half of the respondents (58%) said that at some time in the past they had been concerned about the possibility of being a victim of crime". A consistent finding in research on fear of crime and perceptions of insecurity is that women fear crime more than men do (Lira & Andradepalos, 1993; Carcach, Frampton, Thomas, & Cranich, 1995; Bilsky & Wetzels, 1997; Mesch, 2000; Pantazis, 2000; Saltijeral, Lira, & Hernandez, 1996). A second important and consistent factor found to affect people's perceptions of insecurity and/or fear of crime is age (Carcach et al., 1995; Pain, 1995; Pantazis, 2000; Zedner, 2002), and third variable that is regularly found to be associated with fear of crime and lack of security is social class (Vold, Bernard, & Snipes, 2002).

Crime surveys are conducted not only in Western European countries but also the countries of Central and Eastern Europe (Zvekić, 1998; Hatalak, del Frate, & Zvekić, 1998; Kury, 2001; Umek, 2004). Research in Western Europe and Central and Eastern Europe does not show major differences in fear of crime based on demographic, sociological, and/or social psychological factors. Across the region, results show higher-level fear of

crime in women, people who perceive themselves as not being physically fit, the unemployed, those who expose themselves by walking alone in the dark, and those who perceive streets and woods as sources of danger (Meško, Petrovec, Areh, Muratbegović, & Rep, 2006). In addition, higher-level fear of crime can be attributed to respondents who consider themselves a potential victim due to the jealousy of others or as being attractive to a potential criminal in other ways, incapable of chasing off a potential assailant, and perceiving places as dangerous (Meško, Fallshore, Muratbegović, & Fields, 2008).

Fear of crime is not only drawing attention at the empirical level of study as many have also attempted to explain it theoretically. These efforts have tended to be dominated by researchers influenced by social psychological insights (Umek, 2004), though models of explaining fear of crime have recently been expanded with social-psychological and psychological factors (Van der Wurff, Stringer, & Timmer, 1988; Van der Wurff, Staalduinen, & Stringer, 1989; Meško & Farrall, 1999; Farrall, Banister, Ditton, & Gilchrist, 2000; Meško, Areh, & Kury, 2004; Kury, 2008; Meško, Hirtenlehner, & Vošnjak, 2009). In this way, processes occurring at the individual level are taken into account. Van der Wurf, et al., (1989) and Farrall, Bannister, Ditton, and Gilchrist (1997, 2000) developed a model to attempt to explain fear of crime on an individual level. However, individual-level explanations do not take into account factors that can influence social and psychological factors. Research in Western Europe and Central and Eastern Europe show quite similar results of factors of fear of crime (Meško & Farrall, 1999; Meško et al., 2006; Meško, Kovčo Vukadin, & Muratbegović, 2008). The studies imply that the use of socio-demographic and social psychological models explain up to fifty percent of variance of fear of crime.

The links between perceived neighbourhood social disorder and attitudes toward reporting fear of crime are positively related to levels of social integration in a community setting (Rountree & Land, 1996; Gibson et al., 2002; Lee & Earnest, 2003) and also to involvement in formal and informal organizations (Austin, Woolever, & Baba, 1994; Walklate, 1998).

The neighbourhood disorder perspective broadens the scope of the social integration model by incorporating the social and physical characteristics of the neighbourhood. Social factors include drunken people, rowdy teenagers, incivilities and drug users (Kanan & Pruitt, 2002; McGarrell, Giacomazzi, & Thurman, 1997; Ross & Mirowsky, 1999; Kaal, Vanderveen, & van Oeveren, 2008). Physical factors are the visible features of these neighbourhoods such as vandalism, rubbish and litter, and graffiti (Ross & Jang, 2000; Ross & Mirowsky, 1999; Ross, Mirowsky, & Pribesh, 2001). Both social and physical signs of disorder have been shown to be negatively related to levels of security among residents who live in disorganized neighbourhoods (Ross & Mirowsky, 1999; Kanan & Pruitt, 2002).

Disadvantage and disorder in neighbourhoods has been linked to the lack of social control in the community (Taylor & Shumaker, 1990; Perkins, Meeks, & Taylor, 1992; Sampson & Raudenbush, 1999; Ross & Jang, 2000). Social disorder refers to people and can be exemplified by the presence of people drug dealing, fighting on street corners, crime, physical environment and local demography or other activities that create a sense of danger and that are perceived by residents as signs of the breakdown of social control (Skogan & Maxfield, 1981; Wilson & Kelling, 1982; Taylor & Shumaker, 1990; Ross & Jang, 2000; Ross & Mirowsky, 2001; Hirtenlehner, 2008). As Ross et al., (2001) found, perceived neighbourhood disorder, common in disadvantaged neighbourhoods, influences mistrust by increasing residents' perceptions of powerlessness. Therefore, the willingness to get involved in other residents' lives or to intervene in neighbourhood problems may be affected by the levels of mistrust. Residents may also fear retaliation if they intervene in neighbourhood problems (Bursik & Grasmick, 1993).

Finally, as research from the social disorganization theory suggests, crime and disorder lead to fear, which weakens neighbourhood cohesion and facilitates more crime and disorder (Markowitz, Bellair, Liska, & Liu, 2001). Due to the reduced use of public places, informal social control loses its power in such spaces. Some criminologists wrote about problems related to conceptualization of collective efficacy (Sampson, Raudenbush, & Earls, 1997; Sampson & Raudenbush, 1999). In their conceptualization of collective efficacy, Sampson et al., (1997) link residents' perceptions of their communities with their tendency to intervene in problems and supervise residents to maintain public order. These neighbourhood conditions may negatively influence attitudes to intervene and, as a consequence, attitudes toward reporting crime. As Sampson et al., (1997) suggest, one is unlikely to take action in a neighbourhood context where people mistrust one another, and where neighbourhood residents share a sense of powerlessness, it is difficult to bring about collective action. From this perspective, attitudes toward reporting fear of crime or insecurity, would also be affected by community-level factors such as neighbourhood social disorder, diminished collective efficacy, and low social control in the community (Garcia & Herrero, 2007). Wealthy people move from such communities to gated communities which increases the underlying problem and brings the effect of physically separated social classes.

Empirical studies show different results regarding the relationship between individual criminal victimization and fear of crime. A survey on fear of crime conducted in urban and rural communities in Slovenia citizens shows that the fear of crime is negatively correlated to victimization. Respondents who have already been victimized, express less fear of crime. This finding is statistically significant only for respondents in urban areas. The authors of

this survey concluded that the respondents from urban neighbourhoods were mainly victimized by petty crimes (Meško, Šifrer & Vošnjak, 2012).

## **ABOUT SIX CAPITALS**

### **Ljubljana - Slovenia**

Ljubljana is the capital of Slovenia and its largest city (Statistical Office of the RS, 2010). It is the centre of the City Municipality of Ljubljana. It is located in the centre of the country in the Ljubljana Basin. Throughout its history, it has been influenced by its geographic position at the crossroads of the Slavic world with the Germanic and Latin cultures. First of January 2011, Ljubljana had 280,140 inhabitants (Mestna občina Ljubljana, 2011c) and 38 650 students in 2009/2010 (Ibid). At the 2002 census, 39.2% of Ljubljana residents were Roman Catholic; 30.4% were believers who did not belong to a religion, unknown or did not reply; 19.2% were atheist; 5.5% were Eastern Orthodox; 5.0% were Muslim; and the remaining 0.7% were Protestant or belonged to other religions (Statistical office of the RS, 2002). Around 84% of the population speak Slovene as their native language. The second most-spoken language is Bosnian, with Serbian holding third place (ibid.). Industry remains the city's most important employer, notably in the pharmaceuticals, petrochemicals and food processing. Other fields include banking, finance, transport, construction, skilled trades and services and tourism. The public sector provides jobs in education, culture, health care, state and local administration. The number of unemployed in July 2011 was 13,765 (Mestna občina Ljubljana, 2011a) and the average net salary in June 2011 was € 1,119.57 (Statistical Office of the RS, 2011). Ljubljana and Slovenia do not have a high crime rate. With around 45,000 recorded criminal offences in 2007, the Police Directorate Ljubljana alone accounts for over 50% of the country's crimes (Ministry of the Interior, Police, 2007). Crime rates of reported crimes in Slovenia (450/10.000) and Ljubljana (1600/10.000) show that Ljubljana is far above the Slovenian average. Slovenia and in particular Ljubljana have a quiet and secure reputation (Mestna občina Ljubljana, 2011b). In 2010 GDP per capita was 17,602 EUR (Ljubljanski univerzitetni inkubator, 2012).

### **Zagreb – Croatia**

Zagreb is the capital of the Republic of Croatia. It is in the northwest of the country, along the Sava river, at the southern slopes of the Medvednica mountain. Zagreb lies at an elevation of approximately 122 m (400 ft) above sea level. According to the last official census, Zagreb's city population in 2011 was 686,568 (Croatian Bureau of Statistics, 2011) while its municipal population was 792,875 (Ibid). According to the same census, the wider

Zagreb metropolitan area, which includes the City of Zagreb and Zagreb County (also known as the 'Zagreb ring'), has a population of 1,110,517 people and is the only metropolitan area in Croatia with a population of over one million (ibid.). The majority of its citizens are Croats making up 92% of the city's population (Croatian Bureau of Statistics, 2011). The same census records 60,066 residents belonging to ethnic minorities comprise: 18,811 Serbs (2.41%), 6,204 Bosniaks (0.80%), 8,030 Muslims by nationality (1.02%), 6,389 Albanians (0.83%), 3,225 Slovenes (0.41%), 3,946 Roma (0.55%), 2,131 Montenegrins (0.27%), 2,315 Macedonians (0.27%), together with other smaller minor ethnic communities, especially the historically present Germans (Ibid). Most important branches of industry are: production of electric machines and devices, chemical, pharmaceutical, textile, food and drink processing. Zagreb is international trade and business centre, and the transport crossroad of Central Europe (Službene stranice grada Zagreba, 2012). GDP in 2010 was \$17,500 (Regional secretariat for parliamentary cooperation in South-East Europe, 2012). Crime rates in 2009 were: 19,08 for property crime; 0,57 for violence crime and 4,33 for traffic victims (Nation Master, 2012).

### **Sarajevo - Bosnia and Herzegovina**

Sarajevo is the capital and largest city of Bosnia and Herzegovina, with an estimated population of over 311,161 people within its administrative limits. It is also the capital of the Federation of Bosnia and Herzegovina entity, as well as the centre of the Sarajevo Canton, which has a population of 440,744 (Saopćenje, priopćenje, 2012). Sarajevo is located in the Sarajevo valley of Bosnia, surrounded by the mountains (Igman, Bjelašnica, Jahorina, Trebević, Romanija, Treskavica) and situated along the Miljacka River in the heart of Southeastern Europe and the Balkans. Sarajevo is the leading business and cultural centre of Bosnia and Herzegovina, and its influences in politics, education, entertainment, media, fashion, science, and the arts contribute to its status as Bosnia and Herzegovina's major economic centre (City of Sarajevo, 2012). The city is historically famous for its traditional religious diversity, with adherents of Islam, Orthodoxy, Catholicism and Judaism coexisting there for centuries (Malcolm, 1996). Due to this long and rich history of religious diversity, Sarajevo is often called the "Jerusalem of Europe" (In Europe's Jerusalem, 2002) or "Jerusalem of the Balkans" (Ibid). In 1914 it was the site of the assassination of the Archduke of Austria that sparked World War I. Seventy years later, it hosted the 1984 Winter Olympics. For nearly four years, from 1992–1996, the city suffered from a siege during the Bosnian War for independence. Sarajevo industries now include tobacco products, furniture, hosiery, automobiles, and communication equipment (Tianjin Sister-City council for the Promotion of Enterprises, 2012). GDP per capita in 2010 in Bosnia and Herzegovina was 6,600 USD (USDA, 2011). The overall crime rate in Bosnia-Herzegovina (BIH) remains high, with the greatest concentration of incidents in Sarajevo and other

urban areas. Crime statistics for 2009 indicate that there were 8,015 criminal offenses reported in Sarajevo, which is 9.2 percent less than in 2008 (United State department of State Bureau of Diplomatic Security, 2010).

### **Belgrade - Serbia**

Belgrade is the capital and largest city of Serbia. It is located at the confluence of the Sava and Danube rivers, where the Pannonian Plain meets the Balkans (Beograd, 2012). The city proper has a population of 1.2 million people, while the official metropolitan area has about 1.7 million. It is one of the largest cities in Southeastern Europe. Its name in English translates to White city. Belgrade has a special administrative status within Serbia (Ibid). Its metropolitan territory is divided into 17 municipalities, each with its own local council (Ibid). It covers 3.6% of Serbia's territory, and 22.5% of the country's population lives in the city (Ibid). Belgrade was the capital of Yugoslavia from 1918 to 1989. According to the 2002 census, the main population groups according to nationality in Belgrade are: Serbs (1,417,187), Yugoslavs (22,161), Montenegrins (21,190), Roma (19,191), Croats (10,381), Macedonians (8,372), and Muslims by nationality (4,617) (Ibid). Belgrade is the financial centre of Serbia, and is home to the country's National Bank. New Belgrade is the main business district in the city. As of 2009, over 40% of Serbia's GDP is generated by the city, which also has 31,4% of Serbia's employed population (Ibid). In December 2010, the average monthly net salary in Belgrade was 50,000 RSD (€490, \$680) (Abramović, 2011). Serbia-wide figures showed 100,401 recorded offences in 2010 in comparison to 101,514 in 2009. Within Belgrade, there were 33,764 recorded offences in comparison to 34,051 in 2009 (United State department of State Bureau of diplomatic Security, 2011).

### **Skopje – Macedonia**

Skopje or Skoplje, city (1994 pop. 444,760), capital of Macedonia lies on the banks of the Vardar River. It is an important transportation and trade centre as well as an industrial hub where chemicals, cement, machinery, and diverse light manufactures are produced. The city is also the seat of an Orthodox Eastern archbishop and the seat of a Macedonian university (founded 1949) (Skopje, 2012). It is the country's political, cultural, economic, and academic centre. It was known in the Roman period under the name Scupi. The total budget of Skopje for 2010 was 4,143,357,000 denars, or about € 67 million. Of these 4 billion denars, about 2 billion were from direct taxes and 1 billion \$ endowment from the state. The rest was from indirect taxes or transfers and various donations (Blackhat, 2012). Although Skopje had hosted economic plans since the nineteenth century, the Yugoslav communist regime, allowed the transformation of the city, which transformed it into a major industrial centre. It has been the largest economic and industrial centre of

Macedonia (Official portal of City of Skopje, 2011). Skopje has many factories. The most important activities are the processing of metals, chemicals, textiles, printing and others. Skopje is the most populous Macedonian city. According to the 2002 census, the population of Skopje was 506,926 people. According to a more recent official estimate from 2006, it has 668,518 inhabitants (State Statistical Office, 2002). FYR Macedonia GDP - per capita: \$9,700 (2010 est.) (Nation Branding & Investment, 2010). City of Skopje's GDP per Capita in 2008 was 5.077 € (Idom consulting, 2011). Over one half of criminal acts registered in the first half of 2009 took place in Skopje municipal area. To be exact, there were 6,285 criminal offences recorded in the first six months of the year registered in Skopje (Skopje with highest crime rate, 2009).

### **Pristine - Kosovo**

Pristine is the capital and the largest city of Kosovo, it and its suburbs have a total population of over 400,000. It is the administrative, economical, and cultural centre of Kosovo. The area of Pristine has a long history, in its vicinity archaeological discoveries have been found which date back to the early neolithic area. The city has a majority Albanian population, alongside other smaller communities including Bosniaks, Roma and others. It is the administrative, educational, and cultural centre of Kosovo. Pristine is the most significant high education centre of Kosovo. The University of Pristine, founded in 1970, is located here with its 13 faculties (colleges). Pristine is also home of the Academy of Arts and Sciences of Kosovo (Zysman & Hoxha, 2011), which gathers Kosovo's most prominent intellectuals, the Institute of Albanology, and the Institute of History. Kosovo GDP per capita: 2594 Eur (Annual report on Donnor Activities, 2011). In Pristine Municipality around 13,306 businesses are operating. The largest number of these businesses is oriented towards commercial activity. Based on data from the Ministry of Trade and Industry, about 54% of businesses engaged in commerce and tourism, transport 15%, 8% real estate and only 4% with processing activities (European Centre for Minority Issues Kosovo, 2012).

Crime rates in Kosovo are similar and within the European mainstream; urban Mitrovica has more than its share of offences, the rural municipalities much less (Kern, 2011). Kosovo is very safe for internationals. While it always pays to take care of your belongings, street crimes and petty theft in Kosovo are low and violent crime rates are much lower than in many Western cities. Most internationals, especially women, not only are very safe but also feel very safe in Kosovo (Warrander & Knaus, 2008). No statistical data on recorded crimes are available.

## METHOD

### Instrument

For the purpose of this study a 106 item questionnaire was used. Original questionnaire was in German (Hirtenlehner, Meško, & Vošnjak, 2009). The questionnaire was translated to native languages and for the improvement of the correctness of the translation back translated. Researchers from the participating universities also thoroughly compared the translated questionnaire regarding denotative and connotative meaning of questions and statements. The questionnaire consisted questions and statements about fear of crime, and neighbourly relations, perception of the quality of life in the city among citizens of the studied capitals, as well as questions about their social networks and their trust for the people who live in their neighbourhood. In order to obtain a more complete answer about a subjective feeling such as fear we also asked respondents how they would feel if they were to become victims of different sorts of crime, that is, what measures they are taking to prevent becoming a victim of crime.

### Data Collection

We conducted interviews in the households of the interviewees. The population consisted of the adult (18 years old and older) inhabitants of urban areas of Ljubljana, Zagreb, Sarajevo, Belgrade, Skopje and Pristine – capitals of five republics (Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Macedonia) and one autonomous region (Kosovo) of former Yugoslavia. The exercised sampling procedure was a multi-stage random probability method. The selection process was carried out through four stages.

In the first stage, primary sampling units were defined. Those were city areas (neighbourhoods) in which the research would be conducted. As all capitals are urban and suburban, we focused on urban neighbourhoods only. When the map of primary sampling units was made, the proportionate participation of each such segment in the whole sample was defined. The second step in designing the sample consisted of precisely defining the sampling points i.e. the streets or parts of the streets inside the primary sampling units in which the polls would be conducted. Each sampling point was defined as a path with a specific starting point and given the direction of the pollsters' movement. In that way, we obtained a list of 40 precisely defined paths for each city (from point A towards point B) where the pollsters would move and in such designed areas find their interviewees. Inside each sampling point, 10 interviews were conducted. The next step involved specifying the procedure for finding of convenient households in which the poll or interview would be conducted. The selection of a household was carried out using the random-route technique. The disposition of households was defined according to the city size and the

type of settlement. The pollsters were instructed to walk on the left hand side of the street. The final step in sample design consisted of defining the procedure for the choice of the interviewees inside the previously correctly chosen household. The selection of one respondent per household was on the „next birthday“ selection-key. The procedure prescribed that the pollster should knock at the door of the correctly chosen household, say his/her name and ask for cooperation in the survey, ask how many members of that household are adults (18 years or older), and then pick one whose birthday falls next (chronologically). The change of such designated respondents was allowed only if after three attempts (one initial visit and two call-backs) the pollster could not conduct the interview. In case that it was impossible to find the correctly chosen interviewee or if he refused to participate in the poll, the pollsters continued the interviewing according to the plan of movement in that sampling point.

The polling was conducted during the period April - June 2009 under the supervision of senior researchers by the trained students of the University of Maribor<sup>19</sup>, University of Zagreb<sup>20</sup>, University of Sarajevo<sup>21</sup>, University of Belgrade<sup>22</sup>, University of Ohrid<sup>23</sup>, and AAB University in Pristine<sup>24</sup>, who had received precise instructions about the procedure for polling and keeping the research documentation. The interviewing process was supervised by senior researchers and research assistants from the participating universities. Apart from the permanent supervision of the interviewing process by the staff of the universities, and in accordance with international research standards, a check of at least 15% of the effective interviews was performed in each city using some of the back/checks options (direct supervision during the interview, visit of the supervisor to the interviewed households, check by phone calls to the interviewed households). A stratified random sample of total 2,377 respondents is presented in Table 1.

**Table 1: Sample description (N = 2,377)**

			Ljubljana		Zagreb		Sarajevo		Beograd		Skopje		Priština	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>Age</b>														
18-29	795	33.	10	26.	87	23.	16	40.	91	22.	13	33.	21	54.

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<sup>21</sup> Faculty of Criminal Justice and Security, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

<sup>22</sup> Faculty of Security, University of Belgrade, Serbia.

<sup>23</sup> Faculty of Security, University St. Kliment Ohridski, Bitola, Former Yugoslav Republic of Macedonia.

<sup>24</sup> Faculty of Criminal Justice and Security, AAB-Riinvest University, Prishtine, Kosovo

		7	5	6		3	2	5		8	2	7	8	5
30-39	340	14.	65	16.	60	16.	37	9.3	51	12.	39	9.9	88	22.
		4		5		1				8				0
40-49	284	12.	46	11.	54	14.	57	14.	55	13.	46	11.	26	6.5
		0		6		5		3		8		7		
50-59	321	13.	46	11.	47	12.	51	12.	76	19.	62	15.	39	9.8
		6		6		6		8		0		8		
60-69	320	13.	60	15.	64	17.	49	12.	71	17.	57	14.	19	4.8
		6		2		2		3		8		5		
70+	300	12.	73	18.	61	16.	44	11.	56	14.	56	14.	10	2.5
		7		5		4		0		0		3		
<b>Gender</b>														
Male	104	44.	14	38.	15	42.	20	51.	16	41.	20	51.	16	42.
		8	5	9	5	9	0	4	0	5	3	2	4	9
Female	131	55.	23	61.	22	58.	19	49.	23	58.	19	48.	23	57.
		0	5	7	2	0	0	6	0	5	8	1	6	1
<b>Marital status</b>														
Single	769	32.	10	26.	10	27.	16	40.	10	26.	13	34.	16	40.
		5	3	1	2	0	2	5	7	8	4	0	1	3
Married	111	46.	15	38.	18	49.	18	46.	18	46.	20	50.	20	51.
		1	9	2	5	6	2	4	0	5	3	0	8	4
Cohabitat ion	150	6.3	69	17.	25	6.6	10	2.5	19	4.8	8	2.0	19	4.8
				5										
Divorced	118	5.0	25	6.3	15	4.0	14	3.5	39	9.8	12	3.0	13	3.3
Widowed	219	9.3	46	11.	50	13.	30	7.5	50	12.	40	10.	3	.8
				6		2				5		2		
<b>Level of education</b>														
Incomplet e primary school	35	1.5	2	.5	6	1.6	6	1.5	3	.8	3	.8	15	3.8
Primary school	132	5.6	27	6.8	24	6.3	29	7.3	17	4.3	15	3.8	20	5.0
Vocation al school (3yrs)	284	12.	46	11.	52	13.	52	13.	59	14.	40	10.	35	8.8
		0		6		7		0		8		2		
High school (4	924	39.	16	41.	13	36.	17	43.	13	34.	17	43.	13	34.
		0	4	4	7	1	5	8	8	5	3	9	7	3

yrs)														
Diploma	276	11.	42	10.	51	13.	38	9.5	69	17.	21	5.3	55	13.
degree		7		6		5				3				8
(2yrs)														
Universit	644	27.	93	23.	97	25.	95	23.	98	24.	13	33.	13	32.
y degree		2		5		6		8		5	0	0	1	8
Graduate	74	3.1	22	5.6	12	3.2	5	1.3	16	4.0	12	3.0	7	1.8
degree														

**Employment****t**

Full-time	732	31.	13	33.	15	40.	70	17.	12	31.	11	30.	14	35.
job		5	1	7	1	7		5	0	3	8	9	2	5
Part-time	178	7.7	25	6.4	27	7.3	47	11.	17	4.4	31	8.1	31	7.8
job								8						
Student	415	17.	63	16.	47	12.	96	24.	54	14.	71	18.	84	21.
		8		2		7		0		1		6		0
Unemplo	299	12.	15	3.9	20	5.4	68	17.	43	11.	51	13.	10	25.
yed		9						0		2		4	2	5
Housewif	63	2.7	2	.5	3	.8	22	5.5	2	.5	11	2.9	23	5.8
e														
Retired	638	27.	15	39.	12	33.	97	24.	14	38.	10	26.	18	4.5
		4	3	3	3	2		3	7	4	0	2		

**Financial situation**

Good	173	73.	33	84.	30	80.	27	69.	26	65.	26	67.	28	71.	
		3	2	6	8	6	7	6	0	3	8	7	9	5	3
Bad	635	26.	60	15.	73	19.	12	31.	13	34.	12	32.	11	28.	
		8		2		3	4	0	7	3	6	1	5	8	

**Victim of crime in the past 5 years**

Yes	377	15.	10	25.	55	14.	64	16.	54	13.	47	11.	56	14.	
		9	1	3		5		0		5		8		0	
No	200	84.	29	74.	32	85.	33	84.	34	86.	35	88.	34	86.	
		0	1	9	8	4	5	6	0	6	5	1	2	4	0

**Victim of crime**

Yes	678	28.	16	42.	11	31.	98	24.	11	29.	81	20.	93	23.	
		6	8	1	9	4		5	9	8		6		3	
No	169	71.	23	57.	26	68.	30	75.	28	70.	31	79.	30	76.	
		4	4	1	9	0	6	2	5	1	3	3	4	7	8

Percentage is based on the number of answered questions.

## RESULTS

Results of this study are presented in the following manner. First, factor analysis for the 'fear of crime' variable is presented and compared with the previous studies. Subsequently, the results of factor analyses for other factors will be presented. Third, the results of regression analysis (fear of crime as a dependent variable and other independent variables) will be presented as well as comparison of statistically significant variables.

### Factor analysis

The purpose of factor analysis is to test the questionnaire for the factor validity. In factor analysis maximum likelihood extraction with eigenvalues greater than one was conducted by sections of the questionnaire (see Tables below). In cases of multiple factors, direct oblmin rotation was performed.

### Fear of crime

Fear of crime consisted of six vignettes that enable measurement of complex social situations, which respondents can imagine and relate to crime situations. The previous fear of crime surveys have shown that these vignettes are quite powerful in measuring fear of crime of people in urban neighbourhoods (Meško & Farrall, 1999; Vošnjak, Šifrer & Meško, 2011).

Table 2: Fear of crime

Vignettes		Factor loading	Mean	Standard deviation
<b>F0: Fear of crime (45.3 % var.); KMO=0.85; <math>\alpha</math>=0.76</b>			<b>2.78</b>	<b>0.79</b>
<b>A parked car</b>	One evening you go to take out the garbage. On the street you see two men walking around a parked car. When they see you looking at them, they begin to walk toward you.	0.711	2.40	1.01
<b>A bus stop</b>	One afternoon, you are standing at a bus stop when a group of 15 or 16-year-olds comes along. They begin kicking the bus stop and daubing graffiti on the bus shelter.	0.689	2.79	1.14

<b>A party in the neighbourhood</b>	You have been invited to a party in a neighbourhood you do not really know. Early that evening you set out by bus. When you get off you still have some way to walk. Suddenly you notice that you have lost your way. A group of youths is following you and are giving unpleasant remarks at you.	0.686	2.29	1.03
<b>A telephone</b>	You are going out one evening. You are ready and just about to leave when the phone rings. You answer, giving your name. But at the other end you hear only irregular breathing. You ask who is there. They hang up.	0.675	3.07	1.15
<b>A doorbell</b>	One evening you are at home on your own. It is late. The doorbell rings, but you are not expecting anyone.	0.649	3.16	1.10
<b>A bar<sup>25</sup></b>	You are in a part of town where you have never been before. You go into a bar and inside there is a group of loud speaking local males.	0.626	3.01	1.05

Factor 'fear of crime' explains 45.3 percent of variance. Kaiser-Meyer-Olkin's (KMO) measure (0.85) and Cronbach Alpha reliability coefficient (0.76) show substantial amounts of data adequacy and reliability for further analysis. Respondents' answers were on the scale 1-very unsafe to 5-very safe. In Table 2 the lowest mean 2.29 has vignette 'A party in the neighbourhood' showing the most unsafe feeling among the respondents and the highest mean 3.16 has the vignette 'A doorbell'. We can compare results to the previous studies of fear of crime in Scotland, the Netherlands and in Slovenia, where Meško and his colleagues continuously used this model in a 10 year period in several surveys of fear of crime. The mean values in table 3 show that the importance of the fear of crime factors in the population of Slovenia do not change significantly within 10 years (Meško & Farrall, 1999; Vošnjak, Šifrer, & Meško, 2011). All results of the previous surveys show that the respondents feel a great sense of insecurity about "A party in the neighbourhood" and they feel safer in all other situations, particularly in the situation "A doorbell". In the present study, standard deviations are slightly higher than in the previous studies.

<sup>25</sup> This item has been changed from the original one which consists of a situation with motorbike riders.

Table 3: Results of the previous surveys on fear of crime in Slovenia

	Ljubljana and the suburbs, 1999			Slovenia, 1999			Slovenia, 2001			Ljubljana, 2006			Ljubljana, 2008		
	N=443			N=741			N=1760			N=758			N=480		
Situation	F.L.	M	SD	F.L.	M	SD	F.L.	M	SD	F.L.	M	SD	F.L.	M	SD
Doorbell	0.77	3.31	1.01	0.76	3.14	0.80	0.71	3.12	1.01	0.66	3.43	0.98	0.64	3.25	0.94
Car	0.76	2.41	0.92	0.73	2.45	0.91	0.71	2.44	0.92	0.73	2.59	0.96	0.73	2.52	0.85
To a party	0.69	2.05	0.86	0.64	2.11	0.80	0.68	2.21	0.86	0.68	2.39	0.96	0.68	2.19	0.86
Bus stop	0.71	2.76	0.86	0.63	2.60	0.83	0.69	2.66	0.86	0.64	3.00	1.00	0.63	2.83	0.97
Telephone	0.71	3.27	1,01	0.64	3.18	0.70	0.68	3.29	1.01	0.64	3.16	1.10	0.64	3.02	0.99
Café	0.67	3.24	0.95	0.59	3.01	0.91	0.61	2.48	0.95	0.57	3.63	0.91	0.55	3.58	0,89

### Other fear of crime related variables

In the following analysis, sections of the questionnaire were processed with factor analysis in the same manner as factor analysis of fear of crime items. Each new factor was saved for regression analysis. Results of factor analysis are presented in Table 4.

Table 4: Factor analysis of other variables

Other variables	Factor loading	Mean	Standard deviation
<b>F1: Social networks in neighbourhood (46,68 % var.); KMO=0,73; <math>\alpha</math>=0,76</b>			
V2 People in our neighbourhood can be trusted.	0,810	2,35	0,80
V3 I have many friends in our neighbourhood.	0,805	2,29	0,82
V4 There are many reliable people in our neighbourhood.	0,566	2,06	0,76
V5 When going shopping or for a walk, I meet many acquaintances.	0,493	2,01	0,83
<b>F2: Disorder in neighbourhoods (48,47 % var.); KMO=0,86; <math>\alpha</math>=0,85</b>			
V11 Vandalism	0,786	2,64	1,09
V10 Drunk people in the street	0,764	2,76	1,05

V9	Groups of loitering youngsters	0,751	2,49	1,09
V13	Homeless people	0,744	3,02	1,07
V12	Street begging	0,688	2,69	1,11
V8	Collapsing / demolished buildings	0,654	2,74	1,04
V7	Graffiti	0,574	2,93	0,98
V6	Poor hygiene conditions in public areas	0,572	2,30	1,02

**F3: Trust in public institutions (56.14 % var.); KMO=0,64;  
α=0,61**

V13e	Police	0,762	2,47	1,27
V13f	Judiciary	0,748	3,31	1,30
V13b	Government	0,738	3,39	1,35

**F4: Worry about crime (51,50 % var.);KMO=0,87; α=0,86**

V18	Theft	0,798	1,90	1,10
V17	Physical assault / scuffle	0,775	1,84	1,21
V15	Street robbery	0,743	2,07	1,19
V16	Fraud	0,741	2,31	1,19
V20	House burglary	0,670	1,59	1,05
V19	Aggressive street behaviour (talk)	0,549	2,68	1,37

**F5: Probability of victimization in the next 12 months (50,30 % var.); KMO=0,87; α=0,85**

V25	Theft	0,837	2,81	1,18
V22	Street robbery	0,801	3,09	1,19
V24	Physical assault / scuffle	0,701	3,36	1,15
V27	House burglary	0,691	3,08	1,22
V23	Fraud	0,660	3,06	1,19
V26	Aggressive street behaviour (talk)	0,521	2,59	1,30

**F6: Consequences of victimization (51,12 % var.); KMO=0,86;  
α=0,85**

V31	Theft	0,827	2,07	1,05
V29	Fraud	0,798	2,50	1,13
V28	Street robbery	0,775	2,22	1,10
V30	Physical assault / scuffle	0,660	1,79	1,04
V33	House burglary	0,606	1,62	0,93
V32	Aggressive street behaviour (talk)	0,586	3,17	1,40

**F7: Ability of Self-defence (26,77 % var.); KMO=0,61; α=0,70**

V46	Avert the attacker with a self-confident approach	0,770	3,26	1,23
V43	Defend yourself successfully	0,741	3,18	1,19
V44	Run away	0,685	3,19	1,20

V45	Pacify the attacker with talking	0,681	3,31	1,21
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**F8: Impact of victimization on one's life (54,74 % var.);**
**KMO=0,88;  $\alpha$ =0,87**

V57	Theft	0,819	2,16	1,03
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V54	Street robbery	0,798	2,28	1,06
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V55	Fraud	0,762	2,47	1,05
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V56	Physical assault / scuffle	0,719	1,80	0,97
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V58	Aggressive street behaviour (talk)	0,673	2,87	1,27
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V59	House burglary	0,653	1,68	0,91
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**F9: Prevention/Precaution (21,57 % var.); KMO=0,77;  $\alpha$ =0,74**

V85	I try to avoid strangers at night.	0,796	2,50	1,34
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V84	I avoid certain streets, areas and parks.	0,782	2,70	1,36
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V88	At night, I only leave my flat if absolutely necessary.	0,583	2,82	1,53
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V86	At nights, I avoid using public means of transport.	0,540	3,35	1,51
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V87	I avoid carrying large amounts of money.	0,400	2,26	1,40
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Factor analysis, Principal components method, eigenvalue greater than 1. All single factors.

The results of factor analyses show that all factors have met criteria for further analysis.

### Regression analysis

Regression analysis was utilised for the entire sample and each capital separately. Regression analysis of factors and selected demographic variables in Table 5 shows that weak social networks in a neighbourhood, worry about crime, probability of victimization in the next 12 months, severity of consequences of victimization, low ability of self-defence, impact of victimization on one's life, preventative measures (precaution), gender (women), higher education, low position in a labour market, and recent victimization influence one's fear of crime intensity. Results for the capital cities differ. In Ljubljana disorder in a neighbourhood, worry about crime, consequences of victimization, low ability of self-defence, impact of victimization on one's life and precaution influence one's fear of crime. None of the demographic variables was found significant. In Zagreb, weak social networks in a neighbourhood, low ability of self-defence, impact of victimization on one's life, precaution, gender (women), position in a labour market and financial situation predict fear of crime. In Sarajevo, worry about crime, low ability of self-defence, impact of victimization on one's life, and precaution influence fear of crime. In Belgrade, consequences of victimization, low ability of self-defence, impact of victimization on one's life, precaution, education, and low financial status of households are related to fear of



## DISCUSSION

This article presents results from a comparative study on fear of crime in the capitals of former Yugoslav republics. Sampling procedure and data collection were conducted in the same manner in all the studied cities. Factor analysis and reliability analysis (Cronbach alphas) show that the studies variables meet criteria for an in-depth statistical analyses. Therefore, we saved factors for regression analysis and tested influence of independent variables on fear of crime in a complete sample as well as in separate samples of the capitals. R squares are all over 0.322 which is comparable with other similar tests of socio-demographic and social psychological models in the past (Meško & Farrall, 1999). The results of the comparative study imply results of previous studies where influence of previous victimization on fear of crime was found but we also found out that in the majority of capitals previous victimization did not have any impact on fear of crime. Another important finding is that trust to public institutions does not influence fear of crime. This finding implies that the police and judiciary should pay more attention on victims of crime as well as present their preventative activities in neighbourhoods. Quite diverse findings require additional further analyses of the results. Nevertheless, we can conclude that fear of crime depends on weak social networks. This finding requires more attention and effort of the governments to increase social capital and social cohesion in their communities. In addition, an individual perception of possible victimization (also worry about crime) in the next twelve months can be related to their belief that crime is widespread and everyone is a potential victim. Severity of consequences of victimization and consequences of victimization on one's life is related to one's recuperation (be it physical, psychological or financial) after victimization. Victim support schemes should be introduced to general population as well as preventative measures (be it social or/and situational). The results also show that women and physically weaker people who believe that are unable of self-defence are express more fear of crime. Finally, general findings show that previous victimization has impact on one's fear of crime which is not generalizable on all sub-samples where in the majority of the capitals this findings cannot be confirmed.

This introductory article presents a general impression on fear of crime and related variables and is followed by detailed analyses and reflections about fear of crime in the capitals of the republics and one autonomous region of former Yugoslavia.

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## Perceived Neighbourhood Social Disorder and Attitudes Toward Feeling Safe in Sarajevo<sup>26</sup>

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*Summary: Purpose: In this article, the authors examine how fear of crime levels vary dependent upon the degree of quality of living conditions within neighbourhoods. Additionally, the intervening mechanisms that link the degree of living quality with the level of fear of crime within neighbourhoods of Sarajevo, the capital city of Bosnia and Herzegovina will be explored. Design/Methods/Approach: This article attempts to show the impact which neighbourly relations and social (dis)organization have on citizens' perceptions of the so-called fear of crime. In order to measure the fear of crime in general, the authors relied on Van der Wurff's model which has already been widely used in criminology and which is based on six vignettes describing six different social situations. Authors used a multi-stage random probability method to select a representative sample of households living in urban zones of Sarajevo. The sample population (N=400) consisted of adult (18 years or older) inhabitants of urban areas comprising Sarajevo, the capital of Bosnia and Herzegovina. Findings: The Neighbourhood Disorder and Fear of Crime models indicate that well-developed social networks have a significant impact on feeling safe within Sarajevo's neighbourhoods. Research Limitations/Implications: The most serious objection that can be raised with regard to this survey is the application of the interview as the only data collection technique. Most certainly, the inclusion of other techniques (Focus Group etc.) and methods would achieve more valid results. Practical Implications: From the perspectives of practical implications, fear of crime can negatively impact citizens' lives, and it is important to prevent this phenomenon in our communities, through everyday police activities and activities of other institutions of formal and informal social control. Originality/Value: The incidence and perceptions of safety in Sarajevo has become linked with perceived problems of social stability, moral consensus, and the collective informal control processes that underpin the social order of neighborhoods.*

*Keywords: Fear of crime, Neighborhood, Social disorder, Risk of crime, Safety feeling*

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## INTRODUCTION

A couple of recent studies confirm that one of our most primal needs is the feeling of safety. One of the biggest problems of contemporary criminology is the dilemma of how safety and fear of crime interrelate. Fear of crime constitutes a topic of significant interest for criminologists and has generated an extensive body of research. This focus is likely due to the fact more people experience fear of crime than experience an actual criminal victimization. Defining “fear of crime” has generated some controversy and no single agreed-upon definition exists. Fear of crime has included “a variety of emotional states, attitudes, or perceptions” (Warr, 2000). Factors influencing the fear of crime include the psychology of risk perception (Jackson, 2006; Jackson, 2011), circulating representations of the risk of victimization (chiefly via interpersonal communication and the mass media), public perceptions of neighbourhood stability and breakdown (Skogan&Maxfield, 1981; Wilson &Kelling, 1982), and broader factors where anxieties about crime express anxieties about the pace and direction of social change. Perhaps the biggest influence on fear of crime is public concern about neighbourhood disorder, social cohesion and collective efficacy (Perkins & Taylor, 1996;Wyant, 2008). The incidence and risk of crime has become linked with perceived problems of social stability, moral consensus, and the collective informal control processes that underpin the social order of a neighbourhood (Bannister, 1993). In this paper the author attempt to study how levels of fear of crime vary with the degree of quality of living conditions across neighbourhoods. Additionally this study takes a rare look at some of the intervening mechanisms that link the degree of living quality with the level of fear of crime. From another perspective, fear of crime can be a motivator of the wrong kind of behaviour, and it is important to prevent this phenomenon in our communities.

This article examines fear of crime in Sarajevo, the capital of Bosnia and Herzegovina. Sarajevo experienced a large economic boom, particularly after 1984 when it hosted the Winter Olympics. Unfortunately, Sarajevo is today better known as the location of the longest siege in post World War II history, that is, the siege occurring from April 1992 to December 1995. We chose to examine the correlation between the fear of crime and social networks, disrupted neighbourly relations, anxiety due to crime, close friendships and protective measures taken by citizens in the Sarajevo.

We expected the socio-economic differentiation, represented by “neighbourhood quality” and “population cohesion”, to influence individual perceptions of the fear of crime. In the present article reports will focus on individuals residing within an urban environment. Methodology that was applied for fear of crime surveys will be described as well as the results of the surveys conducted in two countries, Bosnia and Herzegovina and Slovenia (Meško, Fallshore, Muratbegović, & Fields, 2008), and Slovenia and Croatia (Meško&Kovčo, 1999). Another study that was used for present article is about connective links between

victimization and fear - testing a theory of psychological incapacitation in the capital cities of the former Yugoslav Republics (Meškoet al., 2009). Based on the background information of culture and post-war conditions and the results of the current surveys, the relationship between the results and cultural and post-war aspects with regard to fear of crime will be discussed. The article concludes with a discussion of what these findings mean within the context of research on fear of crime and neighbourhood social disorder.

## **METHODOLOGICAL FRAMEWORK**

In this research, we used an interview method conducted from a representative sample of adult (18 years old and more) inhabitants of households located in urban zones within Sarajevo, Bosnia and Herzegovina. The sampling procedure was a multi-stage random probability method. The selection process was carried out through four stages. The first stage defined the city areas (i.e. the wider neighbourhoods) in which the research would be conducted – the primary sampling units. Since the population in this study consisted of urban inhabitants, suburban and rural settlements, as well as industrial and business areas, were therefore excluded at this stage of designing the sample. We picked urban municipalities and the urban parts of the mixed municipalities, excluding the suburban ones. When we obtained the map of primary sampling units, we defined the proportionate participation of each such segment in the whole sample. The second step in designing the sample consisted of precisely defining the sampling points; i.e. the streets or parts of the streets inside the primary sampling units, defined in the first step, in which the polls would be conducted. Each sampling point was defined as a path with a specific starting point and given the direction of the pollsters' movement. In this way, we obtained a list of 40 precisely defined paths for each city (from point A towards point B) where the pollsters would move and in such designed areas to find their interviewees. Inside each sampling point, 10 interviews were conducted. The next step involved specifying the procedure for finding of convenient households in which the poll or interview would be conducted. The selection of a household was carried out using the random-route technique. The disposition of households was defined according to the city size and the type of settlement, and the pollsters were instructed to walk on the left side of the street. The final step in sample design consisted of defining the procedure for the choice of the interviewees inside the previously correctly chosen household. Our selection of one respondent per household was on „next birthday „selection-key. The procedure prescribed that the pollster should knock at the door of the correctly chosen household, say his/her name and ask for cooperation in the survey, ask how many members of that household are adults (18 years or older), and then pick the one whose birthday falls next (chronologically). The change of such designated respondents was allowed only if after three attempts (one initial visit and two call-backs) the pollster could not conduct the

interview. In case it was impossible to find the correctly chosen interviewee or if he refused to participate in the poll, the pollsters continued the interviewing according to the plan of movement in that sampling point.

The polling was conducted from April through June in 2009 by students of the University of Sarajevo<sup>27</sup>, after the field work training and after receiving precise instructions about the procedure for polling and keeping the research documentation. The interviewing process was supervised by experienced researchers of the universities, the research assistants at the faculty, who also controlled the input and creation of the databases. Apart from the permanent supervision of the interviewing process by the staff of the universities, and in accordance with international research standards, a check of at least 15% of the effective interviews was performed in each of municipalities using some of the back/checks options (direct supervision during the interview, visit of the supervisor to the interviewed households, check by phone calls to the interviewed households). The data for three capitals came from a survey of people living in urban area of the Sarajevo. A stratified random sample of 400 residents of the urban parts in Sarajevo which consists of four municipalities: Stari Grad, Centar, Novo Sarajevo and Novi Grad (see Table 1).

Table 1: Respondents' socio-demographic profile

Sarajevo		
	N	%
<b>Age</b>	<b>400</b>	
18–29	162	40.5
30–39	37	9.3
40–49	57	14.3
50–59	51	12.7
60–69	49	12.2
70 and more	44	11.0
<b>Gender</b>	<b>400</b>	
Male	204	51.0
Female	196	49.0
<b>Educational level</b>	<b>400</b>	
Primary school	35	8.8
Secondary school	227	56.8
Some College (2 yrs)	38	9.5
University Degree	95	23.8

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Masters or PhD	5	1.3
<b>Homeowner</b>	<b>400</b>	
Homeowners	326	81.5
Renters and others	74	18.5
<b>Living at this address</b>	<b>400</b>	
Less than 1 year	3	0.7
1-3 years	73	18.3
4-6 years	57	14.3
7-10 years	47	11.7
More than 10 years	220	55.0
<b>Total number of household members</b>	<b>400</b>	
Living alone	44	11.0
2 members	101	25.3
3 members	107	26.8
4 members	98	24.5
5 members	38	9.5
6 members	10	2.5
7 or more members	2	0.5

## ANALYSIS AND RESEARCH ISSUES

This article attempts to show the impact by which neighbourly relations and social (dis)organization have on the citizens' perceptions related to their fear of crime. In order to measure the fear of crime in general, we relied on Van der Wurff's model which has already been widely used in criminology and which is based on six vignettes describing six different situations (Van der Wurff, van Staaldin, & Stringer, 1989). The advantage of the six vignettes is that they enable measurement of complex social situations, which respondents can imagine and accurately present. Previous studies of the fear of crime in Europe have shown that these vignettes are an appropriate tool and that they accurately reflect the opinions of the respondents. Let us now take a look at the vignettes: **Doorbell (s25)** One evening you are at home on your own. It is late. The doorbell rings, but you are not expecting anyone; **Car (s26)** One evening you go to take out the garbage. On the street you see two men walking around a parked car. When they see you looking at them, they begin to walk toward you; **Party(s27)** You have been invited to a party in a neighbourhood you do not really know. Early that evening you set out by bus. When you get off you still have some way to walk. Suddenly you notice that you have lost your way. A group of youths is following you and are giving unpleasant remarks at you; **Bus stop (s28)** One

afternoon, you are standing at a bus stop when a group of 15 or 16-year-olds comes along. They begin kicking the bus stop and daubing graffiti on the bus shelter; **Telephone(s29)** You are going out one evening. You are ready and just about to leave when the phone rings. You answer, giving your name. But at the other end you hear only irregular breathing. You ask who is there. They hang up; **Bar(s30)** You are in a part of town where you have never been before. You go into a bar and inside there is a group of loud speaking local males. The vignettes 1- very vulnerable, 2 - quite vulnerable, 3 don't know, 4 - quite safe and 5 - very safe are used to develop a composite variable from the variables s25 to s30 (Table 2) that is called the "SAFETY (FROM CRIME) FEELING" (F0). The composite variable is obtained using the Factorial Analysis Model (Table 9). The term safety here is used as opposite to the feeling of the fear. In other words, when a person has higher feeling of fear that means she or he has lower feeling of safety and vice versa. The fear of crime and safety feeling will be used interchangeably in this article.

On the other hand, we used questions about neighbourly relations, perception of the quality of life in the city among citizens of the Sarajevo, as well as questions about their social networks and their trust for the people who live in their neighbourhood. In order to obtain a more complete answer about a subjective feeling such as fear we also asked respondents how they would feel if they were to become the victim of different types of crime, as well as what measures they are taking to prevent becoming a victim of a criminal or a criminal group. As presented in this article, all of these complex situations have a significant impact on the subjective feeling of citizens about the safety of their community (i.e., their fear of crime). In relation to that, we have used several questions from the questionnaire to develop composite variables (F1-F6) to help us determine what is the key determinant of the fear of crime among the citizens of Sarajevo.

Table 2: Safety feeling

F0 Safety feeling	Mode	Median	Mean	Std. Deviation
S25 – DOORBELL	3-don't know	3-don't know	2.78	1.078
S26 – CAR	2-quite vulnerable	2-quite vulnerable	2.12	.949
S27 – PARTY	2-quite vulnerable	2-quite vulnerable	2.08	.991
S28 – BUS STOP	2-quite vulnerable	2-quite vulnerable	2.55	1.105
S29 – TELEPHONE	3-don't know	3-don't know	2.74	1.097
S30 – BAR	3-don't know	3-don't know	2.65	.983

Before moving on to the analysis of social factors which are detrimental to the fear of crime in Sarajevo, let us take a look at how citizens there perceive public institutions (see Table 3). It is widely assumed that the trust in public institutions is an important part of peoples' general sense of security. Only 18% (95%CI: 13to 22%)respondents in Sarajevo expressed complete or some distrust in the president, while residents of Sarajevo<sup>28</sup> have shown very little trust in their government with only one in eight respondents or 12.5%(95%CI: 9 to 16%)there having said that they had complete or some trust in the governments. The above results were corroborated with findings related to the trust in political parties as most citizens of Sarajevo have shown very strong mistrust for them – only 10.0%(95%CI: 7 to 13%)of respondents have full or partial trust in political parties. Participants were asked to rate their level of trust on a scale from 1 full mistrust, 2 partial mistrust, 3 doesn't trust or mistrust, 4 partially trust, and 5 fully trust.

Table 3: Trust in public institutions

F1 – Trust in public institutions	Mode	Median	Mean	Std. Deviation
V13a -Presidency of the State	1- full mistrust	2 - partial mistrust	2.19	1.20
V13b - Governments	1- full mistrust	2 - partial mistrust	2.02	1.15
V13c - Political Parties	1- full mistrust	2 - partial mistrust	2.00	1.10
V13e - Police	4 - partial trust	4 - partial trust	3.48	1.25
V13f - Justice	4 - partial trust	3 - neutral	2.86	1.24

Among all the public institutions participants were asked about, the police enjoyed the highest level of trust. This is perhaps the most important finding from our study because the work of the police has a direct impact on citizens' sense of security. About one third or 38% (95%CI: 31 to 45%) of respondents voiced their trust in the judiciary, while two-thirds of the sample (roughly 60%) indicated they trusted the police(95%CI: 53to 67%).

Trust in police forms a good basis for study of other factors which influence citizens' sense of security atthe local level. In addition to the above, it is very important that citizens feel comfortable in their neighbourhood and that they trust their neighbours (Meško, Fallshore, Rep,&Huisman, 2007).

<sup>28</sup> Respondents in Sarajevo were asked about their trust in the government of the Sarajevo Canton, because government at that level has the greatest authority in the city.

Variables used to measure the trust in public institutions are the trust in: *Presidency (v13a), Governments (v13b), Political parties (v13c), Police (v13e) and Judiciary (v13f)*. These questions were used to develop two composite measurement variable (F1.1) called TRUST IN PRESIDENCY, GOV. AND POL. PARTIES and variable (F1.2)TRUST IN POLICE AND JUDICIARY using Factorial Analysis (see Table 10).

Therefore, we have analysed the variables which measure the quality of life in a neighbourhood. Let us begin with a set of questions which we had used in an attempt to approximate the quality of life in neighbourhoods of surveyed city. Better quality of life is determined by a number of factors which obviously also include some which had been covered by the following statements we used: *people who live in my neighbourhood can be trusted (v2), I have many friends among my neighbours (v3), there are many people in my neighbourhood on whom I can rely (v4), every day in my neighbourhood I meet many people I know (v5)*. Participants were asked to rate their level of agreement with the above statements on a scale from 1 completely disagree, 2 – disagree, 3 – agree, 4 - fully agree. These questions were used to develop a composite measurement variable (F2) called QUALITY OF SOCIAL NETWORKS (see Table 4) using Factorial Analysis (Table 10). One third or some 30% (95%CI: 24 to 37%)of residents in Sarajevo were somewhat mistrustful of their neighbours, and four fifths of respondents or some 79%(95%CI: 74 to 84%) meet the people they know in their neighbourhood on an everyday basis.

Table 4: Quality of social networks

F2 – Quality of social networks	Mode	Median	Mean	Std. Deviation
V2-is trustful	3 - agree	3 - agree	2.82	.79
V3-has many friends	3 - agree	3 - agree	2.77	.80
V4-relies on people	3 - agree	3 - agree	2.65	.81
V5-meets many people	3 - agree	3 - agree	3.02	.74

The quality of a neighbourhood depends on many factors that are often visible and which can leave an impression on casual passers-by. Some of the key indicators of “neighbourhood disorder” include dirty public spaces (v6), graffiti on walls (v7), decayed buildings (v8), young people aimlessly wandering the streets (v9), public intoxication (v10), signs of vandalism (v11), beggars (v12), and a significant number of homeless individuals (v13). Participants were asked to rate their level of perception of disorder with the above statements on a scale from 1 representing “no problem” to 4 representing a “very significant problem”. In order to simplify further analysis we decided to develop another

composite variable (F3) called NEIGHBOURHOOD DISORDER(see Table 5)using Factor Analysis (see Table 10).

Table 5: Neighbourhood Social Disorder

F3 – Neighborhood Social Disorder	Mode	Median	Mean	Std. Deviation
V6- dirty public spaces	4 - very significant problem	3 - significant problem	3.02	.87
V7- graffiti	2 - little problem	2 - little problem	2.36	.95
V8- decayed buildings	2 - little problem	3 – significant problem	2.71	1.01
V9- street young people	3- significant problem	3 - significant problem	2.97	.96
V10-street drunks	2 - little problem	3 - significant problem	2.57	.97
V11-signs of vandalism	3 - significant problem	3 - significant problem	2.75	1.03
V12-beggars	4 - very significant problem	3 - significant problem	2.83	1.02
V13-homeless	2 - little problem	2 - little problem	2.37	1.08

A significant percentage (70%) of Sarajevo respondents (95%CI: 63 to 77%) reported large quantities of litter in the streets as a major impediment to the quality of life in their town. Similarly, two of five surveyed citizens of Sarajevo or some 38.6%(95%CI: 31 to 46%) identified presence of graffiti on the walls of residential buildings in their neighbourhood as a major problem. The appearance of buildings and community areas can also influence citizens' opinions on the quality of life in their neighbourhood. Nearly one half of Sarajevo residents or some 56%(95%CI: 48 to 63%)believed that rundown buildings were a major problem of their neighbourhood. If we were to consult the Broken Windows Theory, we would conclude that the rundown exteriors also imply some other deviations (Wilson &Kelling, 1982). Let us now focus on the findings from Sarajevo, where 71% (95%CI: 65 to 77%) of respondents identified presence of young people who are aimlessly wandering the streets as a significant problem of their neighbourhood, while presence of street drunks and beggars in the neighbourhood were identified as significant problems by 50%(95%CI: 42 to 58%) and 63%(95%CI: 56 to 70%) of respondents respectively.

Although previous factors (variables) significantly influence public perception of quality of life in urban areas, criminology studies have shown that respondents mostly judge how

safe an area is based on how concerned they are about crime occurring in their neighbourhood on a daily basis. Therefore, we wanted to explore what impact knowledge has on fear of crime. Specifically, we explored what impact knowledge about the following occurrence of crime has: *street robberies – mugging* (v15), *fraud* (v16), *street fights* (v17), *theft* (v18), *unprovoked hurling of insults at people in the streets* (v19) and *robberies of apartments* (v20). Participants were asked to rate their level of concern with the above statements on a scale from 1 representing “not concerned” to “5” representing very concerned. The presence multiple types of criminal behaviours can make a neighbourhood unpleasant for living, which is why such experiences (variables) are grouped under one composite variable F4 which is called CONCERN about crime in the neighbourhood (see Table 6) using the Factor Analysis (see Table 10).

Table 6: Concern about the crime in the neighbourhood– F4

F4 –Concern about the crime in the neighborhood	Mode	Median	Mean	Std. Deviation
V15- mugging	5 - very concerned	4 - quite concerned	4.13	1.06
V16- fraud	4 - quite concerned	4 - quite concerned	3.67	1.19
V17-street fights	5 - very concerned	5 - very concerned	4.30	1.08
V18-theft	5 - very concerned	5 - very concerned	4.24	1.03
V19- insults	5 - very concerned	4 - quite concerned	3.52	1.33
V20- robberies	5 - very concerned	5 - very concerned	4.58	.84

A very large percentage (90%) of surveyed Sarajevo residents (95%CI: 87 to 94%) believed that street robberies were a significant problem in their neighbourhood. A majority of respondents from Sarajevo i.e. 92%(95%CI: 88 to 95%) fear that they might become the victims of physical assault in the neighbourhoods where they live. A large percentage of respondents were also concerned about the possibility of their apartments being robbed 95% (95%CI: 93 to 97%). All the above findings point to a significant presence of conventional crime, that is, respondents’ perceptions that these types of criminal activities are widespread in the municipality where they live and work.

Personal safety is also greatly dependent on the circle of friends on whom a person can relay. These days, it is very important to have friends close by with whom one can share good and bad things brought about by a fast-paced life in a highly competitive capitalist economy. Further on, we analysed respondents’ views on how likely they are: *to find a trusted person to take care of their apartment when they are away* (v48), *to have friends who are always willing to hear about their problems* (v49), *to have a group of friends with*

whom they often spend time (v50), when sick to ask friends to help them with some services when they are too ill to take care of them (shopping etc.) (v51), to have someone they can rely on when in trouble (v52) and finally, to have a wide circle of friends with whom they often socialize (v53). Above are circumstances which most of us consider to be favourable and integral features of a good neighbourhood and a good life in general. Participants were asked to rate their level of agreement with the above statements on a scale from 1 representing “not agree at all” to 5 representing “fully agree”. We developed another composite variable (F5) that was named CLOSE FRIENDSHIPS (see Table 7) using the Factor Analysis (see Table 10).

Table 7: Close friendships – F5

F5 – Close friendship	Mode	Median	Mean	Std. Deviation
V48-care of their apartment	5 - fully agree	4 - mainly agree	3.92	1.12
V49-hear of their problems	5 - fully agree	5 - fully agree	4.39	.81
V50-spend time	5 - fully agree	5 - fully agree	4.46	.78
V51-help when sick	5 - fully agree	5 - fully agree	4.34	.87
V52-relay when in trouble	5 - fully agree	5 - fully agree	4.50	.77
V53- socialize with them	5 - fully agree	5 - fully agree	4.37	.82

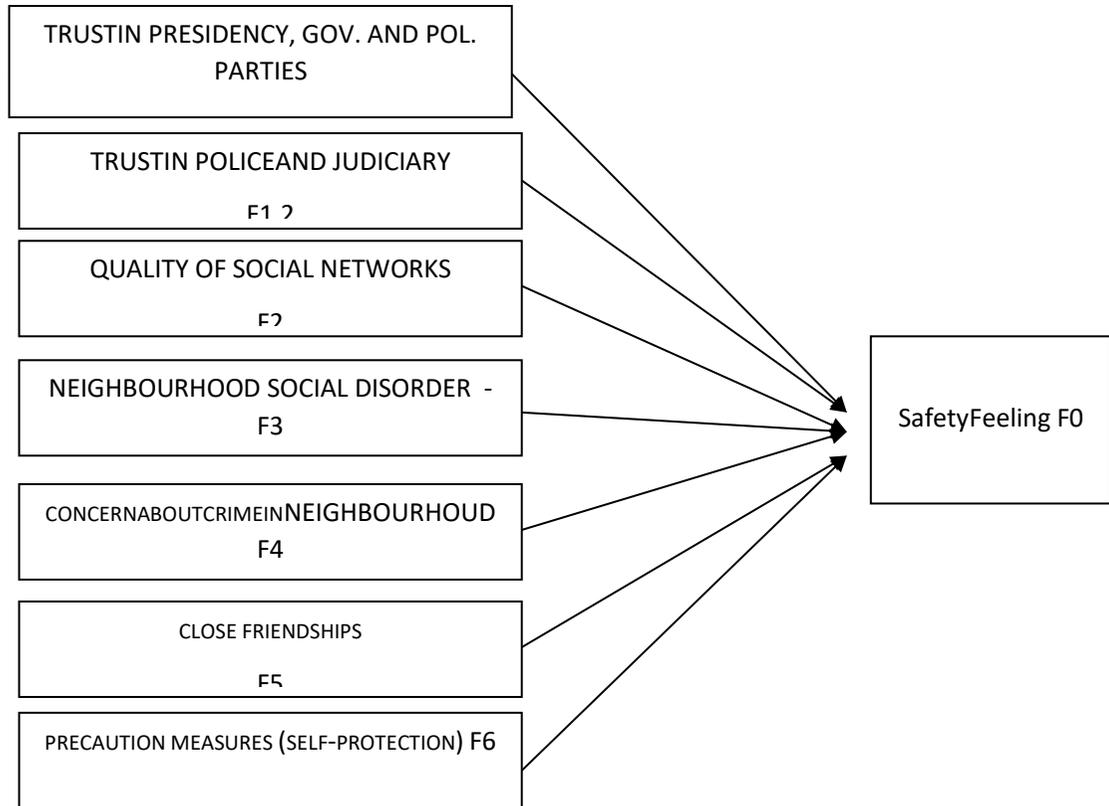
The respondents of Sarajevo (98%; 95%CI: 96 to 99%) have a circle of friends with whom they spend free time. Finally, people show how they perceive the quality of their life and how afraid they are for their life and their property by taking some preventive measures. Different people take different precautions including: avoiding some streets and some parts of their neighbourhood (v84), being cautious with unknown people they meet at night (v85), avoiding the use of public transport at night (v86) and finally, avoiding going out at night except when it is absolutely necessary (v88). Participants were asked to rate the frequency of these precaution measures with the above statements on a scale from 1 representing “never” and 5 representing “always”. We used the above behaviours (variables) to construct a composite variable F6 using Factorial Analysis which we called PRECAUTION MEASURES (Tables 8 and 10). Findings for different variables have shown that respondents of the survey avoid certain streets and parks in their neighbourhood 83% (95%CI: 78 to 88%). A high percentage of respondents in Sarajevo 82% (95%CI: 78 to 86%) walk away from strangers they meet at night. Over a half of respondents in Sarajevo or respectively 59% (95%CI: 53 to 64%) believed that public transport was not safe at night.

Table 8: Precaution measures (self-protection) – F6

F6 – Precaution measures	Mode	Median	Mean	Std. Deviation
V84-avoiding some streets at night	4 - frequently	4 - frequently	3.70	1.17
V85-being cautious with people at night	5 - always	4 - frequently	3.78	1.25
V86- avoiding public transport at night	3 - sometime	3 - sometime	2.95	1.40
V88- avoiding going out at night	5 - always	3 - sometime	3.37	1.41

The fear of crime model presented below is related to neighbourhood disorder, in the widest possible sense of those words (F1-F6), in Sarajevo (Figure 1).

Figure 1. Model Individual Living Quality Neighbourhood Disorder and Feelings of Safety



### FACTOR AND REGRESSION ANALYSIS

With the above feelings of safety (as opposed to the fear of crime) model in mind (see Scheme 1), we conducted factor analysis relying greatly on the experiences from Farrall, Bannister, Ditton, and Gilchrist (1997) and Meško and Farrall (1999) studies. For the purpose of this research, we conducted a factor analysis of the variables (s25-s30) that constructed a composite SAFETY FEELING variable (F0). The factor analysis included the overall sample for Sarajevo (see Table 9). Next, we conducted regression analysis (forced entry method) for the purpose of which composite variables (F1-F6) were observed as independent variables while CRIME SAFETY FEELING (F0) was observed as the dependent variable. Results of regression analysis are presented in Tables 11 and 12.

The limitation of the factor models is that the input variables are mainly non-Normal Likert's scales. This means that the theoretical requirements for the application of the factor model are not fully fulfilled which consecutively reduces the possibility to generalize the results of the factor analysis. In order to fully generalize the findings of the factor models further analysis using non parametric tools are necessary.

Table 9: Safety feeling

Vignettes	Factor loading	Mean	Standard deviation
<b>F1: Fear of crime (52.46 % var.); KMO=0.81; <math>\alpha</math>=0.82</b>		<b>2.48</b>	<b>0.31</b>
<b>Doorbell (s25)</b> One evening you are at home on your own. It is late. The doorbell rings, but you are not expecting anyone;	0.70	2.78	1.08
<b>Car (s26)</b> One evening you go to take out the garbage. On the street you see two men walking around a parked car. When they see you looking at them, they begin to walk toward you;	0.75	2,2	0.95
<b>Party(s27)</b> You have been invited to a party in a neighbourhood you do not really know. Early that evening you set out by bus. When you get off you still have some way to walk. Suddenly you notice that you have lost your way. A group of youths is following you and are giving unpleasant remarks at you;	0.71	2.08	0.99
<b>Bus stop (s28)</b> One afternoon, you are standing at a bus stop when a group of 15 or 16-year-olds comes along. They begin kicking the bus stop and daubing graffiti on the bus shelter;	0.75	2.55	1,0
<b>Telephone(s2)</b> You are going out one evening. You are ready and just about to leave when the phone rings. You answer, giving your name. But at the other end you hear only irregular breathing. You ask who is there. They hang up;	0.71	2.74	1.10
<b>Bar(s30)</b> You are in a part of town where you have never been before. You go into a bar and inside there is a group of loud	0.72	2.65	0.98

speaking local males.

Crombach's Alpha coefficient of internal consistency is high (0.82). Factor F0 – Fear of crime describes 52.46 per cent of the overall variance. Factor loadings vary from 0.70 (for s25-Doorbell) to 0.75 (s28 Bus stop).

Table 10: Independent variables

Other variables	Mean	Standard deviation
<b>F1.1 Trust in Presidency, Gov. and Pol. Parties</b> (55.92% var.)		
<b>F1.2 Trust in Police and Judiciary</b> (21.06 % var.) KMO=.74; $\alpha$ =0.79	2.51	0.64
<b>F2: Social Networks</b> (63.7 % var.); KMO=0.76; $\alpha$ =0.81	2.81	0.16
<b>F3: Social disorder in neighbourhoods</b> (47.79 % var.); KMO=0.88; $\alpha$ =0.84	2.70	0.25
<b>F4: Concern (about crime in the neighbourhood)</b> (60.43 % var.); KMO=0.88; $\alpha$ =0.86	4,07	0.40
<b>F5: Close friendships</b> (56.37 % var.); KMO=0.87; $\alpha$ =0.82	4,33	0.21
<b>F6: Precaution measures (self-protection)</b> (60.2 var.); KMO=0.73; $\alpha$ =0.77	3.45	0.38

Crombach's Alpha coefficients of internal consistency for F2-F6 are immoderately high varying from 0.77 for F6-Precaution measures to 0.86 for F4-Concern (about crime in the neighbourhood). Factor F3-Social disorder in neighbourhoods described the lowest share or 47.8 percent of the common variance. Factor F2- Social Networks described the highest share or 60.5 percent of the common variance.

The regression model (see Table 11) has shown statistical significance at  $p < 0.001$  level, in that two concerns (about crime in the neighbourhood) were found to significantly influence the sense of fear: concern over crime and precaution measures.

Table 11: *Regression Results for Significant Interaction Terms*

	Sarajevo		
	B	Std. Error	Beta
Constant	0,000	0,041	
F1.1 TRUST IN PRESIDENCY, GOV. AND POL. PARTIES	0.052	0.042	0.052
F1.2 TRUST IN POLICE AND JUDICIARY	0.008	0.041	0.008
F2 SOCIAL NETWORKS	0.000	0.045	0.000
F3 NEIGHBOURHOOD SOCIAL DISORDER	-0.052	0.044	-0.052
F4 CONCERN OVER CRIME	-0.257***	0.046	-0.257***
F5 FRIENDSHIPS	0.042	0.044	0.042
F6 SELF-PROTECTION	-0.413***	0.045	-0.413***

Dependent variable: F0 – “Safety feeling”; \*\*\* -  $p < 0.001$ ;  $R^2 = 0.340$ ;  $N = 400$

Respondents from Sarajevo who were more concerned with frequent criminal activity such as theft, street robbery, physical assault and robbery of apartments were also more likely than other respondents there to have greater fear of crime. Fear of crime also tended to be greater among respondents in Sarajevo who take precautions in their everyday life such as avoiding dark places and unknown people they meet at night. Results of regression analysis for the Sarajevo sample pointed to statistically significant differences in the influence of the “neighbourhood disorder” variable in the sense that respondents who consider their neighbourhoods to be in disorder also tend to be more afraid of crime. The precaution measures variable had a statistically significant influence on the intensity of the fear of crime.

**Table 12: Regression analysis – social demographic model**

Total (N=400)	
Independent variables <sup>29</sup>	Beta/sig.
Gender (Woman)	-.631/***
Age 36 to 55	-.327/***
Position in the labour market (Retired)	-.418/***
Religious	-.382/***
Never performed any religious activity	-.346/***
	R <sup>2</sup> = .208

Dependent variable: Fear of Crime, Constant 0.825\*\*\*

N=400. Significance \*\*\*0.001, \*\*0.01, \*0.05

The regression model including socio demographic variables shows that women, middle age people, retired, religious and people who never performed any religious activity have lower safety feeling or greater fear of crime. Most studies on fear of crime show that women are more fearful than men (Meško & Farrall, 1999; Perkins & Taylor, 1996; Wyant, 2008).

Women usually have a greater fear of crime because of their physical disposition as crime is often connected with physical violence and rape, than because of their education and gender role of women in society. Middle aged people have higher fear of crime because this is the period of the life with highest income and the gender role of the protector of the family for man and the gender role of protector of children for the women. Retired people have higher fear of crime mainly because of the physical violence coming with crime and inability to defend themselves against criminals. Another possibility is that they feel enabled to recover from financial consequences of the crime. Religious people have a higher level of fear because fear of God and fear because of committed sins (personal but as well as the perception of sins committed within the community) is part at least of Islam as dominant religion in Sarajevo. People who never performed any religious activity usually are more disconnected from the local community as they do not participate in local religious services.

## CONCLUSION

Because its citizens show the great fear or crime, Sarajevo stands out among the capitals city in the former Republic of Yugoslavia. Responding to six situations (see Table 2), the

<sup>29</sup> Only independent variables (factors) on the 0.05, 0.01 or 0.001 significance levels are included in the table.

citizens of Sarajevo have shown a great sense of vulnerability. These results confirm the findings of two earlier studies conducted in 1999 and 2008 (see Meško & Kovčo, 1999) and (Meško et al., 2008). The common Neighbourhood Disorder and Fear of Crime Model (see Scheme 1) has shown that in Sarajevo well-developed social networks have a significant impact on feeling safe in one's own neighbourhood. This does not come as a surprise considering that the people in post-socialist societies are traditionally more reliant on their family and friends. On the other hand, the high frequency with which crimes are being committed in urban centres in Europe greatly influences the fear of crime felt by residents of large European cities. Not only registered crime rate, but also the so-called dark figure of crime influence public sense of security. Thus, it is not surprising that public concern with crime is a corrective factor which influences and increases the fear of crime among our respondents. However, residents of Sarajevo have great tendency to mention everyday crime as one of the factors which feed their fears. Since some of our findings had been partially interpreted in the above chapters, the conclusion will include only a brief overview of some factors influencing the public fear of crime in Sarajevo. The situation in Sarajevo is not good as only one fifth of respondents there had positive opinion or trusted their public institutions (presidency, government and judiciary). The only exception to this was the police as police forces in all city parts enjoyed trust of more than a half of respondents. In conclusion, we can also say that the people in Sarajevo who do not take more precautions tend to be more afraid of crime. The above finding is not surprising. Respondents in Sarajevo have a general tendency to say that their neighbourhoods are full of poorly maintained public spaces and littered with garbage, but this variable did not influence them in a way to make them more scared for their safety. Interestingly socio-demographic model pointed out religion as additional dimension of the fear of crime in community. The above findings set the ground for further research in the great "socio-pathological market", as Western Balkans are being described in the reports of the official EU bodies. There is no doubt that case study in the cities of former Yugoslavia represent an interesting and useful approach.

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## Neighbourhood Social Disorder and Safety Feeling in Pristine<sup>30</sup>

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*Summary: Purpose: The aim of the present paper is to establish if there is unique neighbourhood level variation in worry about criminal victimization, independent of neighbourhood composition. Additional aim is to establish the extent to which proposed mechanisms at the individual level, prior local victimization and perceived disorder, act as mediators of a hypothesized effect of neighbourhood level disorder. This paper tested a model of the effects of different predictors on individuals' levels of fear of crime in Pristine–capitals of Kosovo neighbourhoods. Design/Methods/Approach: In this research authors used an interviewing method conducted in the households of the interviewees. The population consisted of the adult (18 years old and more) inhabitants of urban areas of Pristine. The exercised sampling procedure was a multi-stage random probability method. The selection process was carried out through the following four stages defined the: (1) city areas, (2) streets or parts of the streets, (3) selection of a household, (4) „next birthday „selection-key. Findings: The common Neighbourhood Disorder and Safety feeling model has shown that well-developed Neighbourhood social disorder have a positive although non-significant impact in Pristine on the neighbourhood fear of crime. This does not come as a surprise considering that the people in the post-socialist societies are traditionally more reliant on their family and friends. The above trend was somewhat strong in Kosovo, because above observation shows that nearly a half of respondents from Pristine live in households with more than five members while one fifth of them live in households with seven and more members. Residents of EU capitals and capitals in ex Yugoslavia countries has greater tendency than residents of Pristine to mention everyday crime as one of the factors which feed their fears. Research Limitations/Implications: The most serious objection that can be raised with regard to this survey is the application of the interview as the only data collection technique. Most certainly, the inclusion of other techniques (Focus Group etc.) and methods too would achieve more valid results. The limitation of the factor models is that the input variables are mainly non-Normal Likert's scales. This means that the theoretical requirements for the application of the factor model are not fully fulfilled which consecutively reduces possibility to generalize the findings of the factor models*

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*further analysis using non parametric tools are the results of the factor analysis. In order to fully generalize the findings of the factor models further analysis using non parametric tools are necessary. Practical Implications: Police enjoyed the highest level trust of all public institutions, which is maybe the most important for our study because the work of police has a direct impact on citizens' sense of security. Such results could have been expected in Pristine given that it police in Kosovo are controlled by the European Security and Defence Policy (ESDP) operation there. Originality/Value: Trust in police forms good basis for study of other factors which influence citizens' sense of security, that is, their fear of crime at a local level.*

*Keywords: Fear of Crime, Neighborhood, Social Disorder, Risk of Crime, Safety feeling*

## INTRODUCTION

People can come to different conclusions about the same social and physical environment: two individuals who live next door to each other and share the same neighbourhood can view local disorder quite differently (Carvalho & Lewis, 2003). Why might people have different levels of tolerance or sensitivity to these potentially ambiguous cues (Sampson & Raudenbush, 2004)? The experience and fear of crime is often linked to people's place of residence and significant neighbourhood-level differences in crime have been found in a number of countries where deprived areas often experience higher levels of crime (Hale, 1996; Kawachi, Kennedy, & Wilkinson, 1999; Shaw, Tunstall, & Dorling, 2005; Weatherburn, 1992). A lot of criminological research about the experience with and fear of crime shown that individuals who hold more authoritarian views about law and order, and who are especially concerned about a long-term deterioration of community, may be more likely to perceive disorder in their environment (net of the actual conditions of that environment) (Sampson & Raudenbush, 2004; Hale, 1996; Farrall, Jackson, & Gray, 2009).

They may also be more likely to link these physical cues to problems of social cohesion and consensus, of declining quality of social bonds and informal social control (Jackson, 2004; Farrall et al., 2009). Some studies have found that local differences in incidence of crime are associated with variation in the quality and quantity of social interactions, and those communities with strong neighbourhood networks and high levels of social cohesion have lower levels of crime.

A multilevel study in Chicago, USA, found that a combined measure of neighbourhood social cohesion and informal social control was associated with lower levels of violent crime in neighbourhoods (Sampson, Raudenbush, & Earls, 1997; Sampson & Raudenbush,

1999). In an Australian study, Carcach and Huntley (2002) found lower crime rates in areas with high levels of participation in community organisations.

In Great Britain Sampson and Groves (1989) found that density of local friendship networks and participation in local organisations had an impact on a range of crimes such as assaults and burglaries. Less research has considered the impact of neighbourhood social interactions and networks on fear of crime or perceptions of safety. An exception is (McCrea, Shy, Western, & Stimson, 2005) in Australia where criminologists found that neighbourhood trust, neighbourhood reciprocity, neighbourhood involvement did not significantly predict fear of crime once age, gender and physical characteristics of the neighbourhood were taken into account.

In this paper integrated model of neighbourhood level disorder and individual level vulnerability, in relation to explaining individual differences in worry about fear of crime is tested. The aim of the present paper is to establish if there is unique neighbourhood level variation in worry about criminal victimization, independent of neighbourhood composition, and to establish the extent to which proposed mechanisms at the individual level, prior local victimization and perceived disorder, act as mediators of a hypothesized effect of neighbourhood level disorder. This paper tested a model of the effects of different predictors on individuals' levels of fear of crime in Pristine neighbourhoods.

## **KOSOVO – LAST 20 YEARS AND DESCRIPTION OF TODAY'S SOCIO-ECONOMIC STATUS**

Kosovo, with an area of 10,908 km<sup>2</sup> and around 2 million inhabitants, has been for years an object of intense interest for politicians, military strategists, intelligence agencies, media and, somewhat less, the scientific community. At the moment, Kosovo is an ethnically very homogenous territory with about 88% Albanian population. The minority population in Kosovo includes Serbs (6%), Bosniaks, Goranis (2%), Roma, Ashkali, Egyptians (RAE) (1.5%), Turks (1%) and others (e.g., Croats) (International Organization for Migration [IOM], 2008). Almost 43% of the population is below the age of 19, and there are estimates that the population growth rate (1.3%), as well as population density (193 inhabitants per km<sup>2</sup>), are the greatest in Europe (Statistical office of Kosovo, 2009). There is no unique estimation of vital statistical data, and so the documents of the Ministry of trade and industry assume that Kosovo is inhabited by 2.4 million of people, but the Ministry of environment and regional planning makes up a new general plan on the basis of 2.2 million of inhabitants, while the Department for macro-economical policy within the Ministry of finance and economy operates with the number of between 1.7 and 1.85 million of citizens (Central Election Commission of Republic of Kosovo, 2006). Kosovo has the youngest population in Europe, and it is estimated that 36,000 youngsters enter the labour market each year

(United Nations Interim Administration Mission in Kosovo, 2004). By the estimations of the World Bank, 40% of the working contingent is unemployed (World Bank, 2007). Kosovo has been a conflict area for decades and radical difference in the position of ethnic Albanians striving to separate from Serbia and form an independent state, and Serbia insisting on preserving its territorial integrity is strongly rooted in history. In Kosovo, the pattern of nationalism, mythmaking and revenge has taken on a seemingly permanent character (Knudsen & Lautsen, 2006). During the 1990s clashes between Serbian law enforcement agencies and Albanian paramilitary significantly intensified and that conflict culminated in 1999, when decision makers in the international community assessed that Serbian leadership overstepped its mandate by using excessive force that resulted in ethnic cleansing of Albanian population from the province. NATO launched a bombing campaign against the FR Yugoslavia (March – June 1999). Shortly after the end of bombing campaign in 1999, about 200,000 Serbs have left Kosovo, and the process of their repatriation experienced almost complete fiasco. Circa 40% from assessed 100–140,000 remnant Serbs inhabit the northern part of Kosovo, at a compact territory, and the other 60% live in three larger communities: in the central part of Kosovo (in a number of settlements around the capital of Priština), at the south-east of Kosovo (in villages near the towns of Gnjilane, Kosovska Kamenica and Novo Brdo) and at the south (Štrpce), as well as in a series of smaller communities in the Metohia area (around the city of Peć).

In the aftermath, intense restructuring of life in Kosovo commenced in 1999. In accordance with UN Security Council resolution 1244, a provisional UN administration mission (UNMIK) was established in order to “provide an interim administration for Kosovo under which the people of Kosovo can enjoy substantial autonomy within the Federal Republic of Yugoslavia, and which will provide transitional administration while establishing and overseeing the development of provisional democratic self-governing institutions to ensure conditions for a peaceful and normal life for all inhabitants of Kosovo” (United Nations Security Council [UNSC], 1999). UNMIK in 2001 announced a Constitutional Framework for provisional self-government, which defined the Provisional Institutions of Self-Government [PISG]. The eight-year period of rule of the provisional administration ended in February 2008 when the Kosovo Parliament proclaimed independence from Serbia. Two months after declaring independence, Kosovo Parliament adopted a constitution and the transfer of mandate from the UN to the institutions of the newly formed state began. The activities of Kosovo institutions were to be supervised by EU, which established its mission EULEX (the EU’s largest ever European security and defence policy – ESDP operation) in December 2008, with the mandate to assist in building Kosovo’s capacities. Kosovo society quite clearly, like in other countries in transition or emerging democracies. International community has a great interest for Kosovo, as a youngest state in West Balkan, and a lot of EU members countries and US, decided to help

Kosovo to develop in a sovereign state and invested a lot in their socio-economic developments. Eleven years after the termination of conflict in Kosovo and the establishment of international protectorate, it can be ascertained that only the first among all the proclaimed goals is fully achieved (finding a new status for the former province). By analysing the presented elements of social life, conclusions can be drawn that the achievements in social reconstruction are modest whilst in the field of reconciling of the antagonistic ethnic groups huge challenges will have to be met (Đurić, Kešetović, & Meško, 2009). At the end of presenting Kosovo, it is necessary to take these facts in consideration in the creation of an opinion on the impact of international forces in Kosovo and their effort to create, maintain and facilitate socio economic development in a young country where it is assumed that “kleptocracy” is still in power (Dobovšek & Eman, 2008).

## **METHODS**

In this research we used an interviewing method conducted in the households of the interviewees. The population consisted of the adult (18 years old and more) inhabitants of urban areas Pristine – capitals of Kosovo. The exercised sampling procedure was a multi-stage random probability method. The selection process was carried out through the following four stages.

First stage, as we can call, primary sampling units, we defined the city areas (i.e. the wider neighbourhoods) in which the research would be conducted. Since in this study the population consisted of urban inhabitants, suburban and rural settlements, as well as industrial and business areas, were therefore excluded at this stage of designing the sample. We picked urban municipalities and the urban parts of the mixed municipalities, excluding the suburban ones. When we obtained the map of primary sampling units, we defined the proportionate participation of each such segment in the whole sample. The second step in designing the sample consisted of precisely defining the sampling points i.e. the streets or parts of the streets inside the primary sampling units, defined in the first step, in which the polls would be conducted. Each sampling point was defined as a path with a specific starting point and given the direction of the pollsters movement. In that way, we obtained a list of 40 precisely defined paths for each city (from point A towards point B) where the pollsters would move and in such designed areas find their interviewees. Inside each sampling point, 10 interviews were conducted. The next step involved specifying the procedure for finding of convenient households in which the poll or interview would be conducted. The selection of a household was carried out using the random-route technique. The disposition of households was defined according to the city size and the type of settlement. The pollsters were instructed to walk on the left hand side of the street. The final step in sample design consisted of defining the procedure for the

choice of the interviewees inside the previously correctly chosen household. Our selection of one respondent per household was on „next birthday“ selection-key. The procedure prescribed that the pollster should knock at the door of the correctly chosen household, say his/her name and ask for cooperation in the survey, ask how many members of that household are adults (18 years or older), and then pick the one whose birthday falls next (chronologically). The change of such designated respondents was allowed only if after three attempts (one initial visit and two call-backs) the pollster could not conduct the interview. In case that it was impossible to find the correctly chosen interviewee or if he refused to participate in the poll, the pollsters continued the interviewing according to the plan of movement in that sampling point.

The polling was conducted during the period from the April - June 2009, by the students of the final years the AAB University in Pristine<sup>31</sup>, after the field work training and after receiving precise instructions about the procedure for polling and keeping the research documentation. The interviewing process was supervised by experienced researchers of the universities, the research assistants at the faculty, who also controlled the input and creation of the databases (see Table 1.).

Table 1: Respondents' socio-demographic profile by capitals

	KOSOVO	
	Pristine	
	N	%
<b>Age</b>	<b>400</b>	
18–29	218	54,5
30–39	88	22,0
40–49	26	6,5
50–59	39	9,8
60–69	19	4,7
70 and more	10	2,5
<b>Gender</b>	<b>400</b>	
Male	169	42,3
Female	231	57,7
<b>Educational level</b>	<b>400</b>	
Primary school	35	8,8
Secondary school	172	43,1
Some College (2 yrs)	55	13,8
University Degree	131	32,8

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Master or PhD	7	1,8
<b>Homeowner</b>	<b>400</b>	
Homeowners	214	53,5
Renters and others	186	46,5
<b>Living at the address</b>	<b>400</b>	
Less than 1 year	0	0
1-3 years	60	15,0
4-6 years	36	9,0
7-10 years	56	14,0
More than 10 years	248	62,0
<b>Total number of household members</b>	<b>389</b>	
Living alone	9	2,3
2 members	102	26,2
3 members	44	11,3
4 members	69	17,7
5 members	50	12,9
6 members	39	10,0
7 or more members	76	19,6

## RESULTS

This article attempts to show the impact which neighbourly relations and social (dis)organization have on the citizens' perceptions of the so-called fear of crime. In order to measure the fear of crime in general, we relied on Van der Wurff's model which has already been widely used in criminology and which is based on six vignettes describing six different situations. The advantage of the six vignettes is that they enable measurement of complex social situations, which respondents can imagine and accurately present. Previous studies of the fear (Meško, Kovčo Vukadin,, & Muratbegović, 2008; Meško, Fallshore, Muratbegović, & Fields, 2008; Meško, Hirtenlehner, Bačanović, Djurić, Kovčo Vukadin, & Muratbegović, 2009; Meško, Hirtenlehner, & Vošnjak, 2009) of have shown that these vignettes are an appropriate tool and that they accurately reflect the opinions of the respondents. Let us now take a look at the vignettes: **Doorbell (s25)** One evening you are at home on your own. It is late. The doorbell rings, but you are not expecting anyone; **Car (s26)** One evening you go to take out the garbage. On the street you see two men walking around a parked car. When they see you looking at them, they begin to walk toward you;

**Party (s27)** You have been invited to a party in a neighbourhood you do not really know. Early that evening you set out by bus. When you get off you still have some way to walk. Suddenly you notice that you have lost your way. A group of youths is following you and are giving unpleasant remarks at you; **Bus stop (s28)** One afternoon, you are standing at a bus stop when a group of 15 or 16-year-olds comes along. They begin kicking the bus stop and daubing graffiti on the bus shelter; **Telephone (s29)** You are going out one evening. You are ready and just about to leave when the phone rings. You answer, giving your name. But at the other end you hear only irregular breathing. You ask who is there. They hang up; **Bar (s30)** You are in a part of town where you have never been before. You go into a bar and inside there is a group of loud speaking local males.

The vignettes 1- very vulnerable, 2 - quite vulnerable, 3 don't know, 4 - quite safe and 5 - very safe are used to develop a composite variable from the variables s25 to s30 (Table 2) that is called the "SAFETY (FROM CRIME) FEELING" (FO). The composite variable is obtained using the Factorial Analysis Model (Table 8). The term safety here is used as opposite to the feeling of the fear. In other words, when a person has higher feeling of safety that means she or he has lower feeling of safety and vice versa. The fear of crime and safety feeling will be used interchangeably in this paper.

On the other hand, we used questions about neighbourly relations, perception of the quality of life in the city among citizens of the three studied capitals, as well as questions about their social networks and their trust for the people who live in their neighbourhood. In order to obtain a more complete answer about a subjective feeling such as fear we also asked respondents how they would feel if they were to become victims of different sorts of crime, that is, what measures they are taking to prevent becoming a victim of a criminal or a criminal group. As presented in this article, all these complex situations have significant impact on the subjective feeling of citizens about the safety of their community, that is, their fear of crime. In relation to that, we have used several questions from the questionnaire to develop composite variables (F1-F6) to help us reach desired goal in the best possible manner: what of the above is the key determinant of the fear of crime among citizens of Pristine.

Table 2: Safety feeling

F0	Mode	Median	Mean	Std. Deviation
S25 – DOORBELL-	3-don't know	3-don't know	3.29	1.124
S26 – CAR-	3-don't know	3-don't know	2.60	1.069
S27 – PARTY-	2-quite vulnerable	2-quite vulnerable	2.52	1.108
S28 – BUS STOP-	2-quite vulnerable	3-don't know	3.07	1.279
S29 – TELEPHONE -	3-don't know	3-don't know	3.00	1.119
S30 – BAR -	4-very safe	3-don't know	3.09	1.213

Quality of life is clearly also generated by trust in state, that is, local community institutions. There have been several studies of public trust in contemporary criminology. The concept of trust is related to a larger debate on social capital. Social capital refers to connections among individuals –social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam, 2001). According to another definition developed within the Organization for Economic Co-operation and Development (OECD), social capital is a 'network together with shared norms, values and understandings that facilitate co-operation within or among groups' (Healy & Cote, 2001). Social capital usually refers primarily to social networks of 'personal relationships which are accumulated when people interact with each other in families, workplaces, neighbourhoods, local associations and a range of informal and formal meeting places' (Harper, 2003). On the other hand, social capital also refers to norms of reciprocity and trust. The basic idea behind most definitions of social capital is that well-functioning social networks and communities lay the foundation for the emergence of norms of reciprocity and trust (Kääriäinen, 2007).

Before moving on to the analysis of social factors which are detrimental to the fear of crime in Pristina, let us take a look at how citizens there perceive public institutions (see Table 3). It is widely assumed that the trust in public institutions is an important part of the peoples' general sense of security. Already the first descriptive analysis has shown 44% (95% CI: 30 to 57%) respondents of Pristine mostly supported and trusted their president or were without an opinion about him in 22% (95% CI: 17 to 27%) cases. Considering that

the governments generally tend to be forced to pass some unpopular measures, especially at times of recession, it could have been expected that the people would be less supportive of them. Still, as much as a half of respondents of Pristina were less trusting of their government than of their president, with one in five surveyed citizens having voiced their trust for the government of Kosovo or some 23% (95% CI: 18 to 27%). The results were corroborated with findings related to the trust in political parties as only 15% (95% CI: 10 to 20%) respondents of Pristine have shown trust for them.

Table 3: Trust in public institutions of Kosovo

F1 Trust in public institutions	Mode	Median	Mean	Std. Deviation
President of the State	5-full trust	3-neutral	3.22	1.37
Government	1-full mistrust	2-partial mistrust	2.23	1.34
Political Party	1-full mistrust	1-full mistrust	1.98	1.23
Police	4-partial trust	4-partial trust	3.56	1.24
Justice	3-neutral	3-neutral	2.75	1.34

Respondents in Pristine have shown a good level of trust in judiciary 30% (95% CI: 23 to 38%). Police enjoyed the highest level trust of all public institutions, which is maybe the most important for our study because the work of police has a direct impact on citizens' sense of security. About two thirds of respondents in Pristine have voiced their trust in police 64.3% (95% CI: 53 to 76%). Such results could have been expected in Pristine given that it police in Kosovo are controlled by the European Security and Defence Policy (ESDP) operation there. Trust in police forms good basis for study of other factors which influence citizens' sense of security, that is, their fear of crime at a local level. Variables used to measure the trust in public institutions are the trust in: Presidency (v13a), Governments (v13b), Political parties (v13c), Police (v13e) and Judiciary (v13f). Participants were asked to rate their level of trust on a scale from:1 full mistrust, 2 partial mistrust, 3 doesn't trust or mistrust, 4 partially trust, fully trust. These questions were used to develop two composite measurement variable (F1.1) called TRUST IN PRESIDENCY, GOV. AND POL. PARTIES and variable (F1.2) TRUST IN POLICE AND JUDICIARY using Factorial Analysis (see Table 9).

In addition to the above, it is very important that citizens feel comfortable in their neighbourhood and that they trust their neighbours (see Meško, Fallshore, Rep, & Huisman, 2007). Therefore we have analysed the variables which measure the quality of

life in a neighbourhood. Let us begin with a set of questions which we had used in an attempt approximate the quality of life in neighbourhoods of surveyed cities. Better quality of life is determined by a number of factors which obviously also include some which had been covered by the following statements we used: *people who live in my neighbourhood can be trusted (v2)*, *I have many friends among my neighbours (v3)*, *there are many people in my neighbourhood on whom I can rely (v4)*, *every day in my neighbourhood I meet many people I know (v5)*.

Participants were asked to rate their level of agreement with the above statements on a scale from 1 completely disagree, 2 – disagree, 3 – agree, 4 - fully agree. These questions were used to develop a composite measurement variable (F2) called QUALITY OF SOCIAL NETWORKS (see Table 4) using Factorial Analysis (Table 9). One third or some 30% (95% CI: 24 to 37%) of residents in Sarajevo were somewhat mistrustful of their neighbours, and four fifths of respondents or some 79% (95% CI: 74 to 84%) meet the people they know in their neighbourhood on everyday basis.

A large percentage of respondents of Pristine or some 76% (95% CI: 75 to 78%) have shown complete trust in their neighbourhood. Many respondents in Pristine 72% (95% CI: 63 to 81%) meet the people they know in their neighbourhood on everyday basis.

Table 4: Quality of social networks

F2 – Quality of social networks	Mode	Median	Mean	Std. Deviation
V2-is trustful	3-agree	3-agree	3.05	.76
V3-has many friends	3-agree	3-agree	2.94	.75
V4-relies on people	3-agree	3-agree	2.83	.73
V5-meets many people	3-agree	3-agree	3.01	.90

Quality of a neighbourhood depends on many clearly visible factors which leave an impression even on casual passers-by. Some of the key indicators of “neighbourhood disorder” include dirty public spaces (v6), graffiti on the walls (v7), decayed buildings (v8), young people aimlessly wandering the streets (v9), street drunks (v10), signs of vandalism (v11), beggars coming up to passers-by (v12) and a significant number of homeless (v13).

Participants were asked to rate their level of perception of disorder with the above statements on a scale from 1 - no problem, 2 – little problem, 3 – important problem, 4 –

very significant problem (see Table 5). Factor models for social disorder in neighbourhoods and Precaution measures (see Table 9) actually extracted two factors with Eigenvalues higher than 1. Factors are called F3.1SOCIAL DISORDER IN NEIGHBOURHOODS IN TERMS OF PEOPLE, F3.2SOCIAL DISORDER IN NEIGHBOURHOODS IN TERMS OF INFRASTRUCTURES.

Table 5: Neighbourhood Social Disorder

F3 - Neighborhood Social Disorder	Mode	Median	Mean	Std. Deviation
V6- dirty public spaces	4-very significant pr.	3-important problem	2.80	1.08
V7- graffiti	2-little problem	2-little problem	2.17	1.00
V8- decayed buildings	2-little problem	2-little problem	2.25	.96
V9- street young people	4-very significant pr.	3-important problem	2.90	1.08
V10-street drunks	4-very significant pr.	2-little problem	2.53	1.14
V11-signs of vandalism	3-important problem	3-important problem	2.59	1.04
V12-beggars	4-very significant pr.	3-important problem	2.58	1.28
V13-homeless	1-not problem at all	2-little problem	2.32	1.23

One third of surveyed respondents of Pristine or some 37% (95% CI: 30 to 43%) identified presence of graffiti on the walls of residential buildings in their neighbourhood as a major problem. Appearance of buildings and community areas can also influence citizens' opinions on the quality of life in their neighbourhood. Nearly a 30% (95% CI: 20 to 40%) of respondents in Pristine believed that rundown buildings were a major problem of their neighbourhood. If we were to consult the Broken Windows Theory, we would conclude that the rundown exteriors also imply some other deviations (Wilson & Kelling, 1982). Half of respondents in Pristine or some 47% (95% CI: 37 to 56%) identified presence of homeless people as a significant problem of their community or their neighbourhood.

Although previous factors (variables) significantly influence public perception of quality of life in urban areas, criminology studies have shown that respondents mostly judge how safe the area where they live is based on how concerned they are about crime occurring in their neighbourhood on daily basis. Therefore, we wanted to show what is the impact on citizens of the knowledge that some crimes are occurring in their neighbourhood on daily basis, including: street robberies – mugging (v15), fraud (v16), street fights (v17), theft (v18), unprovoked hurling of insults at people in the streets (v19) and robberies of

apartments (v20). Participants were asked to rate their level of concern with the above statements on a scale from 1 – not concerned, 2 – little concern, 3 – middle level of concern, 4 – quite concerned, 5 – very concerned. Presence of such criminal behaviours is making one neighbourhood less pleasant for living, which is why such experiences (variables) can be grouped under one composite variable F4 which is called CONCERN about crime in the neighbourhood (see Table 6) using the Factor Analysis (see Table 9).

Table 6: Concern about the crime in the neighbourhood

F4	Pristina KOSOVO			
	Mode	Median	Mean	Std. Deviation
V15- mugging	5- very concerned	4-quite concerned	4.08	1.17
V16- fraud	5- very concerned	4-quite concerned	3.91	1.17
V17-street fights	5- very concerned	5- very concerned	4.16	1.23
V18-theft	5- very concerned	5- very concerned	4.24	1.03
V19- insults	5- very concerned	4-quite concerned	3.70	.84
V20- robberies	5- very concerned	5- very concerned	4.28	1.13

Respondents have expressed concern over frequent street robberies. A very large percentage of surveyed Pristine residents 90% (95% CI: 84 to 95%) believed that street robberies were a significant problem in their neighbourhood. With this in mind, it is not surprising that a majority of respondents in Pristine 87% (95% CI: 80 to 94%) fear that they might become the victims of physical assault in the neighbourhoods where they live. A large percentage of 91% (95% CI: 86 to 96%) of respondents in Pristine were also concerned about possibility of robbery of their apartments.

Finally, people show how they perceive the quality of their life and how afraid they are for their life and their property by taking some preventive measures. Different people take different precautions including: avoiding some streets and some parts of their neighbourhood (v84), being cautious with unknown people they meet at night (v85), avoiding to use public transport at night (v86) and finally, avoiding to go out at night

except when it is absolutely necessary (v88). Participants were asked to rate the frequency of the precaution measures with the above statements on a scale from 1 – never, 2 – rarely, 3 – sometime, 4 – frequently, 5 – always. We used above behaviours (variables) to construct composite variable F6 using Factorial Analysis which we called PRECAUTION MEASURES (Tables 7 and 9).

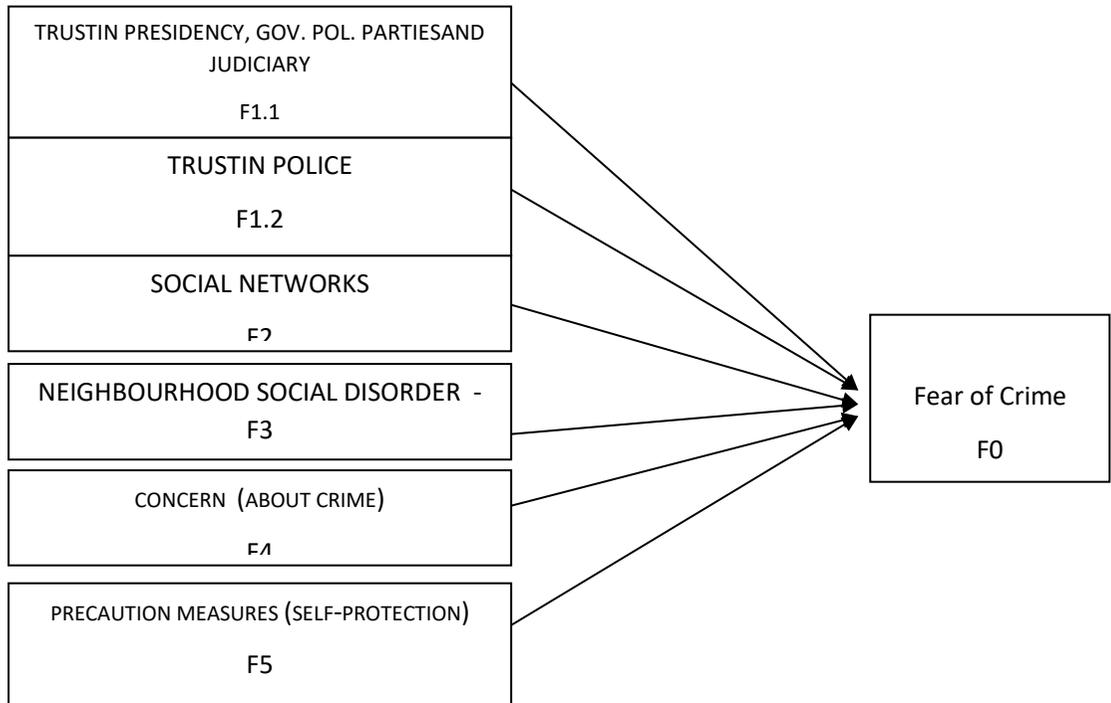
Table 7: Precaution measures (self-protection)

F5 –Precaution measures					
		Mode	Median	Mean	Std. Deviation
V84-avoiding some streets at night	5-always	4-frequently	3.69	1.24	
V85-being cautious with people at night	5-always	4-frequently	4.01	1.18	
V86- avoiding public transport at night	3-sometime	4-sometime	2.87	1.46	
V88- avoiding to go out at night	5-always	3.5	3.35	1.39	

Findings have shown that 83% (95% CI: 77 to 88%) of residents of Pristine are very likely avoid certain streets and parks in their neighbourhood (High percentage of respondents in Pristine or some 87% (95% CI: 83 to 91%) walk away from strangers they meet at night, and also high percentage of some 72%) (95% CI: 62 to 81%) citizens go out at night only when that is necessary. Over a half of citizens or some 56% (95% CI: 52 to 59%) believed that public transport was not safe at night.

The fear of crime model presented bellow is related to neighbourhood disorder, in the widest possible sense of those words (F1-F5), in Pristine (Figure 1).

Figure 1: Model Neighbourhood Disorder and Fear of Crime



### Factor and regression analysis

With the above fear of crime model in mind (see Scheme 1), we conducted factor analysis relying greatly on the experiences from Farrall and others and Meško and Farrall studies (Farrall, Bannister, Ditton, & Gilchrist, 1997; Meško & Farrall, 1999). For the purpose of this research, we conducted factor analysis of variables (s25-s30) that construct composite SAFETY FEELING variable (F0). The factor analysis included the overall sample for Pristine (see Table 9). Next, we conducted regression analysis (forced entry method) for the purpose of which composite variables (F1-F5) were observed as independent variables while SAFETY FEELING (F0) was observed as dependent variable. Results of regression analysis are presented in Table 10.

The limitation of the factor models is that the input variables are mainly non-Normal Likert's scales. This means that the theoretical requirements for the application of the factor model are not fully fulfilled which consecutively reduces possibility to generalize the

findings of the factor models further analysis using non parametric tools are the results of the factor analysis. In order to fully generalize the findings of the factor models further analysis using non parametric tools are necessary.

Table 8: Factor analysis "Safety feeling"

Vignettes		Factor loading	Mean	Standard deviation
<b>F1: Fear of crime (62.74 % var.); KMO=0.88; <math>\alpha</math>=0.88</b>			<b>2.93</b>	<b>0.30</b>
<b>Doorbell (s25)</b>	One evening you are at home on your own. It is late. The doorbell rings, but you are not expecting anyone;	0.72	3.29	1.12
<b>Car (s26)</b>	One evening you go to take out the garbage. On the street you see two men walking around a parked car. When they see you looking at them, they begin to walk toward you;	0.80	2.60	1.07
<b>Party(s27)</b>	You have been invited to a party in a neighbourhood you do not really know. Early that evening you set out by bus. When you get off you still have some way to walk. Suddenly you notice that you have lost your way. A group of youths is following you and are giving unpleasant remarks at you;	0.85	2.52	1.11
<b>Bus stop (s28)</b>	One afternoon, you are standing at a bus stop when a group of 15 or 16-year-olds comes along. They begin kicking the bus stop and daubing graffiti on the bus shelter;	0.78	3.07	1.30
<b>Telephone(s29)</b>	You are going out one evening. You are ready and just about to leave when the phone rings. You answer, giving your name. But at the other end you hear only irregular breathing. You ask who is there. They hang up;	0.84	3.00	1.12
<b>Bar(s30)</b>	You are in a part of town where you have never been before. You go into a bar and inside there is a group of loud speaking local males.	0.76	3.09	1.21

Cronbach's Alpha coefficient of internal consistency is high (0.88). Factor F0 – Safety feeling describes 62.74 per cent of the overall variance. Factor loadings vary from 0.72 (for s25- Doorbell) to 0.85 (s27 Party).

Table 9:

<b>Other variables</b>	<b>Mean</b>	<b>Standard deviation</b>
<b>F1.1 Trust in Presidency, Gov., Pol. Parties and Judiciary (36.04% var.) F1.2 Trust in Police (24.81 % var.) KMO=.54; <math>\alpha</math>=0.49</b>	<b>2.74</b>	<b>0.66</b>
<b>F2: Social Networks (59.25 % var.); KMO=0.74; <math>\alpha</math>=0.76</b>	<b>2.95</b>	<b>0.09</b>
<b>F3.1: Social disorder in neighbourhoods in terms of people (47.75% var.) F3.1: Social disorder in neighbourhoods in terms of infrastructure (14.84 % var.); KMO=0.75; <math>\alpha</math>=0.84</b>	<b>2.52</b>	<b>0.26</b>
<b>F4: Concern (about crime in the neighbourhood) (50.01 % var.); KMO=0.78; <math>\alpha</math>=0.79</b>	<b>4.06</b>	<b>0.22</b>
<b>F5: Precaution measures (self-protection) (59.67 % var.); KMO=0.71; <math>\alpha</math>=0.75</b>	<b>3.48</b>	<b>0.46</b>

Cronbach's Alpha coefficient of internal consistency is high or acceptable for all factors in the model except for the Precaution measures which is questionable (0.60). F3B factor was introduced to the regression model as well.

The regression model has shown statistical significance at  $p < 0.001$  level, in that two components were found to significantly influence the sense of fear: neighbourhood disorder, and precaution measures.

Table 11: *Regression Results for Significant Interaction Terms*

	<b>Pristine KOSOVO</b>		
	B	Std. Error	Beta
Constant	-,006	,045	
F 1.1 TRUST IN PRESIDENCY, GOV. ,POL. PARTIES AND JUIDICIARY	,053	,047	,053
F1.2 TRUST IN POLICE	-,001	,046	-,001
F 2 SOCIAL NETWORKS	,037	,046	,037
F 3.1 NEIGHBOURHOOD SOCIAL DISORDER(People)	,084	,050	,084
F3.2 NEIGHBORHOOD SOCIAL DISORDER (Infrastructure)	,225***	,046	,224
F4 CONCERN OVER CRIME	-,061	,052	-,061
F5 SELF-PROTECTION	-,389***	,048	-,388

Dependent variable: F1 – “Safety feeling”; \*\*\* -  $p < 0.000$ ;  $R^2 = 0.207$ ;  $N = 400$

Respondents from Pristine who were more concerned with neighbourhood social disorder in terms of infrastructure as graffiti and rundown buildings were also more likely than other respondents there to have greater fear of crime. Fear of crime tended to be lower among respondents in Pristine who take precautions in their everyday life such as avoiding dark places and unknown people they meet at night.

**Table 12: Regression analysis – social demographic model**

Total (N=400)	
Independent variables <sup>32</sup>	Beta/sig.
Gender (Woman)	-.398/***
Student	-.392/***
Position in the labour market (Unemployed)	-.373/***
Position in the labour market (Housewife)	-.461/*
Sporadic religious activities	-.398/***
Bad economic situation	-.682/***
	R <sup>2</sup> = .156

Dependent variable: Safety feeling, Constant 0.468\*\*\*

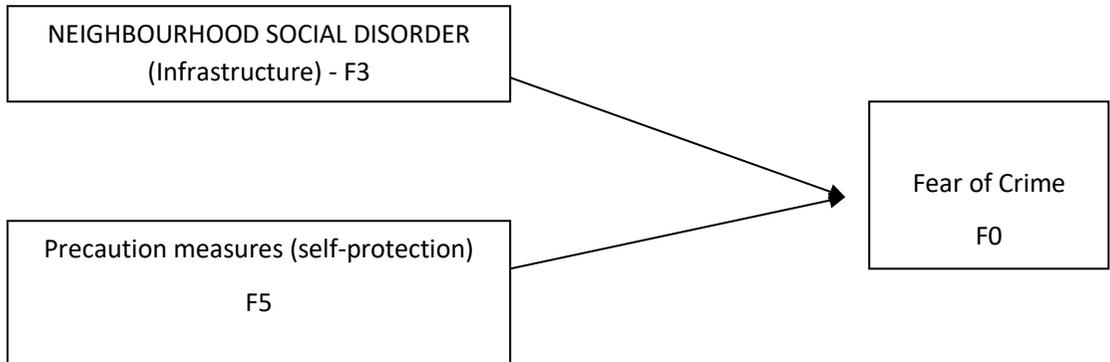
N=400. Significance \*\*\*0.001, \*\*0.01, \*0.05

When looking for statistical significance for the overall sample (see Scheme 2), we found out that the persons who have weaker “social network” tend to fear more, but not significant. Additionally, persons who are “concerned” over different forms of crime in their neighbourhood, also show greater fear of crime. More “cautious” respondents in Pristine tend to show greater fear, as additionally confirmed by high value of Beta coefficient (.290). Results of regression analysis for the Pristine sample pointed to statistically significant influence of “neighbourhood disorder” variable in the sense that respondents who consider their neighbourhoods to be in disorder (graffiti and rundown buildings) also tend to be more afraid of crime. Precaution measures variable has statistically significant influence on the intensity of the fear of crime in Pristine (see Scheme 5). Fear of crime tended to be lower among respondents in Pristine who take precautions in their everyday life such as avoiding dark places and unknown people they meet at night but higher fear of crime when they take money with them.

Regressions model with socio demographic variables shows that weak socio-economic categories of society in Kosovo as women, students, unemployed, housewives, people with sporadic religious activities and people in bad economic situation have greater fear of crime.

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<sup>32</sup> Only independent variables (factors) on the 0.05, 0.01 or 0.001 significance levels are included in the table.

**Figure 2: What works? – Pristine****CONCLUSION**

The common Neighbourhood Disorder and Safety feeling Model (see Scheme 2) has shown that well-developed Neighbourhood social disorder have a positive although non-significant impact in Pristine on the neighbourhood fear of crime. This does not come as a surprise considering that the people in the post-socialist societies are traditionally more reliant on their family and friends. The above trend was somewhat strong in Kosovo, because above observation (see Table 1) shows that nearly a half of respondents from Pristine live in households with more than five members while one fifth of them live in households with seven and more members. It is logical to expect the people who live in larger households to have better opportunities to develop stronger social networks. This probably also explains the fact that Albanians are considered throughout the former Yugoslavia to be the best organized nation with strongest social and family networks which provide support to their members including by funding their business activities. This opinion can be supported by empirical evidence, since Albanians enjoy nearly exclusive right to small family businesses such as bakeries or cake shops in nearly all cities of former Yugoslavia (with the combine population of some 22 million people).

On the other hand, the high frequency with which crimes are being committed in urban centres in Europe greatly influences the fear of crime felt by residents of large European cities. Not only registered crime rate, but also the so-called dark figure of crime influence public sense of security. Thus, it is not surprising that public concern with crime is a corrective factor which influences and increases the fear of crime among our respondents.

However, residents of EU capitals and capitals in ex Yugoslavia countries has greater tendency than residents of Pristine to mention everyday crime as one of the factors which feed their fears.

Since some of our findings had been partially interpreted in the above chapters, the conclusion will include only a brief overview of some factors influencing the public fear of crime in Pristine covered by this research. According to results, in Pristine is only one fifth of respondents there had positive opinion or trusted their public institutions (presidency, government and judiciary). The only exception to this was police as police forces in all three cities enjoyed trust of more than a half of respondents. In conclusion, we can also say that the people in Pristine who take more precautions tend to be more afraid of crime. The above finding is realistic and unsurprising. On the other, the composite variable neighbourhood disorder had a detrimental influence of the fear of crime.

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## Illegal Migration-B&H Point Of View<sup>33</sup>

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*Summary: The subject of this paper is related to illegal migrations from the perspective of Bosnia and Herzegovina. The research focus is on possible deficiencies in the legislative and institutional framework of actions in relation to illegal immigration, so the tasks of this research should be conducted through the analysis of the legal and institutional framework of action in the context of the problem of illegal migration in Bosnia and Herzegovina with the detection of the basic elements of illegal migration phenomenon. We expect that the contribution of this work should be in defining elements that would improve actions, within the contents of the measures, and in the subjects' actions of their implementation. The basic methods used in the preparation of this work will be: a method of content analysis, collection and processing of statistical data, induction and deduction. The research results should contribute to the more effective and more efficient course of actions of the state of Bosnia and Herzegovina towards illegal migration.*

*Key words: Illegal migration, Bosnia and Herzegovina, Legal frame, Institutional frame.*

### INTRODUCTION

From the end of 2010, protests occurred in several countries of the Middle East and North Africa. The protests were caused by struggle against autocratic rule in those countries. Due to these protests, several leaders of different countries have resigned from their positions. Because of disturbances in the previously established social relations, this led to instability and insecurity in these countries. Consequences of this situation were migrations from these countries towards a safer and more prosperous destinations. One of the first countries that experienced this, was Tunisia whose nationals have migrated to the Italian island of Lampedusa (Seeberg, Eyadat, 2013). This led to a humanitarian crisis in Italy. All of this put back migrations to the front pages of newspapers or in the focus of politics and the scientific community. The influx of refugees from the EU is evaluated as a phenomenon that could endanger the safety and stability. The refugee crisis was exacerbated by the wars and upheavals in the Arab Mediterranean countries, but also by incomplete interventions of Western allies to break down the local dictatorial regimes in the so-called

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Arab Spring. Although in most Arab countries did not happen anything special other than dismissal of individual ministers or amendment of some laws (regarding the subsidization of food or fuel), for example in Lebanon, Jordan, Algeria, Morocco, Mauritania, Saudi Arabia, Oman, Qatar and the United Arab Emirates, larger protests, upheavals and conflicts have happened in Tunisia, Libya, Egypt, Syria, Yemen and Bahrain (Tadić et al, 2016). According to the same source, migration from the Arab part of the Mediterranean to the EU existed before 2011. All these countries are characterized by large population growth.

During the period from 1980 to 2010, all these countries have doubled their population (a large proportion of the young and the unemployed). Slow economic growth accompanied by technological backwardness in comparison to the EU, in spite of the mineral resources, has resulted in above average youth unemployment even before the upheaval in the Arab Spring. Youth unemployment is on average higher than 25%, with the examples of Egypt and Tunisia with 30% of unemployed young people. Several routes were used for the movement of refugees from those countries, and for this paper it is particularly important so-called Balkan route leading from Greece as the first member of the EU on this route. Originally, the initial flow of this route has not led through BiH, but through the Republic of Macedonia and the Republic of Serbia. During their journey, many migrants were held on the territory of the Republic of Serbia because of the impossibility to enter the EU Member States. In the past few years BiH was part of so-called Balkan route, but with respect to the phenomenon of migrant crisis, that was a negligible number of entries. The situation changed during 2017 when the number of illegal migrants was increased by 380%, in the first eleven months (Slobodna Bosna, 2017). Due to this fact, the problem of illegal migration in BiH (furthermore BiH) is becoming highlighted, and everything indicates that it will escalate during 2018, at least from the perspective of BiH.

The subject of this paper is focused on the capacities of BiH to deal with illegal migration, with special emphasis on proficiency of state apparatus responsible for the establishment, operation, supervision and development of legal and institutional framework to counter this phenomenon. Since we focused our work on the question of the structure and functioning of the state system in relation to the problem of illegal migration, this paper reviewed achievements regarding application of theoretical thesis to the ways in which society responds to the crime, what represents the foundation of criminology theories on social reaction. Because of the space that we have at our disposal, we will not discuss in details some general elements of illegal migration and migrant crisis, as well as their impact on the political situation and the security of the EU, although it is difficult to separate the security of BiH from the EU security (for more on the general characteristics and specific peculiarities of the phenomenon of migration and illegal migration, see: Friedman, Randeria, 2004 Graham, Poku, 2005, Guild, Van Selm, 2005, Huysmans, 2006,

Morehouse, Blomfield, 2006, Truong, Gasper, 2011, Morehouse, Blomfield, 2011, Mijalković, Žarković, 2012, Seeberg, Eyadat, 2013, Riviera-Sánchez Lozano-Ascencio, 2014, Truong et al, 2014, Buzar, 2015, Innes, 2015, Grigonis, 2016, Tadić et al, 2016, Brouwer et al, 2017, Jardon Hernández, 2017, Pastor, 2017). When we are talking about possible security challenges of migrant crisis, these challenges are discussed in the above-mentioned literature, references of general character, that we have recommended for further consideration, and these security challenges are usually related to the risk of possible terrorist acts (through infiltration of potential terrorists in migrant groups), trafficking and smuggling of human beings and other associated crimes such as counterfeiting of documents (as an accompanying element of migrants movements), and other criminal activities of migrants (general crime, homicides, sexual assault, etc.). In terms of experience of Bosnia and Herzegovina, risks related to terrorist activities were not present, but human trafficking is, and the rate of other crimes that may be linked to the migrants so far, is at the negligible level. During the final phase of writing this paper, the most complex incident occurred in Velika Kladuša, when during the mutual fight of migrants, one person of Moroccan origin, got killed (for more see: Klix, 2018). With this paper, authors will try to present legal and institutional framework regarding illegal migration in BiH; analyze the implementation of the strategic documents in state institutions regarding these issues; present available statistical data relating to this phenomenon; analyze the forms and characteristics of illegal migration in BiH; try to spot trends in the development of this phenomenon in BiH and draw conclusions on such matters. Research instruments, in addition to the use of official statistical data of relevant state bodies and agencies and publicly available data, involved anonymous semi-structured interviews with representatives of the relevant parliamentary committees, as well as managers and employees of competent police agencies. We believe that with this approach, we can achieve several objectives that are already defined by this paper. At the same time, our intention is to contribute to the image completion regarding the problem of reaction to illegal immigration in Bosnia and Herzegovina. So, with this paper, we expect to make a basic assessment of national capacities of response to the problem of illegal migration, with particular attention to the evaluation of the segments of the system that are responsible for operational work, such as border security services and local operational policing bodies. Beside this, our goal is to assess and identify the basic problems in the functioning and coordination of the state apparatus responsible for the response to illegal immigration, and in particular the relationship between the legislative and executive authorities. In that regard, our task is also an analysis of strategic documents adopted in this area of work, that will help us to assess the preparedness of the country to illegal migration and readiness to monitor and implement the tasks set by these documents. Finally, using available sources of the Ministry of Security and other competent authorities, we will try to insulate specific indicators of illegal immigration and present its specificity.

## **THE LEGAL FRAMEWORK IN RELATION TO ILLEGAL MIGRATION IN BIH**

The basic legal framework in the field of migration in BiH consists of five laws which, among other things, regulate the area of immigration and asylum in BiH: the Law on Immigration and Asylum ("Official Gazette BiH" No. 23/99), the Law on movement and stay of aliens and asylum ("Official Gazette BiH" No. 29/03, 04/04, 53/07, 36/08 and 87/12), the Law on foreigners ("Official Gazette BiH", No. 88/15), the Law on asylum ("Official Gazette BiH", No. 11/16). The laws that regulate the establishment and scope of work of state institutions that have their share of competence on issues of migration and asylum, can be added to afore mentioned list of laws (see more in the section entitled "The institutional framework of BiH"). The remaining part of the legal framework are by-laws arising from the provisions of the Law on Foreigners ("Official Gazette BiH", No. 88/15) and the Law on Asylum ("Official Gazette BiH", No. 11/16), but mostly, these by-laws are actually books of rules and decisions that we will not mention due to the available space. The legislative framework in BiH which regulates the issues related to illegal migration and asylum issues, movement and residence of foreigners, is in accordance with the relevant standards prescribed by the international legal sources (see: Ministry of Security BiH, 2007, pp: 43-44).

Extensive and complex range of by-laws represents satisfactory legal instruments for a number of questions arising from the above law, which provides to all agencies and departments adequate legal mechanisms for the implementation of competence entrusted to them. The following presentations will be focused to the administration structure and basic functions of state bodies responsible for issues of reaction to illegal immigration.

## **THE INSTITUTIONAL FRAMEWORK OF BIH**

BiH is a country with complex constitutional framework. This country is composed of two entities (the entity of the Federation of BiH and Republika Srpska entity) and one district (Brčko District of BiH). From afore mentioned structure, it is quite obvious that institutional framework regarding illegal migration, on the legislation and the executive level, is very complex. This can be divided into: The authorities at the state level, the authorities at the Entity level and at the District level. Authorities at the state level are: BiH Parliament, the Presidency of BiH and the Council of Ministers of BiH (see Figure 1).

Parliamentary Assembly of BiH, established by the Constitution of BiH, consists of two houses - the House of Representatives and House of Peoples, and all legislative decisions require approval in both Houses. Parliamentary Assembly passes laws, approves the budget and decides on sources and amounts of revenue for financing the institutions of

BiH and international obligations of BiH, confirm the appointment of the Chairman and members of the Council of Ministers, gives consent to the ratification of international treaties and decides on other issues necessary for the implementation of its authority or that are assigned by entity agreement.

As a special body of the Parliament of BiH, there is the Joint Commission for Human Rights, that is, with the involvement of other international and national associations, dealing with the issue of migrations (UNHCR etc.) and the work of the Foreigners Affairs Service, which through media appearances (Klix, 2018 ) expressed concern that according to their knowledge, the number of migrants every day drastically increases, and emphasizes the need to strengthen the capacity of the Services in order to successfully cope with the arrival of a new wave of migrants. The Presidency of BiH is responsible for conducting the foreign policy of BiH, including the conclusion of international agreements of BiH, denouncing, and with the consent of the Parliamentary Assembly, ratifying treaties, and the presentation and the membership of BiH in international and European organizations and institutions.

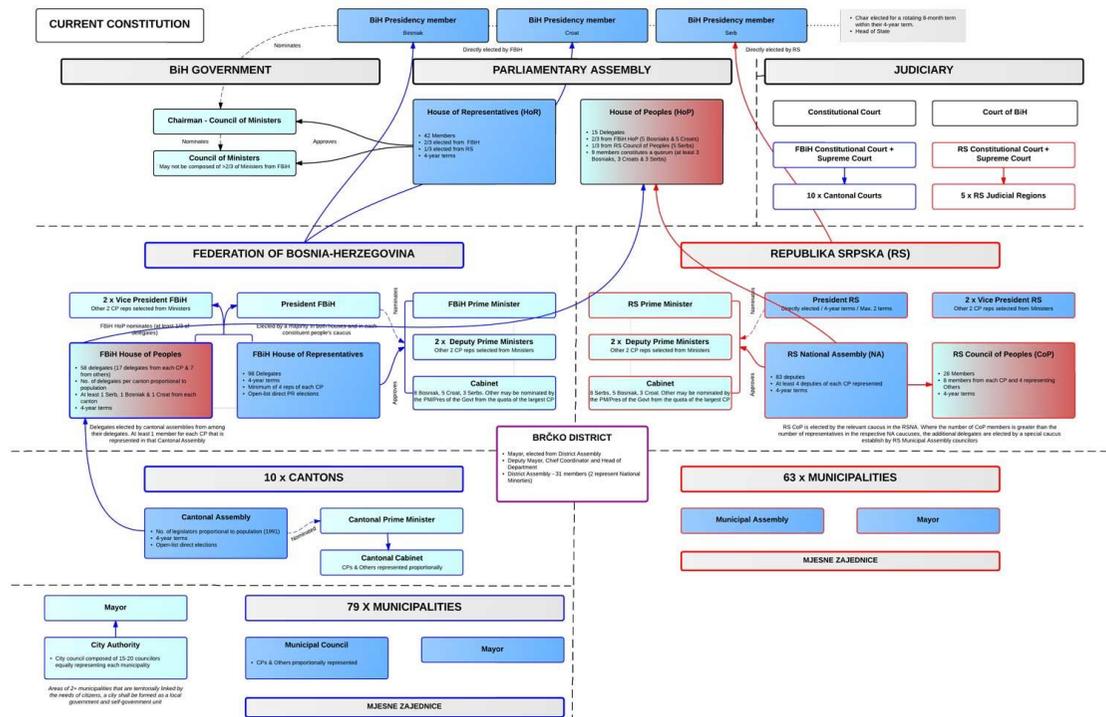


Figure 1. (<http://www.municipalizacija.ba/en/bih-constitutional-structure.html>, visited on 05.06.2018)

The Council of Ministers is the executive body which consists of ministries prescribed by the Constitution of BiH. For the issue of the institutional framework to prevent and combat illegal migration following ministries and independent administrative and judicial organizations / institutions are significant: Ministry of Security, Ministry for Human Rights and Refugees, Ministry of Foreign Affairs, Ministry of Justice, Ministry of Civil Affairs, Directorate for European Integration, the Court of BiH and Constitutional court of BiH.

Ministry of Security is responsible for the protection of international borders, domestic border crossings and regulation of traffic at border crossings of BiH, the prevention and detection of perpetrators of terrorism, drug trafficking, counterfeiting of domestic and foreign currencies and trafficking and other crimes with international or inter-Entity element, international cooperation in all areas within the jurisdiction of the Ministry, the collection and use of data relevant for security of BiH, organization and harmonization of activities of the entity ministries of Interior and Brčko District of BiH in achieving security tasks in the interest of BiH.

Ministry of Security is responsible for creation, maintenance and implementation of immigration and asylum politics in BiH, regulating the procedures and structure of the service related to the movement and stay of foreigners. Ministry of Security delivers the first instance decisions on applications for international protection of foreigners in BiH and is responsible for the second instance decision on appeals of foreigners in respect of entry, movement and stay of foreigners in BiH, i.e. makes decisions about complaints to the first instance decisions passed by the Foreigners Affairs Service and Border police in accordance with the Law on Foreigners. Regarding the implementation of the activities countering illegal migration, especially important role is played by two sectors within the Ministry: Sector for Immigration and Asylum Sector (for more on jurisdiction of the Ministry of Security see the Law on Council of Ministers of BiH, "Official Gazette BiH", numbers: 30/03, 42/03, 81/06, 76/07, 81/07, 94/07, and 24/08 and the Law on ministries and other administrative bodies of BiH, "Official Gazette BiH", numbers: 32/02, 03/05, 42/03, 26/04, 42/04, 45/06 and 88/07).

Within the structure of the ministry operates several independent administrative units, and for this paper, the most important are: Border Police of BiH, the Foreigners Affairs Service, State Investigation and Protection Agency (SIPA) and the Intelligence and Security Agency (OSA). Civilian oversight and control of the police authorities in BiH is entrusted to the body called the Independent Committee. This body was established by the Law on Independent and Supervisory Bodies of Police Structure of BiH ("Official Gazette BiH" No. 36/08), which prescribes its function and structure. The jurisdiction of this committee relates to the following activities: conducting the selection procedure of candidates and proposing the removal of police supervisors and deputy supervisors of the police

authorities of BiH, the advertisement of job positions and evaluation of applications of candidates, selection and submission to the Minister of Security, for his decision, list of the names of a maximum five candidates for the managers and the names of up to five candidates for deputy heads of police forces of BiH.

Border Police is the police authority responsible for tasks of the surveillance and control of BiH border crossing which involves ensuring the inviolability of state borders, protection of life and health, the prevention and detection of crimes and offenses, as well as detecting and finding their perpetrators, prevention of illegal cross-border migration and prevention and detection of other threats to public safety, public order and national security. Border Police in the field of implementation of immigration legislation is controlling the movement of foreigners across the border of BiH, in accordance with the Law on Foreigners and the Law on Asylum, rejects the entry of foreigners in BiH in cases when they do not meet the requirements for entry into BiH and under defined conditions, make decisions on rejection entering; in exceptional cases prescribed by the afore mentioned Law, Border Police is issuing a visa at the border, performs cancellation or shortening of the visa validity and a foreigner can express intention of applying for asylum to the Border Police, maintains and exchanges data in this area (for more on jurisdiction of the Border Police see the Law on Border Police, "Official Gazette BiH", numbers: 50/04, 27/07 and 59/09 and the Law on Border Control, "Official Gazette BiH", numbers: 53/09, 54/10 and 47/14).

Foreigners Affairs Service (FAS) is an administrative organization within the Ministry of Security, with operational independence to perform duties and solve issues within its jurisdiction. FAS is established to perform administrative and inspection activities related to movement and stay of foreigners in BiH, to deal with administrative matters upon requests of foreigners as well as other tasks stipulated by the Law on Foreigners and the Law on Asylum, and other laws and regulations governing the rights, obligations and other issues relating to the movement and residence of foreigners. FAS was established by the Law on Foreigners Affairs Service in 2005, but it started with operational work on October 1, 2006 (for more about the competencies of the Foreigners Affairs Service see the Law on Foreigners Affairs Service, "Official Gazette BiH", numbers: 54/05 and 36/08).

State Investigation and Protection Agency (SIPA) is an administrative organization within the Ministry of Security, with operational independence in its work. SIPA, within its legally defined competences, deals with the prevention, detection and investigation of criminal offenses within the jurisdiction of the Court of BiH, and particularly organized crime, terrorism, war crimes, human trafficking and other crimes against humanity and values protected by international law (for more on competencies of SIPA see the Law on State

Investigation and Protection Agency, "Official Gazette BiH", numbers: 27/04, 63/04, 35/05, 49/09 and 40/12). Intelligence and Security Agency in terms of immigration is responsible for security checks of foreigners, in order to detect possible threat to the security of BiH (for more on competencies of OSA see: the Law on the Intelligence and Security Agency, "Official Gazette BiH", numbers: 12/04, 20/04, 56/06, 32/07 and 12/09).

Ministry of Human Rights and Refugees is responsible for monitoring and implementing international conventions and other documents on human rights and fundamental freedoms, creation and implementation of activities to meet obligations concerning accession to Euro-Atlantic integration, in particular regarding the implementation of the European Convention on Human rights and fundamental Freedoms and its protocols; monitoring and production of information about standards and activities in the areas of human rights; taking care of rights and issues of refugees in BiH after determination of their status; reception and care, for a period of 30 days, of BiH citizens returning to BiH under an agreement of readmission; creation and implementation of policy in BiH in the field of return of refugees and displaced persons in BiH, reconstruction projects and ensuring other conditions for sustainable return, and creation of BiH policy towards the diaspora (for more about the competencies of the Ministry for Human Rights and Refugees, see the Law on Council of Ministers of BiH, "Official Gazette BiH", numbers: 30/03, 42/03, 81/06, 76/07, 81/07, 94/07, and 24/08 and the Law on ministries and other administrative bodies of BiH, "Official Gazette BiH", numbers: 32/02, 03/05, 42/03, 26/04, 42/04, 45/06 and 88/07).

The Ministry of Foreign Affairs is responsible for the implementation of the established policy of BiH, and for the development of international relations, representing BiH in diplomatic relations with other countries and international organizations; cooperation with international organizations, proposing to the Presidency of BiH membership or participation of BiH in the work of international organizations; preparation of bilateral or multilateral agreements; carrying out duties concerning the stay and protection of the rights and interests of BiH citizens permanently and temporarily staying abroad and of domestic legal persons abroad, and the promotion, development and cooperation with emigrants from BiH. Ministry of Foreign Affairs, in the field of implementation of immigration legislation, is preparing for the Council of Ministers proposals of decisions about the states whose citizens are not required to have a visa for entry to BiH, draft decisions for countries whose citizens can enter BiH with a document other than a passport, as well as draft decisions on exemption from obtaining visa for holders of certain types of travel documents.

Also, the Ministry for Foreign Affairs is implementing the migration politics through the issuance of visas in diplomatic and consular missions of BiH, and decides on extension of short-term visas in exceptional situations that are prescribed by the Law on Foreigners (for more on the jurisdiction of the Ministry of Foreign Affairs, see the Law on Council of Ministers of BiH, "Official Gazette BiH", numbers: 30/03, 42/03, 81/06, 76/07, 81/07, 94/07, and 24/08 and the Law on ministries and other government authorities BiH, "Official Gazette BiH", numbers: 32/02, 03/05, 42/03, 26/04, 42/04, 45/06 and 88/07). The Ministry of Justice is responsible for administrative functions related to judicial bodies at the state level; international and inter-entity judicial cooperation; ensuring that legislation of BiH and its implementation at all levels is in compliance with the obligations of BiH deriving from international treaties; Cooperation with the Ministry of Foreign Affairs and Entities in drafting international bilateral and multilateral agreements; generally acting as a central coordinating body for harmonizing legislation and standards of judicial system between entities; extradition; tasks of administrative inspection of Law Enforcement; and the issues of association of citizens and keeping of registers of associations of citizens and non-governmental organizations operating in the territory of BiH. The Ministry of Justice is responsible for the inspection of administrative procedures of all ministries and other civil bodies, including those for managing migration and asylum (for more on jurisdiction of the Ministry of Justice, see the Law on Council of Ministers of BiH, "Official Gazette", numbers: 30 / 03, 42/03, 81/06, 76/07, 81/07, 94/07, and 24/08 and the Law on ministries and other government authorities of BiH, "Official Gazette BiH", numbers: 32/02, 5/03, 42/03, 26/04, 42/04, 45/06 and 88/07).

Ministry of Civil Affairs is responsible for citizenship, citizen registration and records, personal data protection, residency registration, identity documents, travel documents, and other duties prescribed by law. In the area of immigration, this Ministry is responsible for defining the travel documents for foreigners (for more on jurisdiction of the Ministry of Civil Affairs, see the Law on Council of Ministers of BiH, "Official Gazette BiH", numbers: 30/03, 42/03, 81/06, 76/07, 81/07, 94/07, and 24/08 and the Law on ministries and other administrative bodies of BiH, "Official Gazette BiH", numbers: 32/02, 03/05, 42/03, 26/04, 42/04, 45/06 and 88/07). The High Judicial and Prosecutorial Council of BiH is responsible for supervision and control, but also for significant elements of the management and administration of judicial institutions (for more, see Law on High Judicial and Prosecutorial Council of BiH, "Official Gazette BiH", numbers: 25/04 , 93/05, 15/08, 48/07). This body represents the actual authority over all prosecutorial and judicial institutions in BiH. This body with defined responsibilities, performs a decisive role in the policies that are implemented at the level of prosecutor's offices or at the level of courts (prosecution policy and penal policy of courts, more in: Ignjatović, 2012).

The Court of BiH, in the context of its criminal jurisdiction, has jurisdiction over criminal offenses defined in the Criminal Code of BiH and other laws of BiH. Within its administrative jurisdiction, the Court of BiH is competent to decide on actions taken against final administrative acts issued in the exercise of public authority. Within the appellate jurisdiction, the Court of BiH is competent to decide on appeals to verdicts or decision delivered by the Criminal or Administrative Division of this Court, extraordinary legal remedies against final decisions passed by the divisions of the Court, except request for retrial. The Court of BiH in the field of implementation of immigration legislation is deciding, as an appellate body, about the complaints of foreigners to the decision of the Ministry of Security in proceedings upon the application for international protection, and in terms of immigration, all decisions of the Ministry of Security are subjects to judicial review (for more on jurisdiction of the Court of BiH, see the Law on the Court of BiH, "Official Gazette BiH", numbers: 29/00, 16/02, 24/02, 03/03, 37/03, 42/03, 04/04, 09/04, 35/04, 61 / 04, 32/07, 74/09 and 97/09).

Authorities at the entity and district level are: Parliament of the entity Federation of Bosnia and Herzegovina, National Assembly of the Republika Srpska Assembly BDBiH, the Judicial institutions (prosecutors' offices and courts) at the entity and district level, the Ministry of Interior of the Republika Srpska, Ministry of Public Administration and Local Self-Government of the Republika Srpska, Ministry of Interior of the entity of the Federation of Bosnia and Herzegovina, the Ministries of Interior of the ten cantons in the Federation of BiH and Brčko District Police. Responsibilities of the Ministry of Interior of Republika Srpska include, among others, civil and security related investigations, support state authorities in charge of migration management, primarily the Foreigners Affairs Service, the procedures for registration and deregistration of stay of foreigners and at the request of the Foreigners Affairs Service provides support in the forceful removal of foreigners from BiH, and performs verification of identity and citizenship regarding the request for the return of BiH nationals under readmission agreements (for more on jurisdiction of the Ministry of Interior of Republika Srpska see the Law on police and internal affairs, "Official Gazette of RS "No. 57/16). Ministry of Public Administration and Local Self-Government of the Republika Srpska performs administrative and other professional tasks relating to citizenship, registers, personal name, unique number of citizens and perform other duties in accordance with law and other regulations of Republika Srpska and BiH (for more on jurisdiction of the Ministry of Administration and Local Government of Republika Srpska see: the Law on Government of the Republika Srpska, "Official Gazette of RS " No. 118/08 and Law on Republic Administration, "Official Gazette of RS", No. 118/08, 11 / 09, 74/10, 86/10, 24/12, 121/12, 15/16 and 57/16). Ministry of Interior of the Federation of BiH is responsible for the prevention and detection of criminal acts of international crime and terrorism, illicit drug trafficking and organized crime, tracking down and capturing the

perpetrators of these acts, publishing of internal and international searches, cooperation with competent prosecutors' offices to investigate criminal cases, affairs related to the Federation citizenship, human rights and civil liberties in the field of internal affairs, and other tasks within its jurisdiction. In terms of immigration, this Ministry is obliged, at the request of the Foreigners Affairs Service, to provide support to the Foreigners Affairs Service in the forceful removal of foreigners from BiH, and performs verification of identity and citizenship regarding the request for the return of BiH. Nationals under Readmission Agreements (for more about jurisdiction of the Ministry of Interior of Federation of BiH, see: The Law on Government of the FBiH, "Official Gazette of F BiH", numbers: 1/94, 8/95, 58/02, 19/03, 2/06 and 8/06 and Law on internal affairs of FBiH, "Official Gazette of FBiH" No. 81/14).

Cantonal Ministries of Interior in the field of immigration law are responsible for the support of the Foreigners Affairs Service, the procedures for registration and deregistration of stay of foreigners and at the request of the Foreigners Affairs Service to support the forceful removal of aliens from BiH, and perform the verification of identity and citizenship regarding the request for the return of BiH. nationals under the readmission agreements. Each Cantonal Ministry of Interior has its own Law on Internal Affairs, as well as its own Law on Police Officials. Due to limited space, we will not list official gazette links for each law in different cantons. Police of Brčko District of BiH in the field of immigration law shall, at the request of the Foreigners Affairs Service, provide support to the FAS in the forceful removal of aliens from BiH, and perform verification of identity and citizenship regarding the request for the return of BiH. Citizen by readmission agreements (more on the authorities of police of BD see in the Law on police of the Brčko District of BiH, "Official Gazette of Brčko District of BiH", No. 31/09 and 60/10).

In terms of implementation of segments of the scope of work of the institutions whose jurisdictions are elaborated, we can add following laws to the legal framework of their activities: The Law on Criminal Proceedings (BiH, FBiH, RS and Brčko District) and Laws on Police Officers (BiH, FBiH and BD). Also, in this legal framework it would be possible to add numerous by-laws of all these institutions, that serve for implementation of the activities of their basic competences. However, due to the limited space, we will not further elaborate. In addition, BiH is signatory party of large number of international agreements and treaties of which, again due to the limited space, we will emphasize only readmission agreements with all neighboring countries. For example, when it comes to the institutional framework, we can say that this framework, in terms of operating procedures, is very complex and complicated in procedural actions, however this framework is derived from the complex constitutional structure of the country as a result of the peace agreement. Thus, according to the opinion, not only of the author of this paper, the system could be

much simpler. Despite the afore mentioned facts, according to the opinions obtained through interviews, even this institutional framework, in theory, provides answers to all the challenges. According to the same sources (and the experience from the current developments regarding a migration crisis in BiH) problems arise with the practical application of what in theory seems perfect and then all the disadvantages of such a system come to the surface.

### **ILLEGAL MIGRATION IN BIH**

When it comes to the phenomenon of illegal migration in BiH, it is necessary to emphasize that cited problem is recognized by the competent authorities in BiH. Relevant working bodies that are dealing with the monitoring of this phenomenon are formed and they are taking concrete steps depending on the specific situation. It is important to mention that BiH since 2001 began drafting the periodic strategy documents. Last strategy was made in 2016 and is valid for the time frame 2016-2020. Also, from 2007, Migration Profile of BiH is regularly being drafted.

In the introductory part of the paper, we have outlined the theories of social control of crime, and in the next presentations we dealt with the analysis of the elements of the system of state reactions, so in this section we will focus on the available information on the phenomenon of illegal migration. Elementary theoretical assumptions of this concept are presented by Ignjatovic (2006, pp. 33-42) who is stating that this approach in criminological research is particularly emphasized in the theoretical concepts of the so-called new criminology or, as it is often called in literature, radical or critical criminology. So, Taylor, Walton and Young believe that crime solving should be directly related to the thorough study of the criminal justice and formal social control, including the process of creation of criminal laws and their violation as well as a social reaction to this violation.

Problems with illegal migration in BiH started appearing in the last two decades. At that time, BiH was mainly used as a transit country, and to a lesser extent, as the destination, while during that whole period, citizens of BiH were migrating to EU countries. Also, during that period, we started having cases of citizens of BiH going to the areas controlled by the so-called, the Islamic state, and more recently some of them returned to BiH. Throughout this period, problems with the suppression of human trafficking and terrorism occurred, as causes or consequences of illegal migrations. All the above conditions essentially determined the ways and procedures of institutions of BiH in terms of the development of the current institutional and legal framework on these issues, which even before the current migrant movements from the Middle East, was adjusted to the circumstances that BiH was facing with, as a state. More details on the current situation regarding illegal

migration in BiH can be seen in the documents entitled: "The Migration profile of BiH for 2016" and "The Strategy in the area of migration and asylum and the Action plan for the period 2016-2020". When creating certain legal and policy documents in the field of control of migration and asylum in BiH, it is necessary to take into account all relevant indicators and factors that affect the planning of concrete measures and activities of the competent institutions for the selected period of time.

It is important to create a comprehensive document that will be based on real, reliable and objective estimates of migration flows, as well as the interests of BiH in this field. Among these factors particular important are those relating to: geo-strategic position of BiH, observed trends in migration, the constitutional framework, the obligations arising from international agreements, movement towards a common migration policy of the EU and adopted policies of the competent authorities of BiH (Ministry of Security of BiH, 2016:14). Based on the results of the study on illegal migration in BiH, Buzar (2015:98) concludes that when it comes to illegal movements of foreigners in our country and the violation of immigration regulations performed by afore mentioned foreigners, so far it has been identified several ways or forms on which base illegal migration are manifested in BiH. Thus, in the first place is illegal entry and illegal exit from BiH, i.e. illegal transit through its territory. Other forms are related to the cases of legal entry and illegal exit from BiH, as well as illegal entry and request for international protection (asylum).

The situation regarding illegal migration in BiH is best explained by a press statement of the State Minister of the Ministry of Security, who emphasized in early March of 2018, during his meeting with regional representative of UNHCR Anne-Christine Eriksson, that the number of migrants and asylum seekers in BiH is being reduced lately (Glas Srpske, 2018). In the same statement, it was pointed out that during the past several months a large number of illegal migrants and refugees entered into BiH, and that the Border Police, Foreigners Affairs Service and Sector for Asylum of the Ministry of Security undertook all measures to keep under control these flows. However, the latest information from this institution, are not indicating that the problem of illegal migration will be reduced, but contrary, in statements of the Head of the institution from mid-March of this year, one can easily recognize the concern for this problem due to a number of problems on the internal, the BiH level, as well as on external level or maybe it is better to say, the treatment of this issue by the neighboring countries, as well as regional initiatives (Klix, 2018).

So, among other things, the minister says *"We have to solve the problem together, first of all Western Balkan countries. There are so many things involved, such as lack of respect of agreements on readmission. Everyone is trying to transfer that burden to the neighbor. The corridor has been expanded from Trebinje towards the eastern part, Višegrad. In the past,*

*we were not burdened with this problem. We are still not in so complex situation that would request activation of the plan related to the migration crisis. Serbia was coming up with additional capacity to fight against it. We have no understanding for such things. We have one-fifth of positions that are not filled. People are exhausted because we are sending them from one part of the border to another. We are facing the crisis because we cannot get any resources. What capacities we can use to confront this problem? Despite this, we are still successfully dealing with it. These are evaluations of international organizations”.*

Currently, the dominant direction of movement that leads migrants to BiH, is from Greece via Albania and Montenegro, however, according to media reports, we should not neglect the arrival of migrants across (or from) the Republic of Serbia. In our introductory notes, we presented the assessment that the problem of illegal migration in BiH during 2018, will escalate, i.e. will reach the largest proportions so far. From the publicly available statistical data of the Border Police for 2017, it is evident that this increase occurred during 2017 (especially in the last three months of this year). The media reported that a large number of migrants are moving freely through certain parts of BiH, and that they are moving towards the western and southern parts of the country along the border with the Republic of Croatia (or they are moving in the opposite direction upon failed attempts to cross the border). The media report that they are frozen, exhausted, hungry and without adequate shelter.

Through analysis of all publicly available strategic documents and analysis of the state institutions of BiH, one gets the impression that the official preparedness of state bodies is quite good. However, in practice it is noticeable that some segments of the state structures still do not function. Specifically, this refers primarily to the apparently large number of migrants who have been able to illegally enter into the BiH, avoiding official border control. The problem of insufficient number of officers and the impossibility of absolute coverage of the border area was emphasized by the Border Police, in their official documents, while Minister of Security of BiH addressed that issue in his public appearances (more see: Šišić, 2018, HINA, 2018). Furthermore, from the media reports, and through informal communication with employees of the Border Police, it is evident that we have only partially coordinated activities with neighboring countries. The opinion prevails that the authorities of neighboring countries behave according to the principle of mutual blame-shifting, i.e. transfer of migrants to the territory of other countries (i.e. to move the problem away from your own competence and responsibility).

Similar thing can be stated, in some cases, for members of the BiH Border Police. All of these mentioned facts indicate the humanitarian disaster that lasts, with the potential of expansion. A key question that arises is how to handle migrants until they are being

transferred from BiH, because it is obvious that the existing capacities (when we take into account migrants who are not officially registered as illegal and move freely throughout the country) are not enough. The Council of Ministers tried to solve these problems by provision of additional capacities (barracks and asylum centers), which led to political turmoil in Bosnia and Herzegovina (among other things; for more, see: Vela, 2018, N 1, 2018, Al Jazeera Balkans, 2018). Also, the Ministry of Security increased the number of patrols along the border by redeployment of a number of officers of SIPA and the Directorate for Coordination of Police Bodies of Bosnia and Herzegovina to assist the Border Police. Also, at the regional level, it was agreed that each country that has contact with immigrants, should establish their own database of biometric data (which will be exchanged), in order to monitor the movement of migrants, and in this way to potentially identify individuals of security interest (for more see: Klix, 2018, Ljubas, 2018). The opinion of the author of this paper on these issues is in line with the intentions of the Council of Ministers and the Ministry of Security, however as in many other issues in BiH, politics is put ahead of the profession. The thing that is in a way encouraging, is the fact that the competent authorities, and citizens, are dealing with migrants in extremely human manner, and we do not have registered problems with them, such as those in some neighboring countries, that even several international medias reported about (for more see: Faktor, 2018, Tanjug, 2018, Oslobođenje, 2018). Also, in recent years the growing phenomenon is the fact that migrants do not have any identity documents which hinders the process of their identification, and in many cases, makes the identification almost impossible.

### **STATISTICAL INDICATORS 2014-2018**

The structure and characteristics of the phenomenon of illegal migration, due to the lack of relevant data, unfortunately we can observe indirectly, or through statistical data of individual state institutions responsible for the issue of asylum and residence of foreigners in BiH, so in Table 1 we presented statistical data of the Foreigners Affairs Service pertaining to acceptance and removal of foreigners for the period 2014-2016. The data was obtained using the annual reports of this Service, that are available on their website (<http://sps.gov.ba/izvjestaji-u-oradu/?lang=hr>, visited on 13.02.2018.). The report for 2017 is not yet available, which is a shortcoming of this analysis.

Year	ADMITION		REMOVAL						Expressed intentions for asylum
	Number of individuals under supervision	Admission on the basis of readmission agreements	Submission of the agreement on readmission	Escorted removal	Independent voluntary return implemented by Department	Assisted voluntary return through the special purpose project	The repatriation of victims of trafficking	Independent voluntary return of foreigners from BiH	
2016.	311 (37 minors)	112	22	0	24	246	1	849	26
2015.	193 (23 minors)	31	29	1	8	179	1	828	19
2014.	218 (10 minors)	54	57	4	7	169	1	0	41
<b>Total</b>	<b>722 (70 minors)</b>	<b>197</b>	<b>108</b>	<b>5</b>	<b>39</b>	<b>594</b>	<b>3</b>	<b>1677</b>	<b>86</b>

Table 1.

In its report for 2017, the Border Police recorded a significant increase in the number of detected illegal migrants. From January 1 to December 31, 2017 in an attempt to or immediately after the illegal crossing of the state border, it was discovered 753 migrants while in 2016, this number was less than a hundred. In terms of detected illegal migrants, the highest percentage are the adult males traveling alone, and in a few cases women and

minors were also discovered. The largest number of discovered migrants are nationals of: Pakistan (124), Algeria (125), Afghanistan (85), Turkey (64), Libya (56), Syria (62), Morocco (43), Iran (26), Albania (18), and 96 persons from Kosovo. In accordance with the signed international agreements on readmission-admission of persons, 293 foreigners were admitted, which is 146.22% more than in 2016. The largest number of accepted foreigners are citizens of Turkey (150), Albania (77) and persons from Kosovo (45). 522 foreigners were readmitted from BiH, which is 360% more than in 2016. The largest number of admitted foreigners are persons from Kosovo (181), the citizens of Afghanistan (74), Albania (70), Algeria (55) and Pakistan (48) (see more: "Summary Report of the Border Police for 2017", available at: <http://www.granpol.gov.ba/content/read/71>, visited 20.02.2018.). From this report, it is evident that the greater the number of illegal migrants do not originating from countries which are directly exposed to war, but it is obvious that countries of origin are politically unstable, with socio-economic factors that we partially elaborated in introduction.

At the time of writing of this paper, we were able to confirm that the number of illegal migrants in BiH in the first few months of 2018 already exceeded the total number from 2017 (for more see: Avaz, 2018, Faktor 2018, FENA, 2018, Fokus, 2018 Klix, 2018, Slobodna Bosna, 2018). In addition to these data, in an interview with the Director of Border police of BiH, which was published on March 23 on one web portal (Dučić, 2018), it was stated that in 2017 at the borders of BiH, it was registered 547 persons who are for different reasons searched by the competent authorities in our country, as well as 118 persons that have been registered in the Interpol database. It was found that these are people for whom warrants have been issued, and that they are under prohibiting measures of crossing the state border or that are of security interest. These persons were recorded during the 3756 crossings or attempted crossings across the state border, which is an increase of 14.3 percent compared to 2016. In the same period, Border Police officers discovered 59 vehicles and 780 documents that are the subject of the investigation activities. Thus, during 2017 on border crossings, the border itself and inland of BiH, there was 341 criminal offenses, and in 2016 that number was 296. Prosecutors' offices submitted 328 official reports, for 454 people. It was recorded and qualified 21 criminal act of "trafficking in humans" and seven criminal acts of "Organizing a Group or Association for Smuggling of Migrants". For this offense, the competent prosecutor's office filed 25 official reports against 64 persons. It was temporarily confiscated 144 documents suspected of being falsified.

In terms of the number of migrants, in one media appearances (Faktor, 2018), representatives of the competent state police agency stated that in the period from the beginning of this year to March 8, it was recorded 1,084 illegal migrants, and from that

number, during the attempt or shortly after illegally crossing the state border it was registered 574 citizens from countries of high migration risk. In terms of preventive action, the same source stated that 510 people are discouraged from illegal entry into our country because of the presence of police officers on the border line between BiH and Montenegro and Serbia, i.e. away from border crossings. The largest number of illegal migrants are detected in the area of Trebinje, Gacko, Višegrad, Zvornik, Bratunac, Velika Kladuša, Bijeljina, Bihać and in smaller numbers in the area of Brčko, Foča, Posušje, Čapljina and Grude. According to data available to the police agency, in the period from January 1 to March 8 of this year, the intention for asylum expressed 251 foreigners, while 64 of them applied for asylum. The same source stresses the statement of the Minister of Security of BiH, who said that when Croatia detects illegal migrants, if they have evidence that they came from BiH, in accordance with the signed agreement on re-admission, they are being admitted in BiH.

The position of our country is specific, as it is situated at the external border of the EU, with which we have a long border line of about 1,000 kilometers, and thus present a barrier for migrants to the EU. Of course, there are people that are trying to take advantage of this migrant crisis for human trafficking, and the report states that so far, several cases of human trafficking are being discovered. Recently, the police action was conducted, in which they discovered and detained persons involved in the crime of trafficking in humans, and all of them are handed over to the competent judicial authorities. Thus, the German media sources suggest that Federal Intelligence Service (BND) has warned that the Balkan route for smuggling of refugees from the Middle East and Africa, was "reopened" (Kurir, 2018), while Deutsche Wele stated that from 2016 refugee trail through Eastern Europe should be actually sealed, but that "the smuggling gangs, still transferring thousands of refugees per month." In one confidential analysis of BND it was stated that the number of refugees, that are being transferred through the Balkan route into the Germany, is constantly growing for the past six months. According to the findings of BND, approximately 15,000 people a year are entering into the country. Smugglers also earn up to 120 million of euros per month, according to this source.

## CONCLUSION

Though the analysis of the legal and institutional framework for dealing with cases of illegal migration, from the preventive and repressive point of view, we can conclude that basic capacities for reaction are developed, but certainly there is room for improvement of elements of the system, which is responsible for the operational work in the field. This primarily refers to the units and services that are both engaged on borders and in local communities in the wider border area. In terms of regulation, very developed structure of

laws and bylaws are regulating the most important issues regarding illegal migration, as well as questions of asylum, movement and residence of foreigners. However, we believe that the main challenge that the State of BiH is facing, is connection and coordinated action of a numerous security and judicial institutions in a very complex constitutional and legal framework of our country. We are particularly emphasizing the role of legislative bodies, that in addition to monitoring compliance and adequacy regulations are obliged to recognize and then to react well to any problems that arise in law enforcement, but also to monitor and supervise the work of the bodies of the institutional framework in terms of civilian oversight and control.

BiH, since 2001 initiated efforts to create a periodic strategic documents and the last such strategy was adopted in 2016 under the name "The strategy in the area of migration and asylum policy and action plan for the period 2016-2020". In addition to this document, the competent national authorities since 2007, are adopting the document entitled "Migration profile of BiH ", which are made on an annual basis. Through analysis of the above mentioned documents and reports on their implementation, it appears that the official preparedness of state bodies is at a satisfactory level, however, in practice there are numerous shortcomings and problems, and above all, we would like to point out a problem that is obviously present, and that is a large number of migrants who managed to illegally enter into the BiH, avoiding official border control. In this regard, the competent institutions indicate that the basic problem is insufficient number of employees, and thus there is no possibility of absolute coverage of the border area. With this problem of insufficient human resources, it was emphasized that the authorities of neighboring countries behave according to the principle of mutual blame-shifting, i.e. transferring of migrants to the territory of other states, noting that similar procedures are often used by members of the Border Police.

However, according to many indicators and reports, it is highlighted the fact that the competent authorities, as well as citizens, are dealing with migrants in extremely human manner, and rarely are recorded problems such as those related to the poor treatment of migrants in some neighboring countries, that media reported about. Therefore, we believe that content of strategic documents detects problems and suggests appropriate ways of resolving issues that the state institutions are facing, but there are numerous problems in the application of these documents on the lower and the operational levels of the system, which indicates that it is necessary to invest a lot more energy in order to have these documents consistently implemented and to monitor their implementation, which would allow us to acquire the knowledge about the deficiencies of the system for response and control of illegal migration, what would contribute to innovations and improvement of activities of the entire state apparatus regarding this matter.

Through the analysis of available statistical data related to illegal migration, as well as the registration and treatment of foreigners in the work of the competent authorities within the BiH Ministry of Security, we can only acquire indicators of various forms and characteristics of illegal migration in our country. So, from the examined reports, it is noticeable that the larger number of illegal migrants are not originating from countries which are directly exposed to war, but it is certainly clear that the countries of origin are politically unstable. We mentioned and emphasized in the introductory part of this paper, the general socio-economic and other characteristics of those countries, but it is evident that in addition to the war there are other numerous conditions and causes that affect the demographic characteristics of migrants that are coming to our country. Reports confirm two times larger number of migrants in the first quarter of this year, than in the whole previous year 2017, indicating a significant increase of this problem in BiH, which has a humanitarian and possible security challenges, that certainly require a significant and better engagement of all segments of the state chain of control of illegal migration, admission, registration, stay and movement of foreigners who have defined status problems.

The problem of illegal migration in BiH cannot be seen as an isolated problem because, for the most part, dependent on the immigration policy and ways of implementing this policy by the EU Member States (which very often do not have a unified position on these issues), by countries with which the EU borders, as well as by neighboring states of BiH.

Finally, we consider important to emphasize that all the fact presented in this paper are just partial analysis of indicated problem, but due to the limited space, and due to everyday changes that occur in real life, it was not possible to presented in a broader scope. So, we believe that this work paper can be used only as a segment in the continuation of scientific research and professional treatment of the problem of illegal migration in BiH.

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## Child Abuse and Exploitation through Information and Communication Technologies in Sarajevo (Bosnia and Herzegovina)<sup>34</sup>

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*Summary: Purpose: This paper will provide an insight into the analysis conducted through focus group interviews with children about child abuse and exploitation through information and communication technologies [ICT]. The method employed was intended to present the current state in terms of vulnerability of children using information and communication technologies in Sarajevo. Methods: The survey included (N = 50), instead of the initially planned 50 students, of which 25 (50%) male and 25 (50%) female subjects. The average age of students in the sample was 13.5, while the participants' age ranges from 7 to 18 years of age. There were six focus groups, three with secondary school students and three with primary school children. Findings: Relying on the analysis of data collected which suggests that: The ICT is available for school children at an early age, and that the increase in the age of respondents is followed by an increase in the frequency of use of ICT; Different parenting styles affect children's safety; Students do not use proper Internet etiquette and that because of false profiles are at risk of sexual abuse and exploitation by means of ICT. Research limitations: Time to implement focus group interviews was limited, especially with students from primary school, which prevented the in-depth analysis of the data collection. Originality: The research aims to determine the conditions of the ICT use among students in elementary and secondary schools in Sarajevo, analyse, systematize and compare relevant indicators. Keywords: Child, Abuse, Exploitation, Information and Communication Technologies, Sarajevo.*

### INTRODUCTION

Cyberspace crime represents activities conducted by means of information technology, such as electronic money laundering and Internet fraud. However, child pornography is also a global criminal activity which spreads mostly through the Internet and represents the most serious form of sexual exploitation and abuse of children and minors by adults. Stalking and harassment in cyberspace is not only virtual, it is also a real threat to all Internet users, particularly children and minors. Direct victims are children abused for pornographic material production, and indirect victims are children who use the Internet

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and have access to such content. Children are the most vulnerable and the most frequent Internet user group unaware of the dangers that exist in the cyberspace. This early observation encapsulated what has since become a truism—that online identity is easily manipulated, and that people communicating with each other via email, chat room conversations, SMS, or other electronic technologies can and often do pretend to be someone other than, or at least to have different characteristics from, their real selves (Urbas, 2010). Cooper, Golden, & Marshall (2006) further argue that the Internet provides users with the opportunity to pursue sexual contacts from their homes and engage in a great variety of sexual activities and associated behaviours online. This is facilitated by the “Triple A Engine” (Cooper, 1998), namely accessibility, affordability, and anonymity, whereby vast amounts of varied sexual content can be accessed by anyone presenting as either themselves or as an online persona, at any particular time, and at affordable costs. Child pornography, as a global criminal activity, is generally carried out and spread through the Internet, and represents one of the most widespread forms of sexual exploitation of children and adolescents in the contemporary society. As such, child pornography in Bosnia and Herzegovina is gaining momentum. Exploitation of children for the production, distribution, possession or viewing of pornographic material, whose participants are children themselves, is one of the worst forms of child abuse. Young people today live in a virtual world and have up to several thousands of virtual friends on social networks. Moreover, the facts show that posing in all sorts of clothing, or even in virtually no clothes, and posting such photos in places accessible to the general public has, sadly, become generally acceptable. New systems of values indicate that the erotic content in one of the Internet portals can increase a young girl's or boy's popularity, social status and material gain.

In late 2007, a European website was hacked and 99 images of child pornography were posted on the website. Within just 76 hours, the website had received 12 million hits from more than 144,000 Internet Protocol (IP) addresses across 170 countries (Australian Federal Police, 2009). According to the “Internet World Stats” (2012), over 2 billion people used the Internet worldwide by June 30, 2012. Cooper, Golden, and Marshall (2006) argue that with the ever-increasing proliferation of web users, the number of people using the Internet for online sexual activity has increased dramatically. This is further reflected in the rising number of children reporting experiences of sexual solicitation and exposure to sexually explicit material (Child Exploitation and Online Protection Centre [CEOP], 2010).

In this paper we tried to provide an insight into the analysis conducted through focus group interviews with children in primary and secondary school in Sarajevo about child abuse and exploitation through information and communication technologies (ICT). The method employed was intended to present the current state in terms of vulnerability of

children using information and communication technologies in Sarajevo. In order to clarify the problem we examined the frequency of use of ICT among children and youth, studied relevant modes of risk behaviour and identified possible cases of cyber violence.

### **ONLINE CHILD ABUSE AND EXPLOITATION – FOCUS GROUP INTERVIEWS**

The paper will provide an insight into the analysis conducted through focus group interviews with children. The method employed was intended to present the current state in terms of vulnerability of children using information and communication technologies in Bosnia and Herzegovina [BiH]. The aforementioned attempt should be regarded exclusively as an attempt to engage children as participants in the strategic planning process, dealing with the strategic documents focusing on "child's best interests". After all, the involvement of children in issues that directly affect them is one of the four principles of the UN Convention on the Rights of the Child, ratified by BiH; this is the first recorded case in BiH to include children in evaluation and/or development of strategic documents that actually address children (UN Convention on the Rights of the Child, 1989).

#### **Problem, subject and aim of research**

In the last decade of the 21<sup>st</sup> century ICT has taken a very important role in various fields of human activity. Because of the possibilities it provides it enables rapid establishment of communication, information and conversation exchange, and thus bring closer the people otherwise worlds apart. Information and communications technologies are equally available to adults, children and youth. The advantage of ICT is that it develops communication skills, provides access to information, develops critical thinking and stimulates lifelong learning. New, multimedia technology turns information into dynamic learning system and meets the needs of individuals who want to learn something new. However, beside all advantages, the use of ICT holds numerous dangers that can result in child abuse.

The subject of research is to examine risk behaviour in children and adolescents that are causally associated with the use of ICT. In order to clarify the problem we examined the frequency of use of ICT among children and youth, studied relevant modes of risk behaviour and identified possible cases of cyber violence. In order to obtain adequate data, we collected information about the attitudes and opinions of children on Internet use, online security, addiction and other forms of atypical forms of behaviour and related actions resulting from the use of ICT. The results obtained may give a modest contribution in finding adequate educational recommendations, programs and even interventions in risk behaviour in children and youth relating to the use of ICT.

The research aims to determine the conditions of the ICT use among students in elementary and secondary schools, analyse, systematize and compare relevant indicators. The specific aim of the research aims to define the nature of link between risk factors and students' behaviour, in order to initiate appropriate measures in determining strategies that would yield lasting and effective results in the prevalence and correction of inappropriate behaviour.

### Hypotheses

Based on the subject of the paper, the main hypothesis, which assumes that there is a statistically significant proportion of the risk among primary and secondary schools children who use ICT and who are exposed to a range of behavioural disorders, permanent anti-social behaviour, aggressive and delinquent behaviour displayed by adults or their peers, which may result in permanent physical and psychological damage. Our main hypothesis is supported by five sub-hypothesis, which are defined as follows:

**H1:** ICT is known and accessible to school children at an early age and that the increase in the age of respondents is followed by the increase in the use of ICT.

**H2:** Primary and secondary school children are not aware of the consequences of revealing and saving personal data on the Internet, which may lead to exposure to the risk of sexual abuse and exploitation of children by means of ICT.

**H3:** Factors existing outside the family, such as parents' employment, education, financial status, the type and size of the family, increase safe use of ICT by children; whereas the family factors such as inadequate parenting, lack of parental control, reduced extent and quality of communication with a child increases the risk of misuse of ICT.

**H4:** Students do not use the internet properly, and are at risk of sexual abuse and exploitation through ICT due to creation of fake profiles.

**H5** the fifth sub-hypothesis suggests that children of elementary and secondary school age are not informed or warned of the risks of the Internet and do not know who to turn to for help.

### Research tasks

In the context of the research aim, we were used the first sub-hypothesis (**H1**), which suggests that the ICT is available to school children at an early age and that the increase in the age of the respondents is followed by an increase in the frequency of use of ICT:

- Examine the level of knowledge of the purpose of using the Internet;

- Explore favourite social networks that students in elementary and secondary school use;
- Analyse the situations and places where students often use the internet;
- Make comparison between the time spent on the Internet and availability of the Internet access.

In order to examine the other sub-hypothesis (**H2**), which suggests that primary and secondary school students reveal personal data on social networks and are therefore at risk of being exposed to sexual abuse and exploitation of children through ICT, the following tasks were set:

- Use the projective game "On the other side of the monitor" to examine whether children and youth reveal their identity information and other data that might be subject to abuse;
- Analyse the data obtained through Formative dialogue to determine whether the children and youth had a bad experience with fake identity on the Internet, either on their part or on the part of the person on the other side of the monitor;
- Examine the views of children and young people about internet safety.

In order to test the third hypothesis (**H3**), which suggests that different parenting styles affect children's safety and risk behaviours that are correlated with the use of ICT, the following tasks were set:

- Exploration the parents role of elementary and secondary schools restrict work on the computer at all;
- If it is determined that there is a kind of censorship on ICT use, examine how parents implement it and if it yields any effective results.

In order to test the fourth hypothesis (**H4**) which suggests that the way children create profiles on social networking sites and that their Internet etiquette affects their safety, the following tasks were set:

- Use formative dialogue to examine how many friends students of primary and secondary schools have on social networks;
- Examine who can review and comment on profile posts;
- Use projective techniques of stories to examine how students accept friends on social networks, and what the ultimate outcomes of communication are.

In order to estimate the fifth sub-hypothesis (**H5**), which suggests that children of elementary and secondary school age are not well-informed or warned of the risks of the Internet, the following tasks were set up:

- By means of an interactive workshop examine how the primary and secondary school students react when a strange and attractive person proposes a meeting face-to-face;
- Examine whether they had some bad experiences on the Internet, and if so to whom they turned for help;
- Examine the way in which children perceive the issue of protecting children on the Internet and ask what they would do that the adults have not done yet.

### **Sample**

The survey included (N = 50), instead of the initially planned 55 students, of which 25 (50%) male and 25 (50 %) female subjects. In order to ensure representativeness and homogeneity of the sample as well as reliability in the process of drawing conclusions, we opted for the stratification on the basis of the following three features:

- ages 7–10 (8 primary school students from “Novi Grad Municipality”, equal proportion of boys and girls), a group of children of early adolescence;
- ages 11–14 (20 primary school students, equal proportion of boys and girls) – middle adolescence;
- ages 15–18 (22 secondary school students, equal proportion of boys and girls) – older adolescents.

The average age of students in the sample was 13.5, while the participants' age ranges from 7 to 18 years of age. All respondents were from urban areas, with the exception of two girl from secondary school who live on the outskirts of Sarajevo. The total of 100 % of respondents has Internet access.

Bearing in mind that the respondents were minors, the survey was conducted with the consent of a parent or guardian. The participation in the survey was, of course, voluntary and the students were guaranteed discretion in the implementation of the research. It is useful to mention the names of primary and secondary schools where we carried out the research: Public Institution Primary School “Fatima Gunić” Sarajevo & Dental Secondary School, Sarajevo.

## Research methods

The study was conducted by means of qualitative and quantitative research. Qualitative research was conducted through focus groups with students of primary and secondary schools and it aimed to collect information that could not be obtained using conventional methods of completing questionnaires or surveys. There were three focus groups [FG], one with secondary school students and two with primary school children. Discussions in the focus groups were preceded by several detailed interviews with school representatives. The secondary data on Internet use among students in primary and secondary schools were obtained in an interview with the principal of the primary school Sokolje and the principal of the Dental Secondary School. During the focus groups important information was gathered as a part of the assignment for the research study. A key focus of the qualitative part of the try to identify the risk factors in the use of ICT. In parallel with the qualitative research, the quantitative data analysis was conducted during the implementation of participatory instruments. Using meta-analysis, comparing and combining the data collected in the study and the data of other researchers, we obtained answers to new questions in the domain of misuse of ICT. During the implementation of FG special attention was paid to the code of research ethics in working with children and young people.

The process of selecting procedures and techniques during data collection was influenced by several factors: the purpose of the assessment, the number of respondents, the time for implementation of FG, the available technical equipment and material resources. We applied the following research methods: focus group discussion and situational analysis, projective techniques, clustering, and formative dialogue.

### Protocol questions for quantitative data collection

In order to gather the relevant data, a protocol of questions, that is, a questionnaire was created for the purpose of the research, with volatile variables broadly classified into one of the following categories:

- Personality characteristics of respondents such as gender, age, number of members in the family, employment status and parents occupation;
- Location - the place where the respondents come from;
- Characteristics of the living space where children and young people have access to the Internet;
- Financial availability of the Internet;
- Ownership of property such as laptops, computers and other ICT;

- Data relating to violation of child's rights.

The quantitative results of the study were processed by the statistical program SPSS v.18, which calculated the basic statistical indicators: distribution and dispersion of data, the average value and the frequency of respondents in certain categories of the variables measured. Given the aim and the problem of research in addition to basic descriptive statistics, appropriate multivariate statistical procedures were applied, such as the variance analysis, correlation and regression analysis, H<sup>2</sup>-test, t-test, ANOVA and MANOVA. The regression analysis established relationships between a dependent variable (the amount of time spent on the Internet, the method of use, Internet misuse and risks) and independent variables such as gender, parents' education and age group. These are just some of the variables that reflect the real state of children and adolescents and their correlation with the use of ICT.

### **Research Ethics and Related Issues**

Since conducting any research includes compliance with the ethical principles in the process of data collection, result analysis and narrative report writing, which is in accordance with the Code of Ethics of Research on Children, for the purposes of this research we have:

Obtained consent to conduct research in primary and secondary schools from school management in advance.

Obtained consent from the parents allowing children to participate in the study. The parents were presented with information about the research, the aim, the methods of implementation and the expected results, with specific reference to the rights of parents and children in research and ways to protect their children's identity. Students and parents were given the questionnaire for review.

Although we are aware that honesty can never be completely secured, during the testing we told students that their answers would not be graded, that is, there was no "correct" or "incorrect" answer, and that their answers would have no consequences whatsoever. The cover page of the questionnaire included a note relating to the confidentiality and anonymity of the data provided. The aggravating circumstance was that the focus group discussions were attended by a number of observers. Some of them were given certain roles, such as writing minutes, but they rejected to participate in the proposed manner, which was why some students concealed certain information that proved to be contradictory in several situation analyses. As much as 10 % of the students refused to reveal they had problems relating to abuse, as was found out during the workshop

applying specific techniques. Time to implement FG was limited, especially with students from primary school, which prevented the in-depth analysis of the data collection.

## RESEARCH RESULTS

### The purpose and use of ICT among primary and secondary school students

In context of the first hypothesis (**H1**), which assumes that the ICT is available for school children at young age, and that the increase in age of respondents is followed by an increase in the frequency of use of ICT, we obtained the information that 90 % of pupils aged 7–18, who have Internet access, use the Internet for personal purposes. When asked what they used Internet for, 46.2 % of students said they used it for school work, while 30,8 % said they used it to communicate with friends. Secondary school students stated that they used the Internet to collect a variety of information and acquire new knowledge about the things they found interesting.

In the context of our research, the answer to the question of what their favourite social network was, the largest portion of the respondents referred to the use of the social network Facebook. All respondents of early and middle adolescence age, aged 7–15 use Facebook as a social network. In addition to Facebook, secondary school students also use Twitter and My Space.

When asked where they use the Internet the most, every other respondent said they used the Internet at friend's home (57.7 %), while the second most common location was their home (23.1 %). If we make a comparison of who showed them how to use the internet, we can conclude that there is a correlation between the location of Internet use and the answers on who taught them how to use the Internet. Most respondents said they learned how to use the Internet from their peers. Students who have Internet phone drivers use Internet in public places with free access.

When asked how much time they spend on the Internet, we found that secondary school students tend to claim that they only spend as much as they had to. In-depth analysis of the formative dialogue and mapping showed that primary-school children used Internet for about 2 hours per day on average, while secondary school students spend three hours per day online on average.

### **Students' attitudes about Internet safety**

When we asked the respondents whether the Internet is safe we got different answers. Younger primary school students believe that Internet is not dangerous if you do not watch the content that they think is harmful. Secondary school students are aware of the risks on the Internet and all the challenges they carry. The 17 year olds find the abundance of available data and the difficulty to differentiate between them as one of the aggravating factors. They are aware of the fact that it is difficult to assess the authenticity of the information and the credibility of certain content and data. The age group we would like to draw attention to is the group of children aged 11–15 years, who are not aware of the risks of the Internet use. More than half of the respondents from this age group argue that the Internet is safe.

We wanted to determine whether there was a correlation between the age of children and mean threats sent to their peers. Correlation analysis shows that there is no statistically significant correlation between this type of behaviour and the age of the minor. In establishing the correlation between responses of boys and girls with sending malicious and cruel threats, the correlation analysis showed that there is a statistical significance in responses at both levels ( $r = 0.156$ ,  $p < 0.01$ ). The data obtained show that this behaviour is more common for boys than in girls. Unfortunately, the incidents of sending cruel threats do not happen in isolation. One type of violence leads to another type of violence successively and in a coordinated manner so that the victims cannot defend themselves or report the violence. There was only one example of cyber bullying observed, aimed to humiliate and abuse peers. This form of violence most commonly occurs in social forums; it spreads rapidly and increases with time.

The 14-year-old girl's comment shows that children and young people unintentionally establish contact with strangers who assume false identities, spread lies or false stories, hurt others' feelings, and who may well be people from their environment familiar with the victim's identity. Another example from the FG transcript shows there are online predators in social networks who present themselves falsely in order to establish an online relationship with a child or a young person. Predators operate by gradually attracting the attention of a young person by pretending to be compassionate.

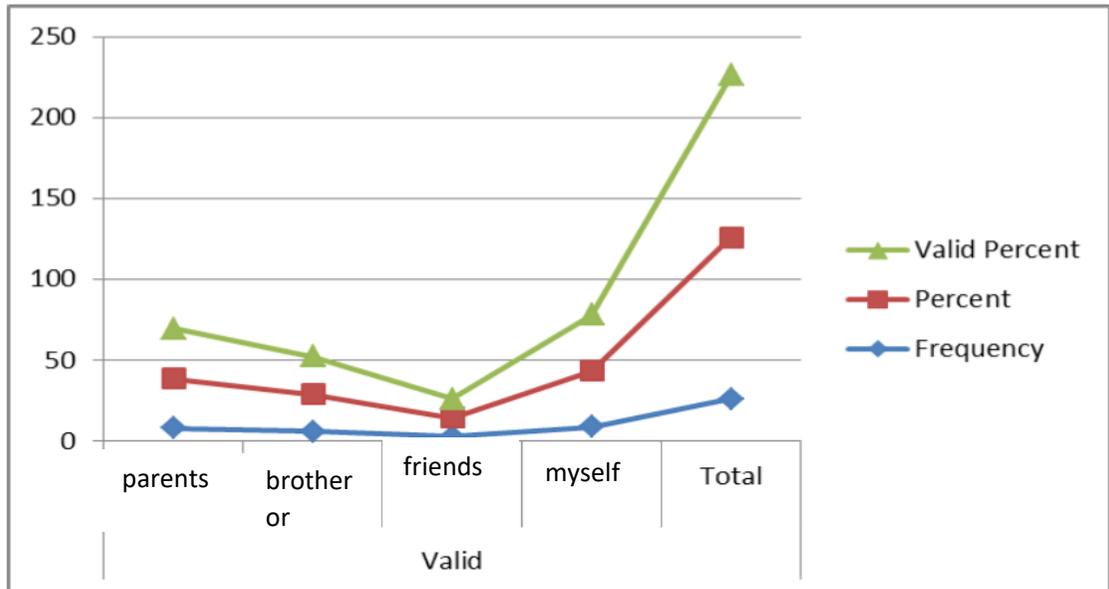


Figure1. Answers to the question of who has access to their passwords

Figure 1 shows that in the case of joint group profiles the administrators are persons of trust, as can be inferred from the conversation with students. However, there is a strong likelihood that the group's privacy might be violated. This is confirmed by the fact that 65 % of students said they gave their passwords to their parents, sisters or brothers, or best friends (Figure 1). When asked whether they post their personal information only 1 % of students said they created a profile with correct personal information. All other students said that they created profiles with incorrect information or partially correct information. The incorrect information provided is mainly related to the children's age. The total of 90 % of respondents, girls and boys, created a profile saying they were older than they actually were. The lowest limit was three years more than their real age. When asked why they did it, the majority of respondents said that all social networks are age-restricted. Some social networks, such as Facebook, do not require the users to be 18 or over. If one takes into account that Facebook requires the children to be at least 13 to sign up, the question is why do so primary and secondary school students lie about their age when creating their profiles, when they are eligible to sign up.

Figure 2 shows that approximately 73.1 % of students reported that they created a fake profile where they lied about their age. In 90 % of the cases they withheld other personal information such as their full name or place of residence (Figure 2). There was only one case where a student who uses Facebook did not post a photo. The reason he did so was purely practical since he did not know how to do it. The total of 26.9 % of the students

posted partially correct information. There was only one case of posting a phone number on the social network.

For the purpose of drawing attention to misuse of identification data and abuse of children for sexual purposes we would like to reflect on a study which was aimed to investigate the misuse of social networks. In a sample of 150 respondents aged 18–70 years more than half of the respondents admitted that they created a fake profile with an incorrect age, with a tendency to falsely present themselves as being younger than they actually are. If we make a comparison between the profiles created by children and fake profiles created by adults, there is a high probability that the person who really is 30 (posing as he/she was 20 in a fake profile) will come in contact with a person who is 10 or 15, who posted to be five years more than he/she actually is, and who claims to be 20 in online communication.

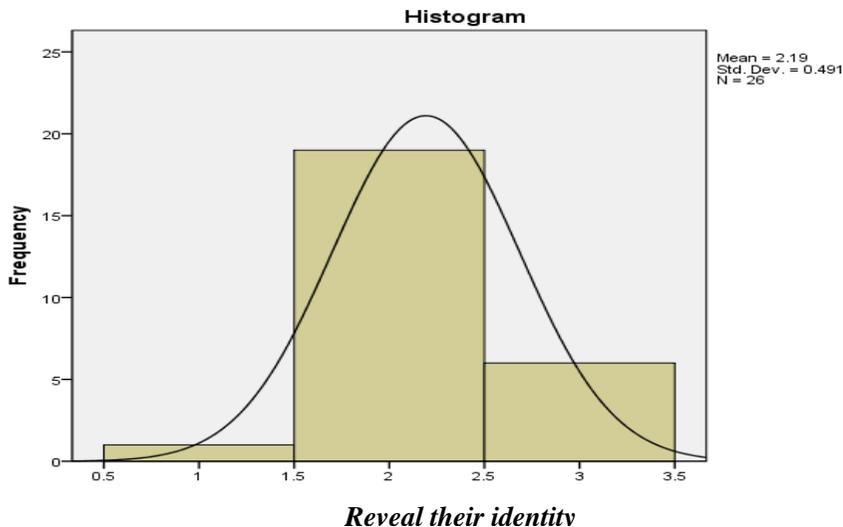


Figure 2: The extent to which children and young people reveal their identity

Bearing in mind that 90 % of children and young people reveal their identity in part, there is a great likelihood that a young person will come into contact with an online predator whose attractive, warm and friendly communication offers help and solutions to the child's problems.

### **Students' attitudes about parental control of Internet use**

The control strategy of Internet and ICT use varies depending on the age of the child, parenting philosophy and the specific behaviour of the child or young person. Secondary school students behave more in line with parental expectations and parental control by

commands and restrictions decreases as the child's age increases. During this period, young people are generally equal interlocutors to their parents, they express their wishes, needs and expectations openly and without fear. In terms of parental control of the Internet use the secondary school students are on their own.

The advantage of the focus group interview is that the cross-examination provides relevant answers about the safety of using ICT. The Boys' statement above shows that the boy provides desirable answers on accessing educational content, while the second set of questions reveals that he does not use the Internet only for educational purpose, but also to meet new friends. When asked whether their parents restricted their access to the Internet, 38.5 % said yes, 26.9 % said sometimes, but only 34 % said that parents do not impose censorship on the Internet. The majority of respondents whose parents restrict Internet use are children aged 7–10 years, followed by children aged 11–15 years, while the secondary school students have the minimum restrictions imposed on their Internet use. One of the risk factors is the lack of control by parents and it is, therefore, not rare that children and young people are addicted to playing games, communicating with strangers, which can certainly affect the mental health of an individual. The problem of Internet addiction can gradually destroy a person's personal and professional development.

Parental control of Internet use is very important, regardless of whether children are in primary or secondary school. It is especially important in cases of abuse on the Internet or any risky situation where open communication and honest dialogue between parents and children is of great importance. It is desirable that children be less criticized and that they are compared with other children in case of any violence. Praise and positive messages of support affect the development of the child's self-confidence, self-esteem and positive self-image. Parents should not forget that they are role models for their children and that the greatest help is for the children to learn to control themselves, take responsibility for their own words and actions.

### **Creating profiles on social networks in line with the Internet etiquette**

The way in which we accept friends on social networks belongs to the code of conduct developed by the Internet etiquette. As in the real world, the friendships made in the virtual world, on the Internet, are part of communication via virtual socializing with selected individuals who can, in a way, influence an individual's way of thinking and behaviour. Figure 3 shows when asked how many friends they had on social networks, the highest percentage of respondents (69.3 %) said they had 100–200 friends. Most respondents in elementary school had an average of 200 friends, while the secondary

school students' answers yielded significantly higher figures. About 26,9 % of students have more than 1.000 friends who they claim to know personally.

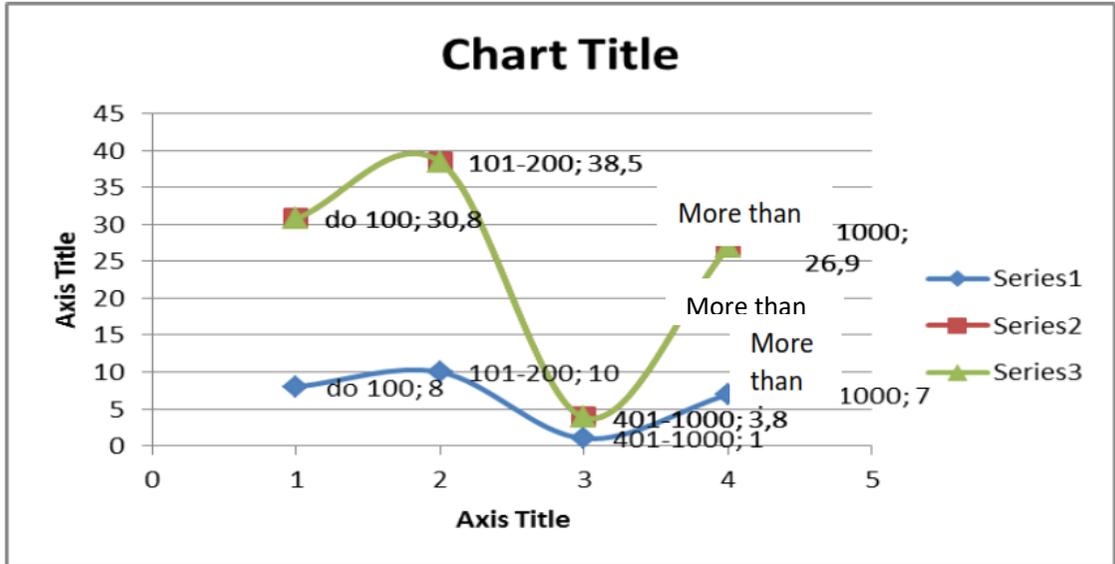


Figure 3: Answers relating to the number of virtual friends on social networks

Making friends on social networks entails a certain amount of risk. Based on the statements of students, their peers accept friendship requests made by hundreds of peers they are not familiar with or do not know at all.

The analysis of responses collected shows that most of the students add virtual friends following no criteria whatsoever, and it is not uncommon that the act of adding friends takes incredible proportions that even the users themselves cannot follow. Some of the respondents confirmed that they cannot refuse a friendship request when someone approaches them. The matter becomes further complicated with the well-behaved who find it difficult to terminate friendship in real life and take the same approach when it comes to virtual friendships.

In an interview with the students we learn that their peers post photos on their profiles in 90 % of the cases, they send those photos to their friends and make certain collection of photos of their friends. It should be borne in mind that regardless of deleting the photos and profiles, social networks can use previously posted photos for commercial purposes and forward them to other users. The very fact that children and young people may be at

risk of sexual and other abuse, urges parents to sign up for social networks and thus monitor what their children do and who they communicate with.

In an interview with the students who spend more than 4 hours on social networks and have over 1000 virtual friends, we found out that online communication is full of turmoil and that socializing on social networks follows the same rules as in real life.

### 3.5 Internet etiquette and how to communicate on social networks

By the means of participatory technique and role play *My virtual friend*, we simulated a situation in which respondents are approached via their FB profile by someone who appears to be their age. The person seems very attractive and proposes meeting offline. Figure 4 shows that in relation to respondents' attitudes on establishing direct contact with strangers on social networks, every second respondent admitted that they would go out if they checked the identity of the person they are supposed to meet, while 42.3 % said they would not take that kind of risk under any circumstances. A disturbing fact is that 7.7 % of respondents would go out with a stranger.

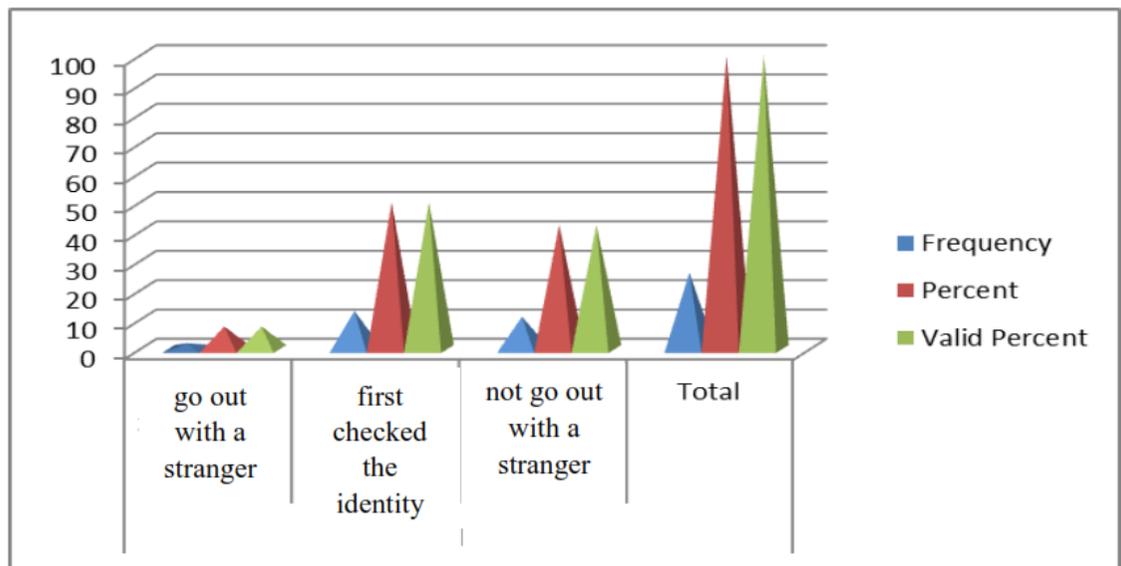


Figure 4: Responses relating to meeting a stranger offline

After the participatory activity it can be said that all respondents are aware of the risks of communicating with strangers. One of the respondents stated that if someone harassed him or sent him inappropriate messages he would immediately inform his parents, and then report the person who disturbed him to the FB administrator.

One of the problems that young people may encounter in using the ICT is receiving unsolicited e-mails, the so-called spam, which, despite spam filters, can reach users and impose content such as pornographic images, violent or ideological content. Spam can certainly affect a young person because critical thinking is still under development in adolescence. It is not uncommon for children and young people to believe in striking representations, regardless of whether they are logical or not. Based on the data collected we found out that 69.2 % of respondents had the opportunity to hear from their peers that they had been targeted by hackers or received spam with inappropriate content. Only 3.3 % of respondents said they were harassed by their peers online.

Figure 5 shows that when asked whom they would turn to if they had a bad experience online, most of the students, 57.7 % of them, said that they would talk to their parents and 23.1 % said they would talk to their friends. Those with more IT experience (15.4 %) said they would report any type of abuse to the network administrator. A very small percentage said they would report it to a sibling, only 3.8 %.

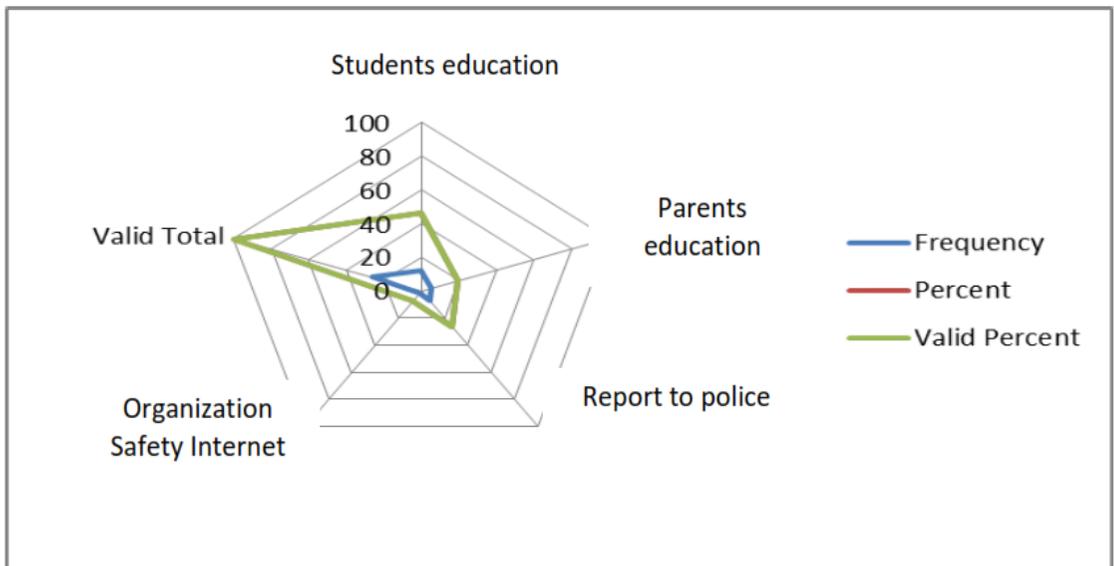


Figure 5: Students' responses to the question of what measures should be taken

It is not uncommon that after being asked for help, parents, teachers and even older friends, brothers or sisters cannot help in solving the problem. We would like to emphasize that it is necessary to work on raising awareness among public and launch campaigns to help teachers and parents to teach children how to use the Internet and computer technology. Training should cover safe search, learning methods and entertainment. It is especially important to note that all social network users should get acquainted with

Internet etiquette in creating new friendships and socializing with friends. The education about potential threats is very important since it can help children find practical solutions on how to protect themselves and where to seek help.

## THE CONCLUSIONS AND RECOMMENDATIONS

Relying on the analysis of data collected in section No. 1 relating to the first sub-hypothesis (H1), which suggests that the ICT is available for school children at an early age, and that the increase in the age of respondents is followed by an increase in the frequency of use of ICT, we can conclude the following:

- Primary and secondary school students know for which purposes the Internet is used;
- Primary and secondary school students use Facebook as their primary social network.
- In addition to Facebook, secondary school students also use Twitter and MySpace.
- Secondary school students spend most of their time on the Internet at home because their parents do not impose restrictions on Internet use, while elementary school students use the Internet at relatives' and friends' who have Internet access with Wi-Fi, since their Internet use is restricted. In addition to computers, students use laptops and smart phones, which are mobile, in public places with Internet access.

The data relating to the second sub-hypothesis (H2), which suggests that primary and secondary school children are not aware of the consequences of revealing and saving personal data on social networks, which may lead to exposure to the risk of sexual abuse and exploitation of children by means of ICT illustrate the following:

- 90 % of children and young people create fake profiles on the Internet and reveal some of the key information that they are correct. The problem is an exaggerated age that children and youth post online, which can certainly lead children and young people to communicate with online predators who aim to abuse children.
- The analysis of data obtained using Formative dialogue showed there was no major misuse among the respondents and that the students had no problems with the misrepresentation of other people on the Internet.
- The analysis of the secondary data collected from the respondents on the Internet etiquette showed that 80 % of the respondents' peers do not use the Internet safely and that they are at risk of being sexually or otherwise abused.

- The data collected to confirm the third hypothesis (H3), which suggests that different parenting styles affect children's safety, led us to the following conclusions:
- It is necessary to initiate communication and open dialogue between children and parents relating to the Internet use restriction, since restriction causes children to seek alternatives that might be more complicated, such as stealing mobile phones and laptops, by children who have smart phones, false pretences of studying at their classmates', surfing via mobile phones, the use of which can lead to visual impairment, etc.
- The parents need to develop computer literacy in order to understand children's needs to use the Internet; otherwise, if these needs are not met it can lead to children's resentment, which can easily develop into problem behaviour. Therefore, it seems reasonable to plan and organize special training programs on Internet safety for students, teachers and parents.
- In relation to censorship, computer literate parents enter user codes on computers, change passwords or ban access to the modem as means of imposing censorship.
- H4, the fourth sub-hypotheses suggests that students do not use proper Internet etiquette and that because of 1% of false profiles are at risk of sexual abuse and exploitation by means of ICT. The hypothesis was confirmed since the data collected indicate the following:
  - The analysis of the responses showed that 60 % of students in elementary and secondary schools accept friendship requests on social networks randomly.
  - The data collected suggest that in 60 % of cases primary and secondary school students have public profiles, 30 % of their peers profiles' are open for friends of their friends, while only 10 % of users use their FB profiles for other purposes, that is, not for communication and do not allow nor accept friendship requests.

Examining the fifth sub-hypotheses (H5) which suggests that primary and secondary school children are not well-informed or warned of the risks of the Internet, we obtained the following results:

- Primary and secondary school students engage in risky communicate via social networks and every third student would go out with an unknown person their age in order to meet them.
- After collecting the data we found out that students who have more than 1,000 friends and those who do not check their friends have had unpleasant experiences and received spam. Most of them turned to their parents and teachers for help,

but even they were unable to help them because they were not familiar enough with the Internet use.

- Primary and secondary school students believe that it is necessary to organize training courses for them, their parents and their teachers. Secondary school students are of the opinion that the Internet police should be established and that the number of organizations working to raise awareness about the safe use of ICT should be increased.

The analysis and interpretation of the results and the five sub-hypotheses, lead to the conclusion that our main hypothesis has been confirmed. The data collected prove that there is a statistically significant percentage of risk among primary and secondary school children who use ICT and who are exposed to antisocial behaviour disorder, permanent antisocial behaviour, silent aggression and violent behaviour in adults or peers, which can result in permanent psychological and physical harm.

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## Primary Categories and Symbiotic Green Crimes in Bosnia and Herzegovina<sup>35</sup>

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*Summary: The aim of this chapter is to highlight the problem of the environmental degradation in Bosnia and Herzegovina from a criminological perspective and to define two types of "Green Crime" in contemporary criminology. There are four "primary categories" of green criminology in which the environment becomes degraded through human action – all of which have become the subject of legislative efforts in recent years. These new categories are as follows: a) crimes of air pollution; b) crimes of deforestation; c) crimes of species decline and against animal rights; and d) crimes of water pollution. The secondary categories of green criminology can be found under the name of symbiotic green crimes. These are defined as crimes that grow out of the flouting of rules that seek to regulate environmental disasters. They include, for instance, state violence against oppositional groups, hazardous waste and organized crime. "Green Criminology" in South Eastern European Countries is still a very strong taboo. On paper, there are many legal and policy-related issues raised by green crimes, but in reality, these crimes are not considered important by the institutions of formal social control. This chapter is mainly based on the studies available in the field of "Green Criminology" in Bosnia and Herzegovina. Several case studies from Bosnia and Herzegovina will also be presented, which will illustrate the real extent of the problem of environmental crime.*

### INTRODUCTION

#### Research problem

Ecological and environmental protection certainly represents the most important strategic interests of modern civilization. Knowledge about the transience of the benefits of nature caused by human mistakes naturally occurs in response to the daily industrial race, which determines the predatory nature of capitalism in general (Mujanović 2009). People are already infected by the basic goals of modern living that start with an instinct for self-preservation and, gradually, through the process of accumulation of capital, are becoming

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more "eager for additional profits" for themselves and to ensure a secure future for the coming generations (Modly 1998).

It is in pursuit of this goal that a secure future is now already at stake. Water and air grow more and more polluted, waste piles up all around, industrial toxic gases triumph over nature and everything is slowly melting down. Nature, of course, reciprocates with the same measures and if we continue "to ride this road" then it is for sure: "As always, nature wins". All these are only superficial reasons why man should finally return to his original motto: "Living with nature."

In this chapter, we will try to show the conservation status of individual natural resources in Bosnia and Herzegovina, a country far well less known for its natural resources which mark it out as an oasis of the Balkans, than for being a site of war at the end of the 20<sup>th</sup> century, involved in one of the greatest horrors of recent European history.

Criminological thought, even for the analysis of conventional crimes, is an extremely new subject in Bosnia and Herzegovina, and therefore it should be made clear in advance that the field of environmental protection or environmental crime has not been sufficiently researched as yet. Although modest, this study will make an initial contribution to the development of a new criminological orientation in Bosnia and Herzegovina, namely as "Green Criminology".

The term "Green Criminology", first coined by Lynch in 1990, as a useful paradigm for analyzing the two faces of eco-crime, sociological and legal definitions. This phenomenon was established as terminological umbrella under which to theorize and critique the emerging terminology related to environmental harm (McLaughlin and Muncie 2006: 147). Like other parts of contemporary criminology, "green criminology" is a social construction, influenced by: social locations, power relations in society and definitions of environmental crimes (Lynch and Stretsky 2003: 217).

As a new field of critical analysis, green criminology involves both new sets of concerns - particularly harms to other species and violations of "animal rights" and harms to ecological systems - and what have more generally been understood as environmentally destructive conduct usually by business corporations and states. These are important issues but what, if anything is gained by relating these to criminological discourse and what is lost by doing so (Pearce 2007).

As few years ago, Carabine and others (2004: 28) identified four main tasks of contemporary green criminology. Those tasks include: 1) documentation of the existence

of green crimes in all their forms, 2) charting the ways in which the laws have been developed around area of green crimes, 3) the connections of green crimes to social inequalities and 4) the assessment of the role of green social movements in bringing about social change. *Issues in Green Criminology: confronting harms against environments, humanity and other animals* aims to provide, if not a manifesto, then at least a significant resource for thinking about green criminology, a rapidly developing field (White 2003: 490). This article demonstrates the complexities in determining the character, extent and impact of environmental harm. It furthermore identifies diverse, and at times, competing approaches to environmental regulation and to the prevention of environmental harm.

The field of criminology has historically shown relatively little interest in the topic. The emergence of environmental, or green criminology, over the past decade marks a shift in this trend, but attempts to define a unique area of study have been extensively criticized (Gibbs et al. 2010: 126; South 1998: 213).

In the next part of this chapter we will outline the significance of green issues for Bosnian criminology, through legal, sociological and other criminological relevant views.

## **ENVIRONMENTAL CRIME IN BOSNIA AND HERZEGOVINA**

Under environmental crime in Bosnia and Herzegovina, criminal justice practitioners consider a group of offenses that threaten the environment, that have been defined by the Criminal Code and special laws governing the particular area of environmental protection, and that have been incriminated within the Criminal Code provisions as the worst forms of threat to the environment as criminal acts (Sućeska 2008; Ramljak and Petrović 2005).

Legislation protecting and improving the environment in Bosnia and Herzegovina is treated by four main Laws: a) Law on Environmental Protection, b) Law on Nature Protection, c) Law on Air Protection and d) Water Act Protection. These offenses are particular forms of crime which result in environmental pollution on a large scale or affecting a broad area, thus endangering human health or life or causing the large-scale destruction of plant or animal life (Ramljak and Petrović 2005). These crimes have been especially acute in recent years in Bosnia and Herzegovina, due to the rapid development in science and technology and the introduction of new technologies, which use new, powerful energy sources, and the construction of a large number of industrial plants followed by the development of large urban areas (Modly 1998). We will start our analysis with the conservation of the status of water and air in Bosnia and Herzegovina.

## **MAIN PRIMARY CATEGORIES OF ENVIRONMENTAL CRIMES IN BOSNIA AND HERZEGOVINA**

### **Water Pollution in Bosnia and Herzegovina**

People are now living through an extensive period of globalization, in which they reap all its benefits but suffer its "side effects" too. One such side effect is that the water flowing in the world is increasingly becoming more polluted. In particular, the European Union, for example, has had to adopt certain conventions that contest and mitigate the consequences of harmful actions against nature. So, the Convention on the Protection of Water has been passed in the ECE, e.g. the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Certainly in Bosnia and Herzegovina the greatest burden of pollution of natural watercourses comes from industrial wastewater, which is being discharged without any purification at all or an insufficient degree of purification. If one sentence could describe the state of water in Bosnia and Herzegovina, it would be roughly as follows: "Water in Bosnia and Herzegovina is used to mitigate the effects of the discharges of household and industry wastewater, and given the state of the system for flood control it represents a potential threat to the population" (Ramljak 2002).

The increase in water consumption in Bosnia and Herzegovina is attributed to a large number of reasons: a higher social-material status, urbanization and partial industrialization, all of which lead to increased amounts of wastewater being discharged into the natural water systems (Mujanović 2009). In fact, these water systems are the most common sets of wastewater, which cannot tolerate pollution without serious disruption of the natural balance. Such practice has resulted in the intensive pollution of water resources and loss of water quality. The pollution of water resources is largely caused by materials which are a product of human activity (Korajlić 2008). It is obvious that the environmental crime of water pollution exists in Bosnia and Herzegovina, because the quality of drinking water is already poor in a number of cities because the city and the city's water resources are polluted (Sućeska 2008).

There are several types of water pollution caused by humans or which involve human factors. They are mainly microbiological contaminants and chemical pollutants. Water may be contaminated by a large number of microorganisms which come from the air, soil and plants, mostly from feces of human or animal origin. These forms of microbiological pollution are in most cases directly or indirectly encouraged by humans. Germs that can be transmitted through water include bacteria and viruses. Water used for drinking should

not contain pathogenic microorganisms or any of the indicators of fecal bacteria contamination. The latest test of water on the largest water source of the capital of Bosnia and Herzegovina, symbolically named "Source of Bosnia", showed the presence of bacteria *Escherichia coli* (Ramljak 2002). These findings are devastating because the source has long been reputed for being one of the best water sources in the Balkans: Sarajevo is famed for being the city whose inhabitants drink the highest quality water. Unfortunately, the construction of "tourist facilities" at the Olympic mountain Igman and Bjelašnica, site of the above-mentioned sources, without previously solving the wastewater treatment in an environmentally correct way, is effectively leading to the "self-poisoning of Sarajevans". Microbiologically-contaminated drinking water leads to diseases, either by the direct use of polluted water through drinking or through watering vegetables, washing fruit or preparing food using contaminated water. On the other hand, chemical pollution is caused by the wastewater of most industrial complexes (in the production of oil, mining, etc.), as well as erosion from agricultural lands (in which case groundwater is most often affected) (Sućeska 2008). Chemical pollutants have been proven to lead to water pollution. Chemical pollutants that are usually found in the water in Bosnia and Herzegovina include ammonia, nitrates, detergents, mineral oils, fats and oils, pesticides and heavy metals (including arsenic, mercury, lead and copper).

### **Air pollution in Bosnia and Herzegovina**

Industrial plants in Bosnia and Herzegovina affect the air with the following gases: SO<sub>2</sub>, NO<sub>2</sub>, CO<sub>2</sub>, CO, etc. These listed gases affect the air with increased emissions of stone and other dusts, as well as an increased amount of ash and soot. The air quality is not only affected by different industrial sectors but also by private furnaces, used for heating, which burn around a thousand tons of coal annually (Mujanović 2009). In addition to problems with water pollution, Bosnia and Herzegovina also has problems with air pollution and the presence of hazardous substances in the larger cities of our country. The chimney is both a means of expelling unwanted, harmful gases from the household and a way of getting rid of unwanted gases in industry. In the latter case, its dimensions are far greater as are the harmful, clearly visible effects of the gases on the environment. Toxic gases rise higher due to the physical laws of hot air rising in the upper classes and the law of flow in the chimney (Đonlagić 2005).

These two physical/chemical laws, facilitated by individuals to resolve the problem of unwanted gases as the current problems, in the second "act" two new laws are directly turned involved. The first is gravity that brings the particles of harmful substances back to the earth (heavier and bigger in the immediate vicinity of the chimney, other a bit further). The second is the extremely limited space of the atmosphere and its physical-chemical composition, as well as the function that this composition has had in the formation of the

life on the planet Earth and its role in the further maintenance of eco-system. Direct air pollution in Bosnia and Herzegovina is also caused by the increase in the use of motorized transport. Motor vehicles allow greater mobility, but in turn require high amounts of oxygen (combustion in the engine) and return carbon dioxide and carbon monoxide to the atmosphere (Mujanović 2009).

Bosnia and Herzegovina has the legal framework that, in general, enforces preventive measures related to the problems of water and air protection. The legal framework is not in the hands of state level authorities but in those of authorities at the entities and Brčko District, which, in principle, resolve the matter in a similar manner (Golić 2005). Therefore, for the purposes of this article, we will give an example of the Federation where the following laws are in effect: Law on Air Protection (Official Gazette of Federation of Bosnia and Herzegovina, No. 33/03); Law on Waters (Official Gazette of Federation of Bosnia and Herzegovina, No. 70/06); Law on Environmental Protection (Official Gazette of Federation of Bosnia and Herzegovina, No: 33/03); Law on Nature Protection (Official Gazette of Federation of Bosnia and Herzegovina, No. 33/03); The Law on Fund for Environment Protection of Federation of Bosnia and Herzegovina (Official Gazette of Federation of Bosnia and Herzegovina, No. 33/03); Law on Amendments to the Law on the Protection of Water' (Official Gazette of Federation of Bosnia and Herzegovina, No: 54/03); Amendments to the Regulations on the type, mode, volume measurements and tests on used water and extracted material from the waterway (Official Gazette of Federation of Bosnia and Herzegovina, No: 56/04); the Rules of plants and facilities which stipulates that environmental impact assessment is mandatory and that plants may only be constructed and operated if they have an environmental permit (Official Gazette of Federation of Bosnia and Herzegovina, No. 19/04); the Republic of Srpska (RS) and Brčko District have identical laws and regulations in their positive-legal framework as an integral part of Bosnia and Herzegovina administration.

A positive example in Bosnia and Herzegovina is certainly the Hydro-meteorological Institute of RS, which is the institution at the entity level for monitoring air quality. Although it does not yet have an extensive network of stations to measure air quality in all the cities in the RS, it has quickly achieved the tasks envisaged in the strategy to protect air, which is currently under the construction and development by the Ministry of Ecology of RS. In the RS, there are currently several stations for the measurement of air quality, following the level of primary pollutants in the air, SO<sub>2</sub>, NO, NO<sub>2</sub>, (NO)<sub>x</sub>, CO, ozone and suspended particles to 10 micrometers. The regulation on the monitoring of air quality requires that the analysis should be conducted year-round so that a detailed assessment of air quality can be given annually.

### ***Some ecological specificity in Bosnia and Herzegovina***

The problem with ignoring of air and water pollution in Bosnia and Herzegovina is best illustrated with the following example. During the year 2008, when a state of emergency was declared in Budapest after the value of airborne particles in the air exceeded the value of 100 micrograms per cubic meter, the authorities in Sarajevo, where the pollution was five times higher (500 micrograms), did nothing except issue useless appeals.

Most experts in Bosnia-Herzegovina have the opinion that the main air pollutants in Bosnia and Herzegovina are the power plants burning domestic coal with a high rate of sulfur dioxide. Bosnia and Herzegovina power plants have filters for dust, but at the same time do not have filters for sulfur dioxide. Incorporation of these systems to remove sulfur dioxide is very expensive for Bosnia and Herzegovina, which is practically the only official reason for their absence. Pollution is particularly prominent in the winter period when stable weather conditions occur after snow or rainfall, while in summer, the situation is much better because there is more wind, then the smog, which consists of substances such as sulfur dioxide, carbon monoxide, nitrogen oxides, disappears more easily.

The second largest polluter after power plants in Bosnia and Herzegovina is the motor vehicle. This situation is especially significant in the larger cities. In Sarajevo, the greatest amount of pollution comes from old motor vehicles, which media in BH so-call "European waste management". The cars are on average 15 years old and a large number of them are without catalysts, so they emit more toxic gases than newer cars. However, even if cars did have catalysts, congestion is so heavy in Sarajevo that experts predict air pollution would still be at alarmingly high levels (Sućeska 2008).

According to research by Mujanovic (2009), a large number of cars in Sarajevo (and specifically only this city) are not in technically acceptable condition. The problem is that the technical centers for vehicles certification have a lot of shortcomings. Permits are obtained in different ways and exhaust gases are poorly tested. According to the regulations, vehicles throughout Bosnia and Herzegovina should not emit more than one percent (1 %) of carbon monoxide. However, there is almost no verification of the exhaust level in Bosnia and Herzegovina by law enforcement agencies. It is obvious that poverty resulted in people driving really old cars, and, in the context of our topic, can be concluded that the situation will not change until the old cars ruminated (Mujanović 2009).

***Goals and prevention - what Bosnia and Herzegovina plans to do?***

Every country does its best to protect its water resources and air quality, aiming to prevent, or limit, pollution through the implementation of regular, systematic, efficient measures. Further, the text will present some goals which are mentioned in BH legislation and outline the preventive measures that would ensure the transfer of these laws from paper to reality. That is, the paper offers measures such as raising awareness among people about the importance of protection, reduction of air pollution and improvement of air quality by establishing regional networks for monitoring of air and creating strategies for improvement in areas where monitoring will detect deficiencies in air quality, making air quality management plans to reduce air pollution and reduced emissions below permitted limits prescribed by law enacted by Bosnia and Herzegovina, as well as the regulation in the EU; reducing the percentage of air pollution from sources of low combustion (private houses, buildings, furnaces for heating), reducing air pollution and enabling households to use natural gas for heating, having clean, high-quality, hygienically proper drinking water; reducing the pollution of city water and solving the problem of sewer network; adequately supplying the population with water; working to improve water quality and informing the public on that issue; cleaning rivers; reducing the pollution of rivers with nitrogen fertilizers and finally awakening a sense of responsibility among water pollutants (Šator 2001).

If contemporary civilization considers water scarcity as a key problem faced by humanity today, then the people of Bosnia and Herzegovina are very wealthy people. However, they still need to appreciate this fact and pay close attention to the quality of their water.

**Crimes of Deforestation**

It is generally known that trees maintain the balance of the eco-system. The forests play an extremely important role in the circulation of water in nature, and the consequences of their excessive felling or deforestation may be long-term and fatal. Deforestation is a process of the destruction of forests by cutting and burning.

Deforestation occurs for many reasons: the trees are sold as a fuel or as a commodity, while the devastated land is used as pasture for livestock, plantations and settlements. The destruction of forests without reforestation leads to landslides, the destruction of natural habitats and the destruction of biological diversity. Deforestation has a great influence on the amount of carbon dioxide in the atmosphere (Đonlagić 2005).

Carelessness, ignorance, lack of skilled personnel for the management of forests and ineffective environmental laws are some of the factors that lead to deforestation. In many countries deforestation is causing the extinction of plant and animal species, changes in climatic conditions, desertification and the displacement of indigenous peoples.

There are many causes of deforestation including corruption in government institutions, the unjust distribution of wealth and power, population growth, overpopulation and urbanization. Forests, given their self-reproducibility, natural structure, mixed composition and natural regeneration, represent one of the basic resources in the Development Strategy of Bosnia and Herzegovina for the future. Out of interest, just before the aggression and war in 1992, Bosnia and Herzegovina ranked next to just behind Finland and Sweden for the diversity of its forests on the European scale of forest resources.

Forests are the most valuable natural ecosystems, hence there is a need for their protection. The fact that Bosnia and Herzegovina has the fourth biggest forest in Europe is our comparative advantage. Unfortunately, our relationship to this resource is irresponsible to say the least, which is the reason for the continued reduction of our forests reduction as well as the quality of growing stock becoming rather weak.

Forests are disappearing due to changes in land use (opening of mines, construction of hydro-accumulations and travel communications, raising industrial capacity, fires, etc.). Careless management and often timber theft reduce existing stocks of wood, a lack of quality in legislation and different approaches to its application only benefit individuals.

A significant part of the forests in Bosnia and Herzegovina is mined or damaged by war activities, as a result the Bosnia and Herzegovina timber industry is not competitive in world markets. There is no overall forestry policy at the state level. Instead a forestry company is entrusted with forests and forest management work on the land is under the strong influence of local authorities and poorly managed policy. The concept of integrated forestry in Bosnia and Herzegovina is growing more unachievable day by day, yet it is the only way to ensure a stable system of forest protection (Sakić 2007).

Forests cover almost 46 % of the country, or 0.57 ha per capita, of which the Republika Srpska is 40 % forest, or 0.79 ha per capita, while the Federation of Bosnia and Herzegovina is 48 % forest, or 0.66 ha per capita. Forests and forest lands in the Federation of Bosnia and Herzegovina are spread over an area of about 1,560,000 hectares of which about 1,308,000 hectares or 82 % are owned by the state and about 277,000 ha or 18 % is property under private and other legal person's ownership (Mujanović 2009).

The representation of Bosnia and Herzegovina before external institutions in the forestry sector has been the responsibility and competence of Ministry of Foreign Trade and Economic Relations. According to the constitutional provisions, the forest owners are the Federation of Bosnia and Herzegovina, the Republic of Srpska and District Brčko, with administrative and executive powers for management of the forests in their administrative boundaries being through the Ministries responsible for forestry. According to the Law on Forests in the Federation, the Federal Minister transferred the responsibilities over management and utilization of forests to the cantonal ministers with portfolio competence for forestry. The Federal Bureau of Forestry, which has the function of planning the development of forestry, was set up within the Federal Ministry of Agriculture, Forestry and Water Management, while cantonal administration for forestry, which has the function of planning and administrative control over the management of state and private forests, was established in the cantonal ministries.

Table 5.1 presents the structure of registered and sentenced crime related to the illegal cutting of forests in Bosnia and Herzegovina. It shows that in 2004, only 1,042 cases were adjudicated out of 4,415 registered cases, or 24 %; in 2005, only 950 applications were adjudicated out of 4,964, or 19 %, in 2006, only 306 were adjudicated out of 4,947 registrations, or 6 %; while in 2007, only 1,121 were adjudicated out of 4,927 registered cases, or 23 %. In 2008 the number of submitted (misdemeanors and criminal offenses) notifications was 2,960, of which 1,100 were adjudicated, or 37.20 %.

For the purposes of this scientific work, it is necessary to mention that the percentage of binding judgments passed in 2006 was only 6% and that this was a good indicator for measuring the politicization of Bosnia and Herzegovina society. In fact, this was the "Election year" when many are "looking through their fingers". The data can speak for itself.

Next table (Table 5.1) indicates the slowness of judicial authorities regarding criminal filings, the new Law on Offences returned these procedures to the jurisdiction of the cantons, and in 2008 the number of prosecuted misdemeanor charges increased. Of the total damage by the allegations in the amount of 2,148,365.37 KM for 2004 the charged amount was 65,838.20 KM or 3.06 %; out of 1,223,6393.4 KM for 2005 the charged amount was 40,889.57 KM or 3.34 %; out of 1,233,306.33 KM for 2006 the charged amount was 22,225.59 KM or 1.80 %; in 2007, out of 1,455,955.40 KM the charged amount was 60,291.79 KM or 4.14 %; and in 2008, the estimated damage was 1,057,106.00 KM while the charged amount was 36,649.00 KM or 3.50 % (1EUR=1,95 KM).

**Table 5.1: Judicial authorities regarding criminal filings.<sup>36</sup>**

	Registration	Judicial decision								
Year	2004		2005		2006		2007		2008	
Misdemeanors	2404	517	3093	422	3546	161	3631	873	1872	895
Criminal Offenses	2011	525	1871	528	1401	145	1296	248	1088	205
<b>TOTAL</b>	4415	1042	4964	950	4947	306	4927	1121	2960	1.100

Source: Federal Office of Statistics (<http://www.fzs.ba>).

A small number of convictions and sentences are counterproductive as they encourage the theft and illegal harvesting of forests. This raises the questions of the expediency of filing and the endangering of forest keepers when other authorities do not protect state property. The non-existence of cantonal administrations to protect the forests' wealth and slow judiciary action bring into question the implementation of the government's "Action Plan to Combat Illegal Activities in the Forestry Sector and Wood Industry in Bosnia and Herzegovina."

#### ***Where have the forests disappeared in Bosnia and Herzegovina?***

In the last 15 years the state has not sufficiently taken into account the enormous amount of illegal harvesting of forests throughout the country. An estimated approximate 20 % of the total pre-war (before 1992) forests have been cut down, according to environmental experts from Germany and Alaska. Poor implementation of the legal framework for the protection of natural resources has caused the current situation. The experts unanimously state that there was extremely extensive illegal logging during the war to supply the

<sup>36</sup> Source: Federal Office of Statistics (<http://www.fzs.ba>).

population with firewood as well as harvesting for profit. Today Bosnia and Herzegovina has fewer and fewer forests and logic suggests that the "green gold" or forests are seen as health-giving, recreational areas – the lungs of Bosnia and Herzegovina – from the perspective of citizens, while they represent a considerable source of income from the perspective of entrepreneurs. Most of the trees were cut down in western Bosnia, but also on the mountains Cincar, Prenj and Velež. The most vulnerable species were Bosnia and Herzegovina endemic species: pine, beech, mountain ash, maple, fir, spruce and munika (*Pinus heldreichii*). The forests were once the basis of development, but this is no longer so in Bosnia and Herzegovina today. Bosnia and Herzegovina forests are exploited by individuals and companies, which often illegally export raw timber to Western European countries, because Bosnia and Herzegovina is one of the few states with natural forest. But only non-governmental organizations point this out and only the occasional ambitious activist warns – at least for now to deaf ears – that one day it will be too late.

Bosnia and Herzegovina has over a thousand active erosion areas in forests and forest land that annually slide over 20 million m<sup>3</sup> of forest land. Disappearing ground flora and fauna are hard to renew in the bare areas. Forest roads are inaccessible and covered with landslides. Autochthonous flora and fauna are not able to grow or be sustained and disappear. Medicinal, aromatic and edible plants, forest fruits and mushrooms are not used (Mujanović 2009). In recent years after the war in Bosnia the amount of erosion and flooding has increased, drying up sources of drinking water and what is most worrying is that you can feel the change in the microclimate. The war has brought another great frustration for the country. The fact is that during the war Bosnia and Herzegovina lost more than 30 % (320) of its graduate forestry engineers. The system of education in forestry is not in compliance with the required quality of knowledge in the new economic conditions. Little attention has been devoted to the training of staff in the fields of IT, marketing, management or foreign languages. Scientific work and professional staff development has been ignored.

As for legislation, the entity laws on forests have been enacted, which prescribes fines of €6,000 to €7,500 if the user of forests or other legal entity managed forests without approved plans, if more than the allowed annual volume of trees are cut in high forest or if a biological renewal is not implemented after the allowed harvest of forest took place, if there is no plan to protect forests from fire or if there is unauthorized use of forest chemicals. Penalties from €5,000 to €6,000 are prescribed for the forest user or other entity if they allow or perform the devastation of forests, carrying out illegal trade in forest and forest land, and if they carry out the delivery and harvesting of trees in forests without resolved property relations.

Individuals are fined from €100 to €750 if they fell the forest without an issued decision or remittance, trade forest non-wood products without a permit, cut down or illegally appropriate timber up to two cubic meters, start unauthorized fires, dispose of garbage in the forest, clear forest land without permission or commit other related offenses.

Today, unfortunately, forestry in Bosnia and Herzegovina is facing new challenges. Namely, the interference of the international community in forest policy is creating many systematic errors. The international community is ignoring the Bosnia and Herzegovina forestry sciences and professions and bringing in foreign experts whose mediocre knowledge does not offer solutions that will improve forestry and preserve our forests from further devastation. The exploitation of forests via concessions has been openly advocated, forgetting that harvest is only one of the stages in the production of economic forests. Following this road, concessionaires will obtain the forests for exploitation and we should not expect them to take a special interest in forest protection. Modern techniques and cheap labor will rationalize the production of logs solely for their own profit. Therefore, the general message to the citizens of Bosnia and Herzegovina should be to satisfy with the protection of its natural heritage before it is too late.

### **Protection of animal rights**

In a few cases, only some animals (like cats and dogs) have legal protection in Bosnia and Herzegovina. This proves only one kind of discrimination concerning animal rights. People have made a huge distinction between different types of animals: they respect some animals merely for religious reasons, others because they can utilize them for certain activities or work, and still others because they can benefit from them in some other way. Such an understanding of animals is very degrading since they are taken into consideration only when they have a function, whether used for therapeutic, social or service purposes.

The real value of animals is constantly ignored. That is why, when people think that an animal cannot offer any of the aforementioned purposes, they use it as food. The struggle for animal rights is still in its beginnings in Bosnia and Herzegovina. It will be successful only when people realize the true value of animals. This value does not depend solely on economic values and human perception. Humans today should take into consideration all living beings, even those that at first glance are not fun, attractive or devoted. Animals were finally granted their rights in Bosnia and Herzegovina with the publication of Bosnia and Herzegovina "Official Gazette" No. 25/09 which included the Law on Protection and Welfare of Animals. Pursuant to Article IV. 4a) of the Constitution of Bosnia and Herzegovina, the Parliamentary Assembly of Bosnia and Herzegovina, at the 42<sup>nd</sup> session of the House of Representatives held on the 17<sup>th</sup> and 29<sup>th</sup> of December 2008, and on the 25<sup>th</sup>

session of House of Peoples held on the 26<sup>th</sup> of February 2009, adopted the Law on Protection and Welfare of Animals. This law, for the first time in the history of Bosnia and Herzegovina, formalizes certain activities connected to the protection of animals, treating issues such as: Protection of animals in keeping and breeding; Protection of animals when carrying out health and zoo-technical treatment; Killing animals; Protection of animals at slaughter; Protection of animals during transport; Protection of wildlife; Protection of animals in zoos, circuses and exhibitions; Protection of abandoned and lost animals; Protection of animals for experiments and other scientific research; Expert advice for the protection and welfare of animal. Each provision of this law is applicable to certain rights of animals in Bosnia and Herzegovina. Thus listed this way they mean nothing, as they are only written articles without their use and implementation. Therefore in this work on the violation of animal rights in Bosnia and Herzegovina we will continue by linking to the present law in its full composition and see how animals are protected by law in Bosnia and Herzegovina, and whether the given law is adequately implemented (Animal Friends in BH, 2010).

### ***Violence against animals***

People who are violent to animals rarely stop at just that violence. Violent behavior toward animals has long been known as an indicator of psychopathology that is dangerous not only to animals. Those who consider the life of any living creature worthless are in danger of being taken by the idea that human lives are also worthless, wrote the humanist Dr. Albert Schweitzer: "Killers often begin killing and torturing animals when they are children" states Robert K. Ressler, who worked on developing the profiles of serial killers in the USA. Research has convinced sociologists, lawmakers and courts that acting violently toward animals deserves our attention. It may be the first sign of pathological violence that leads to endangering human life. The fight to protect endangered species in the world has been in full swing for years, while the majority of citizens in Bosnia and Herzegovina does not even know that animals are endangered and how much effort it takes to save them. For now, the experts in Bosnia and Herzegovina have clearly defined the six currently most vulnerable members of the animal kingdom. Thus, within the Project for the development and protection of forests in Bosnia and Herzegovina, the key endangered animals that need special attention are the following: the chamois, the large grouse, the small grouse, the bear, the wolf and the lynx. Poaching in uncontrolled forest management areas and the absence of law enforcement are the reasons why the forests in the Federation are losing indigenous wildlife. Endangered animals, protected by law, are killed for meat, for trophies, and some just for pure pleasure. Poachers do not choose a particular weapon. The animals are killed by automatic rifles, snipers and mines, which is certainly not in line with the Law on protection and welfare of animals. Although it is a very topical issue, the

area of animal rights is still in its infancy in Bosnia and Herzegovina, so for the purposes of this study these have been the primary indications for further study of the topic.

## **SYMBIOTIC GREEN CRIME**

### **Disposal of Animal Waste**

This is an extremely difficult problem to solve today in Bosnia and Herzegovina. The state has fully delegated powers to lower levels of authorities (the entities or the cantons). The mere fact that in Bosnia and Herzegovina there is no unique legislation treating this problem at the state level means there is a large risk of matters going astray and out of control. The current situation with animal waste management in Bosnia and Herzegovina is such that the responsibility of removing animal waste has been entrusted to the municipalities, which continue to engage private contractors; the only exception to this rule is the city of Sarajevo, which organized the special Public Enterprise of Sarajevo Canton "KJKP Rad" (Cantonal Public Communal Company) to perform these tasks.

In the whole territory of Bosnia and Herzegovina there are only a few burial sites and landfills in operation which meet the required standards for environmental protection. This finding represents a large risk for human health, animals and the natural environment. The disappointing fact is that dead animals in Bosnia and Herzegovina are very often buried on the farms from which they originate. The situation is no better when it comes to waste from slaughterhouses, which is usually removed along with other waste; while the animal waste from slaughter performed during religious holidays (Eid al-Adha for Muslims) is often disposed in rivers.

Annual statistics in Bosnia and Herzegovina register about 3,955 tons per year of animal tissue waste and 40 tons per year of dead fish. There is no adequate system in place for the disposal of waste from these activities, particularly for the disposal of animal tissue, which can lead to both environmental and health problems. Animal carcasses can pollute the soil, water and air, and thus become directly harmful to animals and humans. It is therefore necessary that animal corpses in general, and in particular those with infectious disease, are disposed of in an appropriate way as soon as possible. The safe removal of animal carcasses and animal waste should be processed in a facility specifically for this purpose. Exceptionally, other safe methods of disposal can be used such as incinerating the waste matter in the slaughterhouse, inserting it into pit-graves or burial at the animal cemetery or other convenient place (Mujanović 2009).

In the Republic of Srpska, the safe removal of animal carcasses is carried out at the animal cemetery located near the Manjača - Banja Luka or at locations designated by the local community. In the Federation, the safe removal of animal carcasses is done through the relevant utility companies and at locations designated by the local community. The only properly constructed pit grave in the country was built by the Cantonal Public Communal Company "RAD" in Sarajevo.

As for incineration, on the 14<sup>th</sup> of January 2009 in Sarajevo the first delivery of mobile incinerators in Bosnia and Herzegovina took place. The Federal Directorate for Civil Protection purchased a mobile incinerator model A850 (A) to be used by the Veterinary Faculty in Sarajevo.

### ***Hazardous waste disposal***

Besides waste of animal origin, in Bosnia and Herzegovina there is also the problem of the disposal of so-called "hazardous waste". Hazardous waste usually occurs in industry, but may also in households because hazardous substances can be found in many products that surround us such as used batteries, old medicine, paints and varnishes, various chemicals, waste motor oil, etc. Such waste contains substances that can be toxic, carcinogenic, mutagenic, infectious or flammable, and which enter the biological chain through land or water and can cause human illness and adverse effects on wildlife.

Hazardous waste can include: communal waste, industrial waste, packaging waste, construction waste, electrical and electronic waste and scrap vehicles, waste tires can be hazardous if they contain one of the properties of hazardous waste. Following the introduction and implementation of laws on waste, which are often supplemented with a number of under-laws and regulations, we now have only strictly controlled sanitary landfill. Bosnia and Herzegovina has laws, but their non-implementation has led, especially in the postwar period, to the creation of numerous waste dumps. Such laws are:

- Law on Radiation and Nuclear Safety in Bosnia and Herzegovina (Official Gazette of Federation Bosnia and Herzegovina, No. 88/2007);
- Rulebook on the limits above which persons should not be exposed to radiation (Official Gazette of Federation Bosnia and Herzegovina, No. 08/2004);
- Rulebook on notification and authorization of activities related to ionizing radiation (Official Gazette of Federation Bosnia and Herzegovina, No. 64/2003);
- Law on Protection of Population from Infectious Diseases (Official Gazette of Federation Bosnia and Herzegovina, No. 29/2005);

- Rulebook on the manner of conducting mandatory immunization (Official Gazette of Federation Bosnia and Herzegovina, No. 07/2002);
- Law on Waste Management (Official Gazette of Federation Bosnia and Herzegovina, No. 33/2003);
- Rulebook on the management of medical waste (Official Gazette of Bosnia and Herzegovina, No. 77/2008).

This would be the positive legislative framework for the treatment of problems related to hazardous waste disposal in Bosnia and Herzegovina. We will now continue with the presentation of the system of the non-governmental sector in Bosnia and Herzegovina popularly called "the green movements". Their activities are characterized by significant problems. In previous chapters we have seen that public awareness of environmental protection is very restricted. The green movement has a frustratingly limited financial ability in a political climate which is concerned with "more important issues", and although this is the fundamental problem for the movement, it has been considered secondary. Despite such difficult circumstances in Bosnia and Herzegovina, there are still an impressive number of organizations which are concerned with the protection of the human environment.

### **The Green Movement in Bosnia and Herzegovina**

If we talk about those who unconditionally support and protect the environment and work hard without profit, then we are certainly talking about various eco-movements in Bosnia and Herzegovina which act as non-governmental organizations. We will use the term eco-movement to refer to any organized group of people such as voluntary organizations, humanitarian agencies, professional associations, human rights organizations, cooperatives and all similar forms of organization, provided that they are independent from government, i.e. from governmental organizations and institutions which are concerned with the preservation of the environment. These NGOs are basically self-governing bodies that operate on the basis of volunteer work, and which are therefore not under the management of the authorities. They can build different structures based on the principles of democracy and transparency, drawing on a number of legal and information resources, as well as using different types of media (Draganić et al. 2005).

Non-governmental organizations for the protection of the environment represent a link between citizens and the government sector (Draganić, Šehović & Pulić 2005). It is very important that NGOs understand the role they can play in society and the way in which they can most effectively serve as a bridge between the government and the citizens. Mediation in the conflict of interests is an important task for these organizations. Local

communities are often afraid of breaking the prohibitions which result from the declaration of protected areas (bans on grazing, logging, hunting, etc.). Non-governmental organizations must be utilized in the function of nature conservation, but also to protect local interests. This will be achieved through active participation in determining the boundaries of protected areas and the determination of zones with different levels of protection: from the strictly protected central zones to the peripheral with a lower degree of protection and development opportunities for local people (Varišćić 2008).

Most eco-associations (NGOs) in Bosnia and Herzegovina tend to gather volunteer crews from schools, colleges and other institutions and try to engage professionals who will contribute in many ways to the preservation of the environment through voluntary work. NGOs do not include bodies that act as political parties, trade unions and religious communities. These movements are registered as citizen associations, distinctive for not being burdened with the struggle for power and institutionalization, but instead characterized by their massive, voluntary memberships, volunteerism and for being organized around involvement in matters which represent their key needs and interests.

In accordance with Article 11 of the Law on Associations and Foundations (Official Gazette of Federation Bosnia and Herzegovina, No. 33/2003) the association must be established by at least three natural or legal persons who are citizens of Bosnia and Herzegovina, or foreigners who are permanently residing or staying longer than one year in the territory of Bosnia and Herzegovina, alone or together with the citizens of Bosnia and Herzegovina. The association is established by making a Founding Act. The association shall acquire the status of legal person by registration in the registry. Legal actions taken prior to entry in the register of associations creates obligations only for the individuals who have taken these actions.

International organizations and foreign donations play the dominant role in the financing of eco-movements. In some parts of Bosnia and Herzegovina there is support from local institutions (ministries and local government), but this type of financing is still insignificant. A smaller number of NGOs are trying to be self-sustaining, running commercial activities and collecting membership dues. Although there is an initiative to create a sustainable development strategy for the NGO sector in Bosnia and Herzegovina, it is still difficult to talk about real opportunities for the financing and sustainability of NGOs (Draganić et al. 2005). The number of NGOs in Bosnia and Herzegovina is somewhere around 700, but those that participate actively in planning and maintaining the environment is not more than 50.

Media relations with the environmental associations in Bosnia and Herzegovina seem almost non-existent. Most of the eco-movement has expressed dissatisfaction with media coverage of their implemented projects as well as of all other activities undertaken. This in some way confirms for us how underdeveloped awareness is in Bosnia and Herzegovina about these fundamental issues.

### ***Government and ecology in Bosnia and Herzegovina***

The responsibility of Bosnia and Herzegovina as a state, is to protect its natural resources and the environment. Jurisdiction for the protection of the environment and concerns about nature has been entrusted by the state authority to the ministries and other institutions at entity level, such as:

- a) The Ministry of Agriculture, Forestry and Water Management of the RS;
- b) The Ministry of Planning, Construction and Ecology of the RS;
- c) The Ministry of Economy, Energy and Development of the RS;
- d) The Republic Hydro meteorological Institute of the RS;
- e) The Federal Ministry of Agriculture, Water and Forestry;
- f) The Federal Ministry of the Environment and Tourism;
- g) The Federal Ministry of Physical Planning.

Although in 2002 and 2003 the Republic of Srpska and the Federation of Bosnia and Herzegovina (Federation) adopted acceptable legislation on the protection of the environment and nature, its implementation has not been satisfactory. This is mostly due to the significant lack of required by-laws. Since 2003, only 25 of the necessary 100 by-laws have been adopted, these legislative acts being needed to facilitate the practical application of the law. Given the current dynamics of the adoption of by-laws, we can conclude that the completion of this process is still some way off (Varišćić 2008).

Eco-associations in Bosnia and Herzegovina have already emphasized the above as a significant problem. Considered an already alarming situation, the fact that environmental protection is not regulated at state level and stressing the example of behavior of state institutions in the area of so-called entity lines of demarcation. According to the example, the entity authorities suggest that persons engaged in illegal logging continue to work freely but in "their area", or translated into plain English: in other entities. One thing is certain, as long as we continue to speak of Serbian, Croatian or Bosnian forests and rivers when referring to the territory of Bosnia and Herzegovina, eco-associations will continue to have difficulty achieving their goals and, in a direct way, the state will continue to endanger the environment (Adilović and Pehlić 2004). Another issue highlighted by the

Association for Plant Protection in Bosnia and Herzegovina is the violation of the Law on Phyto-Pharmaceutical Resources in 2005 Official Gazette of Federation Bosnia and Herzegovina, No. 29/05

Since, this is also regulated at entity level in terms of the importation of these means, for example, no matter what is allowed to be imported into the Federation it is not possible to control because we cannot know how many were imported of these means at border crossings in the RS and thereafter arrived in the Federation of Bosnia and Herzegovina. In this way, Bosnia and Herzegovina is not able to establish a unique control system for the importation of phyto-pharmaceutical assets on its territory.

State authorities in Bosnia and Herzegovina are still trying to create certain programs for the conservation of nature and the environment. One of the measures taken has been to establish a new system of issuing environmental permits, which is based on modern European standards and procedures, and which pertains to all effects of industrial plants and facilities, and the activities of business entities in general, on certain segments of the environment and the environment as a whole. Therefore a new legal institute called environmental permits has been introduced, which, with its instruments in the form of provisions in the Law and execution regulations, has a preventive effect on excessive pollution established by the limiting parameters on environmental pollution and which contributes to the preservation and protection of human health as well as that of the entire living world (Luebbe and Stroeker 1990).

However, this may be seen as a drop of water in the ocean. State authorities in Bosnia and Herzegovina could do much more. This, after all, is the duty of Bosnia and Herzegovina government both in accordance with international law as well as internal laws that the country has itself enacted.

## **CONCLUSION**

In previous chapters we have tried to show the phenomenology of environmental protection in Bosnia and Herzegovina. Our aim has been to stimulate new ideas on the theme "Green Criminology in Bosnia and Herzegovina" because research of this kind has been very scarce. The focus has been deliberately directed at underlining highly important legislation such as the Law on Environmental Protection, the Law on Nature Protection, the Law on Air Protection, the Law on Waste Management, the Water Law, the Law on Fund for Environmental Protection, and the Law on Phyto-pharmaceutical means in Bosnia and Herzegovina in order to indicate the possibilities for research of violations thereof. The opening of "a new branch of applicable criminology" in Bosnia and Herzegovina, which will

take its research focus as the etiology and phenomenology of environmental crime has been the main objective of this work. On this occasion, we have raised a great objection to the account of the Interior Ministries in Bosnia and Herzegovina (out of 14) for their absence of appropriate reaction and response to the reported violations of the aforementioned laws and for their lack of understanding and attitude towards this type of crime. They afford a traditional police response to conventional types of crime while 'newer' crimes such as computer crime, art smuggling and, in last place, environmental crimes, are treated as secondary, less significant matters. We hope that with this article we will have stimulated young criminologists in Bosnia and Herzegovina to reflect critically on the existing practice of institutions which are responsible for formal social control in Bosnia-Herzegovina when it comes to environmental crime.

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## Procedural justice, police legitimacy and public cooperation with the police among Bosnian students<sup>37</sup>

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*Summary: Purpose: The purpose of this study is to highlight factors that influence students' trust in the police in Sarajevo. More specifically, this study presents an empirical test and description of student attitudes based on prior experiences with the police and criminal justice system. This study has the intention to determine correlations between procedural justice, police legitimacy and public cooperation with the police, as well as to examine what influences trust in the police among students of the Faculty of Law and Faculty of Criminal Justice and Security Studies at the University of Sarajevo. The ultimate purpose of this study is to test various research hypotheses derived from the process-based model of policing. The findings may be used as a basis for the future related research in Sarajevo or Bosnia and Herzegovina. Design/Methods/Approach: This study tests process-based model hypotheses using cross-sectional data from students of the Faculty of Law and Faculty of Criminal Justice and Security Studies at the University of Sarajevo, Bosnia and Herzegovina who successfully completed an online questionnaire (N=583). In this empirical study, a survey was used as method of data collection. Data were analyzed using descriptive statistics (Measures of central tendency and measures of dispersion) and statistical inference (factor analysis and correlation analyses). Findings: The study presents the findings of the survey conducted among the students of the Faculty of Law and Faculty of Criminal Justice and Security Studies at the University of Sarajevo, Bosnia and Herzegovina. The majority of the respondents surveyed revealed that trust in the police is determined by perceived police reputation. That means that if the police work effectively, morally and in compliance with the law, the level of trust in the police increases. Also, the findings have shown that the threat of sanctions/costs (formal and informal) plays a significant role in the story about trust in the police, as well as the relationship between procedural justice and trust in the police. On the other hand, the analyses did not report significant correlations between police legitimacy and other factors such as cooperation with the police. Thus, demographic factors (gender and age), self-control and lifestyle do not play a significant role in terms of trust in the police.*

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*Research Limitations/Implications: The limitations of this study relate primarily to sampling. A convenience sample was used in this case, and although the online survey questionnaire was available to all students in the two faculties (N=4014), a large number did not complete the survey and this can be considered a research limitation. Considering that only 583 students successfully completed the online questionnaire, the response rate is 14.51%. Practical Implications: The results of this study has implications for police practices in Canton Sarajevo and Bosnia and Herzegovina. Specifically, the findings can be considered as indicators which can aid the police to improve their practice in Canton Sarajevo. Originality/Value: The study is important because studies of this kind are a rarity in Bosnia and Herzegovina, so it means that the results of this study could become the basis for such studies in the future. Also, this study examines those factors that influence trust in the police among students of law, criminal justice, criminology and security studies in Sarajevo.*

*Key words: police legitimacy, trust, students, cooperation, compliance, Sarajevo*

## **INTRODUCTION**

The link between procedural justice, police legitimacy and public cooperation with the police has received significant scholarly attention in criminology and criminal justice. In this triangle, police legitimacy may be considered as a certain pathway for the police to elicit cooperation, obtain compliance and increase satisfaction among the public. On the other hand, numerous studies have shown that the most effective promotion of legitimacy is based on procedural justice and public trust in the police (Mazerolle, Bennett, Davis, Sargeant, & Manning, 2013). In the context of the relationship between police and citizens, trust is expected to promote their cooperation, so the trust of citizens in the police has been studied a great deal. In the sense of the afore-mentioned statements, the police will enjoy higher levels of legitimacy in the eyes of the public when citizens believe that the police are respectful, polite, and make fair decisions when dealing with community members (Reisig, Tankebe, & Meško, 2013). These theoretical assumptions have received empirical verification in a large number of studies (e.g. Flexon, Lurigio, & Greenleaf, 2009; Jackson, Huq, Bradford, & Tyler, 2013; Gau, 2013; Cherney & Murphy, 2013), but it should be noted that these studies are limited by various factors.

In previous studies, definitions of police legitimacy were linked to concepts about the legitimacy of governments in general. Generally speaking, legitimacy is the right to rule and the recognition by the ruled of that right (Tyler & Jackson, 2013). In that sense, Gau (2014) considered that "any agent or agency possessing coercive authority over some subordinate segment of society must devise a rationale that explains to these subordinates the reasons why it is necessary or right to submit to this authority" (p. 188). Also, legitimacy can be

defined as “the right of legal authorities to exercise power, prescribe behavior, and enforce laws” (Jackson et al., 2013; p. 2), or “the extent to which an individual states that he or she believes that the law (or legal agents) represents just, fair and valid basis of legal authority” (Papachristos, Mears, & Fagan, 2012; p. 417).

Legitimacy is primarily an issue of procedural justice (Tyler & Jackson, 2013) because judgments about procedural justice influence police legitimacy. These in turn shape compliance with the law. Gau (2014) states that the procedural model of police legitimacy maintains that police garner legitimacy through efforts to make their relations with community more positive and respectful. According to Mazerolle and colleagues (2013), procedural justice implies four essential components: (1) dialogue that encourages citizen participation in the proceedings prior to an authority reaching a decision, (2) the citizen's perception of neutrality in decision making, (2) indicators that authority demonstrates dignity and respect in contact with citizens, and (4) awareness of trustworthy motives of authority. In accordance with this, Reisig, Tankebe and Meško (2013) claim that public cooperation with the police is powerfully shaped by general perceptions that the police are legitimate. On the other side, the police need voluntary help from the public because it is essential to their efforts to reduce crime, as evident in the following statements:

- The majority of volume crimes are detected through information provided by victims and witnesses (Jansson, 2005);
- Problem-solving is often most effective when the public are involved (Tuffin, Morris, & Poole, 2006); and
- The public can provide extra resources for the police by volunteering to take on a variety of roles (Goldstein, 1990).
- Considering that public cooperation is based on a model which involves costs and benefits, the police should provide desirable rewards for cooperation, such as high performance in solving crime, maintaining order, or addressing public concerns (Tyler & Jackson, 2013).

The present study represents an effort to examine correlations between procedural justice, police legitimacy and public cooperation with the police based on Bosnian students' attitudes toward the police. This article has two main aims: the first aim implies the description of data provided by the survey conducted among students of the Faculty of Criminal Justice and Security Studies and Faculty of Law, University of Sarajevo, and the s aim implies the scientific discovery which covers the detection of the relationship between factors derived from the theoretical framework. In this way, the paper will conclude with foundations and recommendations for future research.

## SOME PREVIOUS FINDINGS

In the last two decades, criminologists have been preoccupied with the idea that people obey the law based on their calculations about potential punishments and benefits, and that these calculations are usually in their own self-interest (Klepper & Nagin, 1989; Sherman, 1990; Reisig, Tankebe, & Meško, 2012). In the context of the relationship between the police and citizens, trust is expected to promote their cooperation, so the trust of citizens in the police has been the object of a great deal of study. In that sense, police legitimacy has increasingly focused on normative considerations over the last two decades and this can be considered as one of the most important developments in criminological research. In other words, some criminologists claim that compliance with the law and cooperation with legal authorities are primarily shaped by the general perception that legal authorities are legitimate. The name of this model is the process-based model of regulation or process-based model of policing. It implies that the variation in perceived police legitimacy is explained by procedural justice regarding the manner in which police officers exercise their authority (Tyler, 2003; Reisig et al., 2013).

According to Bottoms (2002) and Hough, Jackson and Bradford (2013), compliance with authority in general is explained by four categories:

- prudential or self-interested calculations about the potential costs and benefits of punishment, which take into account the risks and costs of punishment;
- normative considerations about the 'rights and wrongs' of non-compliance;
- the impact of obstructive strategies, such as locking up offenders to prevent their reoffending, and locking up the targets of criminal attention, literally or metaphorically; and,
- habit.

The first scientist to research antecedents and consequences of police legitimacy was Tom Tyler, who draws a distinction between instrumental and normative perspectives on the antecedents of police legitimacy (Tyler, 1990). According to Reisig, Tankebe and Meško (2013), "the instrumental perspective holds that the police are legitimate to the extent that they are effective in fighting crime and in preventing disorder" (p. 151). On the other hand, the normative perspective considers the importance of procedural justice. In that sense, procedural justice implies two dimensions: "quality of decision-making" and "quality of interpersonal treatment" (Sunshine & Tyler, 2003; Reisig et al., 2013). Decision-making quality primarily refers to the opportunity for people to present fully their case to the police, the neutrality of the police in the decision-making process, and the consistency of the police in applying the law (Paternoster, Bachman, Brame, & Sherman, 1997; Tyler,

2003). Interpersonal treatment quality concerns public perceptions that the police treat them with politeness and dignity, and respect their human rights.

The existence of strong correlations between procedural justice and police legitimacy is confirmed by research conducted by Jackson, Huq, Bradford and Tyler (2013), who found that positive judgments about police legitimacy are associated with more negative views about the use of violence. In addition to those previously mentioned, numerous studies have been conducted in a great number of different countries, and these studies support the basic argument and show that legitimacy explains variations in compliance with the law (Sunshine & Tyler, 2003; Tyler, 2006; Tyler & Fagan, 2008; Jackson, Bradford, Hough, Myhill, Quinton, & Tyler, 2012; Tyler & Jackson 2013), as well as the willingness to defer to the decisions of police officers and judges (Tyler & Huo, 2002), to continue to accept decisions over time (Tyler, Sherman, Strang, Barnes, & Woods, 2007) to cooperate with legal authorities (Tyler, Schulhofer, & Huq, 2010; Jackson, Bradford, Stanko, & Hohl, 2012), and to believe that violence is an acceptable means to achieve social control and social change (Jackson, Huq, Bradford, & Tyler, 2012).

Murphy (2009) claims that, in the context of policing, procedural justice has also been shown to be important for shaping citizens' views about police legitimacy, their satisfaction with the police and also in fostering cooperation with the police. In this study, Murphy examined the relative importance of procedural justice in the overall ratings of police satisfaction across two types of police-citizen encounters (citizen-initiated contacts and police-initiated contacts), and showed that procedural justice is most important in police-initiated contacts, while police performance is most important. Other research (Hinds & Murphy, 2007; Cherney & Murphy, 2013) indicates that procedural justice influences public cooperation with the police. Results of the research conducted by Cherney and Murphy (2013) show that perceptions about the legitimacy of the law and identification with Australian society matter a great deal when it comes to predicting cooperation in counter-terrorism. On the other hand, perceptions of police legitimacy matter most for predicting cooperation in general crime control activities.

In United States of America, Reisig, Bratton and Gertz (2007), using a sample of 432 adults from a nationwide telephone survey, determined that procedural justice judgments affect police legitimacy, which in turn influences both cooperation with the police and compliance with the law. They found that if legitimacy was disaggregated, then trust in the police predicted both of the outcomes of interest.

Justice Tankebe (2008) conducted a study of police effectiveness and police trustworthiness in Ghana, using data from a representative public survey in Accra (N=374)

and strived to fill gaps in criminological knowledge in this area. The results of this study show correlations between perceptions of police effectiveness and perceived police trustworthiness. Tankebe also found that the relationship is stronger if the police are also perceived to be procedurally fair. These results are significant because they show that building public trust in the police requires democratic reforms that simultaneously improve the capacity of the police to achieve both substantive effectiveness and procedural fairness.

A survey conducted by Ellison, Pino and Shirlow (in press) focused on identifying the generative processes that influence perceptions of the police in the context of an inner-city neighborhood in Northern Ireland. Contrary to other surveys, their analysis suggests that instrumental concerns about crime and illegal activity are more influential predictors of attitudes toward the police than expressive concerns with disorder and anti-social behaviour.

In this context, Kääriäinen and Siren (2012) claim that the literature about police culture indicates that the police have a rather cynical approach to citizens. Empirical proof of this mainly comes from examining major cities in the United States and the United Kingdom. Considering this proof, Kääriäinen and Siren conducted a study comparing the level of generalized trust among police officers and other respondents based on the cumulative materials gathered for the European Social Survey of 22 countries in 2002–2008. The primary findings of this study indicate correlations between generalized trust of those working in the police forces and generalized trust in society as a whole. In that sense, they found that if citizens generally trust each other, the police also trust the citizens. On other hand, in countries with a low level of trust in general, the police are also cynical towards citizens. Similar to this study, Jackson et al. (2011) outlined the conceptual roadmap for a current comparative analysis of trust in justice where the methodology included examining a 45-item module in Round 5 of the European Social Survey. The basis for this study was a social indicators approach to trust in justice. It recognizes that the police and criminal courts need public support and institutional legitimacy if they are to operate effectively and fairly.

When it comes to willingness to report crimes, Kääriäinen and Siren (2011) found that trust in the police does not appear to increase the likelihood of people reporting crime. Instead, they found that the seriousness of crime and the relationship between victim and perpetrator have the most significant impact on willingness to report crimes. In this sense, they pose a question: Does a high level of generalized trust reduce citizens' desire to rely on official control? Addressing this question, they examined the links between generalized trust and trust in the police, and their interactive effect on the willingness to report violent

and property crimes. Kääriäinen (2007) also conducted a multilevel analysis dealing with trust in the police in 16 European countries. Assumptions in this study were that general perception of corruption among public officials decreases public trust in the police, and that substantive investments in public order and safety institutions also decrease trust in the police. Kääriäinen concludes that corruption in government strongly explains the country-level variation in public trust towards the police.

In India, Vinod (2012) examined the impacts of community policing on public satisfaction and perception of the police. This study was conducted in the Indian state of Kerala and considered the Janamaitri community policing program. It indicated a strong impact of the program on different aspects of police–public relations, such as greater accessibility, better behavior of the police, greater sense of security among the populace, and better perceptions of the police.

Jonathan-Zamir and Weisburd (2013) examined police performance and procedural justice as antecedents of police legitimacy in acute security threat situations and in “no threats” situations in Israel. They found that assessments of police performance did increase in importance for the public under threat, and procedural justice remained the primary antecedent of police legitimacy in both kinds of situations.

In the Western Balkan region, there have been other studies, one involving pencil-and-paper surveys that were administered to 683 individuals, 18 years of age and older enrolled in 6 high schools located in Maribor and Ljubljana, Slovenia. The purpose of this study, conducted by Reising, Tankebe and Meško (2013), was to examine the effects of procedural justice judgments on perceived police legitimacy. The findings indicate there is a strong correlation between procedural justice and police legitimacy, the latter influencing public cooperation. In other words, it shows that when the public cooperation scale is disaggregated, the effect of police legitimacy varies across different cooperation outcomes. Ultimately, the results reveal:

procedural justice judgments significantly shape individual perceptions of police legitimacy, and perceived police legitimacy explains self-reported compliance with the law.

## **METHODOLOGY**

The purpose of this research study is to collect information about students' experiences with the police and the criminal justice system, and to examine factors that influence their trust of the police in Sarajevo. In other words, the effect of procedural justice judgments on perceived police legitimacy is empirically scrutinized. This study also has the intention to determine correlations between procedural police legitimacy and various legitimacy

related variables, such as procedural justice, trust in police, police effectiveness, police authority, legal cynicism, legal compliance and public cooperation, as well as to examine what influences trust in the police among students of Faculty of Law and Faculty of Criminal Justice and Security at the University of Sarajevo. It is important to focus specifically on law, criminal justice and security studies students because the fact that a number of these students will work in the field of law enforcement and criminal justice. However, the results are based on student opinions and they are not representative of the entire population.

The research study "*Procedural Justice, Police Legitimacy and Public Cooperation with the Police among Bosnian Students*" tests a process-based model hypotheses using cross-sectional data from 583 students (aged 18 and above) attending two faculties within the University of Sarajevo (Faculty of Criminal Justice and Security and Faculty of Law), Bosnia and Herzegovina. Because of its similarity with research studies conducted among students in some other countries (Slovenia, Croatia, Serbia, Macedonia, Russia etc.), the method applied here was very similar to that in the aforementioned research studies. The current study relies on an online survey questionnaire for students, which was distributed via the official web sites of the two faculties during January-May, 2013. This empirical study used a questionnaire (survey) as the method of data collection, and was analyzed using descriptive and inferential statistical analyses.

Every study has its limitations, and the critical element in this study was sampling. Although the online survey questionnaire was available to all students of these two faculties (N=4014), a large number of students did not complete the survey and this can be considered as a research limitation. The number of students who answered the online questionnaire (N=583) represents a response rate of 14.51%. In this sense, we used a convenience sample in this survey. It should be emphasized that a convenience sample consists of whatever subjects are readily available to the researcher, and are appropriate in a variety of research situations. However, if we choose to examine respondents on the assumption that respondents there provide a cross section of the different types, it can be said that sample is representative. On the other hand, researchers must always be wary of potential threats to external validity every time they use a convenience sample. They have to be careful in the interpretation of their findings because convenience samples are prone to systematic biases precisely because they are convenient (Weisburd & Britt, 2007).

Overall, the surveyed students comprised three age groups: 18-24 (89.0%); 25-30 (7.6%); and 31 and older (3.4%), and respondents were primarily female (64.0%). The mean age in years for all surveyed students was 22.5 years (SD=3.8), and their major area of study was

law (57.3%) and criminal justice and security (42.7%). In terms of years of study, the mean number was 2.7 years of study (SD=1.1; range 1-7 years).

Participants were asked to respond to questions designed to capture their economic/financial status. In terms of this question, 9.4% of surveyed students reported that they have their own income, 69.3% answered that they get income from another source or person, 13.4% answered that they have combination of own income and income from another source/person and only 6.0% answered that they are grant-financed. Participants were also asked to provide information about their family's social status. On average, most participants ranked their family social status as "average" (79.9%), while other participants ranked their family social status as "far above average" (0.7%), "above average" (10.3%), "below average" (7.0%) and "far below average" (0.5%) (see Table 1).

Table 1: Sample characteristics

	Frequency	%
<b>Age</b>		
18-24	519	89.0
25-30	44	7.6
31 and more	20	3.4
Mean	22.5	
Std. Deviation	3.8	
<b>Gender</b>		
Male	210	36.0
Female	373	64.0
<b>Major area of study</b>		
Law	334	57.3
Criminal Justice and Security	249	42.7
<b>Year of study</b>		
Mean	2.7	
Std. Deviation	1.1	
<b>Economic/financial status</b>		
Own income	55	9.4
Income from another source or person	404	69.3
Combination of own income and income from another source/person	78	13.4
Grant	35	6.0
Missing	11	1.9
<b>Family's social status</b>		
Far above average	4	0.7

Above average	60	10.3
Average	466	79.9
Below average	41	7.0
Far below average	3	0.5
Missing	9	1.5

## RESULTS

### Variables

In this section of the article, the key findings will be presented. First, it is important to examine respondents' experiences with the criminal justice system and prior victimization. As can be seen in Appendix 1 and Appendix 2, students were asked to describe which role they had in the official/formal communication/contact with the criminal justice system and how these institutions responded towards them. They were also asked to describe have they ever been a victim of a crime, which crime it was, and to describe the victimization that they experienced.

The students answered that they had official contact with the criminal justice system as a hearsay witness (11.5%), as an eyewitness (19.9%), as a person who has committed a minor offence (25.4%), as a suspect of a crime (9.6%), as someone who reported a crime (23.8%) and as a victim of a crime (24.4%). In total, just under half of the respondents (47.3 %) have prior experience with the criminal justice system. In terms of the way the criminal justice system institutions responded, 47.9% of students answered that they did not communicate with anyone personally; 9.3% of students answered that institution employees' behaviour/response was generally very professional; 29.5% answered that behaviour/response was mostly professional, but thought they could have handled the matter a little better; 6.2% of students think that employees' behaviour/response was generally unprofessional; 5.3% have opinion that behaviour/response was both unprofessional and rude; and 1.9% of students answered that employees' behaviour/response was generally cruel and accusatorial, without any provocation/reason (see Appendix 1).

In addition to the questions asked about experiences with the criminal justice system, students also were asked about possible victimization. In that sense, 29.3% of students answered that they were victim of a crime at some point in their life. In terms of the type of crime, 74.8% of students answered that they were theft victims; 66.2% were break-in/burglary victims; 0.7% were rape/sexual assault victims; 0.5% were armed robbery victims; 10.3% were arson victims; 15.6% were assault victims; 15.3% were fraud victims

and 4.3% were victims of some other crime. Specifically, 13.9% of students indicated that victimization that they experienced were non-violent while 11.5% of students answered that they experienced violent victimization. Further, students described the incident of being victimized as follows: 3.8% of students think that victimization was a bad experience and they are still suffering at this point in time; 9.3% of students think that was a bad experience and they are no longer suffering any ill effects; 8.9% think that was not so bad and they are able to handle/cope quite well; and 9.4% think that victimization did not really impact them in any major way (see Appendix 2).

In Table 2 below, results are shown identifying variables introduced in the theoretical remarks and previous research as crucial factors which can determine police legitimacy. Operationally, factors are composite variables built of certain questions from the instrument.<sup>38</sup> The first is *Low self-control*. This is composite variable composed of thirteen questions. Participants were asked to describe themselves on a five-point scale where five represented „ery much“ and one represented „not at all“.

Table 2: Low self-control

Composite Variable	Mean	SD
Low self-control**	30.33	7.781
<b>Questions***</b>		
<i>I am good at resisting temptation*</i>	3.82	1.0
<i>I have a hard time breaking bad habits</i>	2.70	1.2
<i>I am lazy</i>	2.39	1.3
<i>I say inappropriate things</i>	1.85	1.0
<i>I do certain things that are bad for me, if they are fun</i>	2.15	1.2
<i>I refuse things that are bad for me*</i>	3.83	1.3
<i>I wish I had more self-discipline</i>	3.14	1.4
<i>People would say that I have iron self-discipline*</i>	3.87	1.0
<i>Pleasure and fun sometimes keep me from getting work done</i>	2.80	1.3
<i>I have trouble concentrating*</i>	2.53	1.2
<i>I am able to work effectively toward long-term goals</i>	4.12	1.0
<i>Sometimes I can't stop myself from doing something, even if I know it is wrong</i>	2.26	1.2
<i>I often act without thinking through all the alternatives</i>	2.21	1.1

\*Reverse scored

\*\* Cumulative score from 13 = minimum self-control to 65 = maximum self-control

<sup>38</sup> Choosing questions was depending of factor analysis. Namely, the analysis identified questions from instrument which compose one factor.

\*\*\* Response set ranging from 1 = never/not at all to 5= frequently/very much

In Table 2. we can see that mean of composite variable is close to 30. Given that the minimum score is 13 and the maximum is 65, we can conclude that our respondents do not have strong self-control. Overall, students answered that they are fairly good at resisting temptation. In this sense, students also were asked whether they have a hard time breaking bad habits, and usually answered that they have certain problems in this area. students were also asked to rank how lazy they are and their opinion was mostly that they are not so lazy, as seen in Table 2. The next question dealt with saying inappropriate things and the answers indicate that students mostly do not have problems with profanity. Furthermore, answers show that students rarely do forbidden things, even if they are fun. Similarly, students were asked do they refuse things that are bad for them. From Table 2, we see that students mostly refuse bad things, and but they wish they had more self-discipline: but on the other hand, in most cases they answered that people would say that they have atrong self-discipline. Relatedly, students were asked do pleasure and fun keep them from getting work done? On this question, the answers show that students mostly have these kind of problems. The next question was about problems with concetration where one part of students answered that they have some kind of problems with concetration (see Table 2).

In this section, students were asked about their ability to work effecitively toward long-term goals and most feel that they have high-level abilities. Another question referred to discipline and students indicated that they mostly have enough discipline to stop doing something if it is wrong for them. Finally, students were asked about their forethought and answers have shown that they mostly do not act without thinking through all alternatives, again seen in Table 2.

The second composite variable is *Cooperation with the police* and is comprised of five questions (see Table 3). As in the previous section, participants were asked to rate their level of agreement with the above statements on scale from 1 – strongly disagree, to 4 – strongly agree.

Table 3: Cooperation with the police

Composite Variable	Mean	SD
Cooperation with the police**	16.35	3.152
<b>Questions***</b>		
<i>Imagine that you were out and saw someone steal a wallet. How likely would you be to call the police?</i>	3.09	0.87
<i>If the police were looking for witnesses in a case where someone's wallet</i>	3.30	0.83

<i>was stolen, how likely would you be to volunteer information if you witnessed the theft?</i>		
<i>Imagine you had evidence that someone bribed a government official. How likely would you be to report this behavior to the police?</i>	3.10	0.95
<i>How likely would you be to call the police if you saw someone break into a house or car?</i>	3.63	0.64
<i>How likely would you be to volunteer to serve as a witness in a criminal court case involving a crime that you witnessed?</i>	3.24	0.83

\*\* Cumulative score from 5 = minimum to 20 = maximum preparedness to cooperate

\*\*\* Response set ranging from 1 = never to 4= frequently

In this case, we can conclude that respondents mostly indicated a high level of agreement with the statements shown in Table 3, where it can be seen that the mean number of the composite variable is near 16. From these results we can also conclude that students are likely to report crimes as well as to cooperate with the police as a witness. The T-test did not show statistically significant differences between attitudes of students with and without experience with the criminal justice system.

Table 4 presents the results for the composite variable *Perceived police's compliance with the law* which is composed of two questions. Participants were asked to rate legality of police work with the statements on a four-point scale where one indicates, "strongly disagree" and four indicates "strongly agree".

Table 4: Perceived police's compliance with the law

<b>Composite Variable</b>	<b>Mean</b>	<b>SD</b>
Perceived police's compliance with the law**	4.46	1.422
<b>Questions***</b>		
<i>The police always obey the law</i>	2.20	0.77
<i>When the police deal with people, they always behave according to the law</i>	2.27	0.73

\*\* Cumulative score from 2 = minimum to 8 = maximum compliance with the law

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

As can be seen in Table 4, students' opinions toward the legality of police work were significantly different. This conclusion is supported by the mean number of the composite variable which is near 5. In this sense, it can be also concluded that a slightly larger group of students rated legality of police work in a negative context. The T-test reports statistically significant differences between respondents with and without experience with

criminal justice system ( $p = .002$ ). Namely, respondents with such experience viewed police as less compliant with the law.

The next composite variable is *Police legitimacy* and it is composed of four questions. Students were asked to describe their attitudes about police legitimacy where they had to choose one answer with the above statements on a scale from 1 – never, 2 - rarely, 3 – occasionally, 4 – frequently.

Table 5: Police legitimacy

Composite Variable	Mean	SD
Police legitimacy**	9.51	2.443
<b>Questions***</b>		
<i>Do what the police tell you to do even if you disagree</i>	2.56	0.74
<i>Accept police decisions even if you think they are wrong</i>	2.36	0.80
<i>The police in my community are trustworthy</i>	2.37	0.77
<i>Proud of the police in community</i>	2.23	0.80

\*\* Cumulative score from 4 = minimum to 16 = maximum

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

Table 5 shows that the mean of the composite variable is close to 10, and if we consider that the minimum is 4 and maximum is 16, we can conclude that students have significantly different opinions about police legitimacy. If we consider their answers on the questions in this section, we can conclude that students mostly had significantly different opinions toward obeying police orders and different attitudes about trust in the police as well (see Table 5). It is evident that there is a statistically significant difference in the opinions of the students who have had previous experiences with the criminal justice system and students who had not. Namely, students with previous experience gave the worst rating to police legitimacy (T-test,  $p = .002$ ).

The composite variable *Obligation to obey the police* is composed of two questions. Participants were asked to rate their level of agreement with the above statements on scale from 1 – strongly disagree, to 4 – strongly agree. Results are presented in Table 6.

Table 6: Obligation to obey the police

Composite Variable	Mean	SD
Obligation to obey the police**	4.92	1.440
<b>Questions***</b>		
<i>You should do what the police tell you to do even if you disagree</i>	2.56	0.74

<i>You should accept police decisions even if you think they are wrong</i>	2.36	0.80
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\*\* Cumulative score from 2 = minimum to 8 = maximum

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

The mean number of the composite variable presented in table above is near 5, and with the minimum being 2 and the maximum 8, we can conclude that students' opinions regarding the obligation to obey the police are significantly different as was seen in the previous two cases. Students also indicated statistically significant differences in their opinions toward the obligation to obey the police. In that sense, students who have had previous experiences with criminal justice system express much more disagreement (T-test,  $p=.001$ ).

The sixth composite variable is *Trust in the police* and it is composed of seven questions (Table 7). It is very important that students of criminal justice, security studies and law have a high level of trust in the police. Therefore, the variables which measure level of students' trust in the police were analyzed on a scale from: 1 – strongly disagree to 4 – strongly agree.

Table 7: Trust in the police

Composite Variable	Mean	SD
Trust in the police**	16.89	3.919
<b>Questions***</b>		
<i>The police in my community are trustworthy</i>	2.37	0.77
<i>I am proud of the police in this community</i>	2.23	0.80
<i>I have confidence in the police</i>	2.34	0.77
<i>The police in this community are often dishonest*</i>	2.76	0.75
<i>The police are usually honest</i>	2.39	0.73
<i>People's basic rights are well protected by the police</i>	2.34	0.75
<i>The police can be trusted to make decisions that are right for your community</i>	2.46	0.77

\* Reverse scored

\*\* Cumulative score from 7 = minimum trust to 28 = maximum trust

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

As seen in Table 7, the mean of the composite variable is near 17, so we can conclude that students' attitudes toward trust in the police differ significantly. If we consider every question particularly, we can conclude that students had significantly different opinions for every particular question regarding trust in the police (see Table 7). We should also emphasize that there are not statistically significant differences between students who

have had experiences with the criminal justice system and students who had not in terms of their trust in the police.

The next composite variable is *Procedural justice* and is composed of twelve questions which pertain to the level of agreement with the statements on a scale from 1 – strongly disagree to 4 – strongly agree. The results can be seen in Table 8.

Table 8: Procedural justice

<b>Composite Variable</b>	<b>Mean</b>	<b>SD</b>
Procedural justice**	28.30	6.395
<b>Questions***</b>		
<i>The police treat citizens with respect</i>	2.43	0.73
<i>The police take time to listen to people</i>	2.34	0.74
<i>The police treat people fairly</i>	2.39	0.71
<i>The police respect citizens' rights</i>	2.47	0.71
<i>The police are courteous to citizens they come into contact with</i>	2.46	0.70
<i>The police treat everyone with dignity</i>	2.30	0.72
<i>The police make decisions based on the facts</i>	2.51	0.71
<i>The police explain their decisions to the people they deal with</i>	2.46	0.71
<i>The police provide better services to wealthier citizens*</i>	3.06	0.75
<i>The police make decisions to handle problems fairly</i>	2.44	0.71
<i>The police don't often listen to all of the citizens involved before deciding what to do*</i>	2.78	0.68
<i>The police follow through on their decisions and promises they make</i>	2.36	0.73

\* Reverse scored

\*\* Cumulative score from 12 = minimum to 48 = maximum

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

The mean score of the composite variable (Table 8) is near 28, which means that respondents mostly rated low level of agreement with the above statements, except those statements which are reverse scored. Based on the results, we can conclude that students mostly disagree with the statement that the police are respectful and polite, and they think the police mostly make unfair decisions when dealing with citizens. Respondents with experience with the criminal justice system gave these responses more frequently than other respondents. The T-test reports a statistically significant difference between respondents with and without experience with the criminal justice system ( $p = .038$ ).

*Police effectiveness* is the next composite variable, and is composed of two questions which refer to the students' perception of effectiveness of criminal justice system. Also, in this case a four-point scale is used going from 1 – strongly disagree, to 4 – strongly agree. Results are presented in Table 9.

Table 9: Police effectiveness

<b>Composite Variable</b>	<b>Mean</b>	<b>SD</b>
Police effectiveness**	4.68	1.450
<b>Questions***</b>		
<i>The police are doing well in controlling violent crime</i>	2.30	0.78
<i>The police are doing a good job preventing crime in my neighborhood</i>	2.37	0.79

\*\* Cumulative score from 2 = minimum to 8 = maximum effectiveness

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

As is seen in Table 9, the mean number of the composite variable is near 5, which means that students tend to disagree that police are effective. But, if we consider each question separately, the conclusion is that a slightly larger group of students consider that police effectiveness is not at a desirable level.

*Legal cynicism* is one of the important composite variables, and is composed of five questions which can be seen in Table 10. Students were asked to rate the level of their agreement with the statements below.

Table 10: Legal cynicism

<b>Composite Variable</b>	<b>Mean</b>	<b>SD</b>
Legal cynicism**	12.11	3.235
<b>Questions***</b>		
<i>Laws were made to be broken</i>	2.07	0.91
<i>It is okay to do anything you want as long as you don't hurt anyone</i>	2.70	0.82
<i>To make money, there are no right or wrong ways anymore, only easy ways and hard ways</i>	2.51	0.89
<i>Nowadays a person has to live pretty much for today and let tomorrow take care of itself</i>	2.33	0.84
<i>Fighting between friends or within families is nobody else's business</i>	2.50	0.83

\*\* Cumulative score from 5 = minimum to 20 = maximum Legal cynicism

\*\*\* Response set ranging from 1 = strongly disagree to 4= strongly agree

From Table 10, it can be seen that a slightly larger group of students disagree with these statements; in other words, students mostly want to obey the law. These conclusions are supported by the mean number of the composite variable which is near 12. If we consider that the minimum is 5 and maximum 20, it can be concluded that students' opinions are quite divided as well.

Another important variable is *Moral credibility* that contains only one item - *The law does a good job making sure that criminals get the punishment they deserve regardless of how much money they have* (Mean=2.65; SD=0.90). The conclusion that can be derived from this is that students have significantly different attitudes regarding this statement, but it is observed that a slightly larger group of students are of the opinion that criminals do not get the punishment they deserve. In this case, a four-point scale was used (1-strongly disagree to 4-strongly agree) for rating the level of agreement with the statement.

A four-point scale was also used for the composite variable *Deterrence*, but in this case one was "very unlikely" and four was "very likely". The composite variable is composed of six questions where students were asked to choose one number beside each statement.

Table 11: Deterrence

Composite Variable	Mean	SD
Deterrence**	14.49	3.732
<b>Questions***</b>		
<i>How likely are you to be caught and punished if you ...</i>		
<i>... illegally disposed of trash and litter?</i>	1.94	0.94
<i>... made a lot of noise at night?</i>	2.47	0.83
<i>... broke traffic laws?</i>	2.73	0.75
<i>... bought something you thought might be stolen?</i>	2.19	0.88
<i>...to steal a car?</i>	2.86	0.86
<i>... used marijuana or some other drug?</i>	2.31	0.92

\*\* Cumulative score from 6 = minimum to 24 = maximum deterrence

\*\*\* Response set ranging from 1 = very unlikely to 4= very likely

The results in Table 11 show that students' opinion is that the level of deterrence is not high. The mean number of the composite variable (near 15) indicates that opinions differ significantly, but if we consider each question separately, we note that there are some exceptions. In this sense, students mostly consider that is unlikely that someone will be caught and punished if they illegally dispose of trash and litter. On the other hand, students mostly have the opinion that someone who broke traffic laws or stole a car is more likely to be caught and punished.

The last composite variable is *Personal morality*. It contains six questions, and in this case, a three-point scale was used (1-not wrong, 2-somewhat wrong and 3-very wrong) where respondents were asked to choose one number beside each statement to express their attitude about it.

Table 12: Personal morality

Composite Variable	Mean	SD
Personal morality***	15.92	2.648
<b>Questions***</b>		
<i>In your opinion, how wrong is it for someone to ...</i>		
<i>... illegally disposed of trash and litter?</i>	2.53	0.63
<i>... made a lot of noise at night?</i>	2.45	0.62
<i>... broke traffic laws?</i>	2.83	0.46
<i>... bought something you thought might be stolen?</i>	2.51	0.67
<i>...to steal a car</i>	2.92	0.39
<i>... used marijuana or some other drug?</i>	2.69	0.64

\*\* Cumulative score from 6 = minimum to 18 = maximum personal morality

\*\*\* Response set ranging from 1 = not guilty, 2= little guilty, to 3= very guilty

If we consider the mean number of the composite variable which is near 16, it can be concluded that students have shown a solid level of personal morality. For each question particularly, students indicate the highest level of personal morality in relation to a situation where someone steals a car and the lowest level of personal morality pertains to the question regarding a situation when someone made a lot of noise at night.

### Correlation analysis

To get basic information about the relationship between identified factors and Police legitimacy, we conducted a correlation analyses. Surely, we should observe police legitimacy through two components: 1) Trust in the police and 2) Obligation to obey the police. Results are shown in Table 13.

Table 13: Correlations (Pearson's coefficient)

	1	2	3	4	5	6	7	8	9	10
<b>Police legitimacy</b>	1									
<b>Trust in police</b>	,828*	1								
<b>Obligation to obey the police</b>	,819*	,440*	1							
<b>Procedural justice</b>	,708*	,820*	,375*	1						
<b>Perceived police's compliance with the law</b>	,651*	,718*	,384*	,731*	1					
<b>Police Effectiveness</b>	,603*	,667*	,320*	,649*	,609*	1				
<b>Moral credibility</b>	,414*	,499*	,219*	,509*	,523*	,610*	1			
<b>Deterrence</b>	,485*	,526*	,319*	,473*	,482*	,612*	,531*	1		
<b>Personal Morality</b>	,428*	,446*	,285*	,383*	,417*	,512*	,438*	,619*	1	
<b>Cooperation with the police</b>	-.040	.025	-.086*	.065	-.055	-.033	-.012	.018	,106*	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 13 reports the correlations between the variables/factors which we used. It is possible to see that "Trust in the police" and "Perceived police's compliance with the law" represent a correlation coefficient ( $r = .718$ ) which is significantly ( $p > 0.01$ ) different from zero. In other words, the relationship existing between these variables is statistically significant. There is also a positive relationship between trust in the police and "Moral credibility" ( $r = .499$ ,  $p > 0.01$ ) and "Police effectiveness" ( $r = .667$ ,  $p > 0.01$ ). It seems plausible

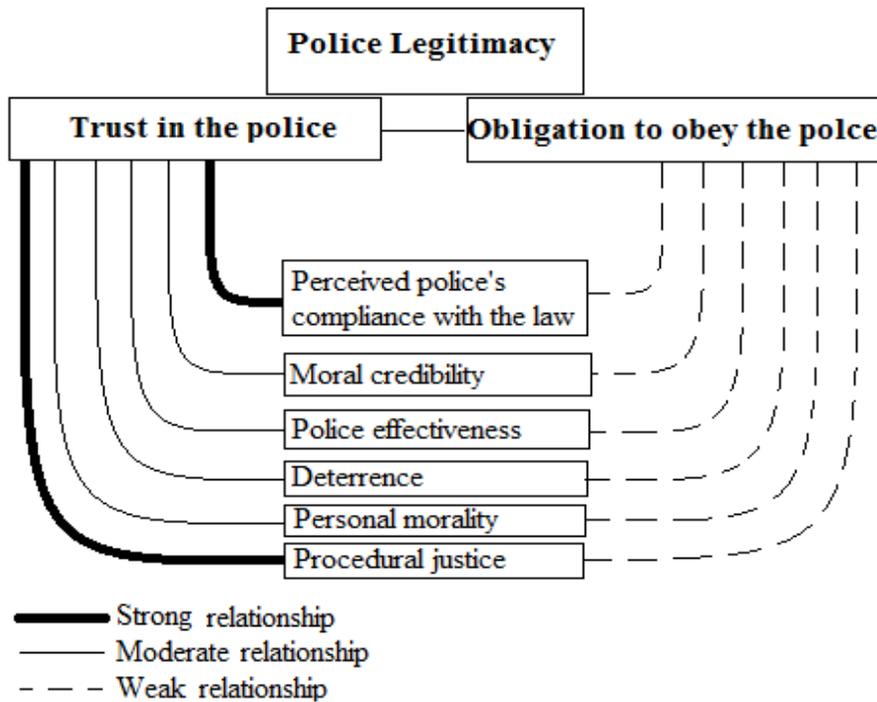
that **image (reputation) of the police** determines trust in the police, and if the police work effectively, morally and in compliance with the law, trust in the police will go up. Interestingly, that does not necessarily mean that citizens will cooperate with the police. Namely, the correlation between these variables and the "Cooperation with the police" does not exist or it is very low correlation. Similarly, there is a significant positive relationship between the aforementioned variables (Perceived police's compliance with the law, Moral credibility, Police effectiveness) and "Obligation to obey the police" ( $r=.384, p>0.01$ ;  $r=.290, p>0.01$ ;  $r=.320, p>0.01$ ), as second part of the police legitimacy.

It seems that **threat of sanctions/costs** (formal and informal) plays a significant role regarding trust in the police. Thus, certainty of legal sanctions (Deterrence) and moral sanctions (Personal morality) significantly correlate with trust in the police ( $r=.526, p>0.01$ ;  $r=.446, p>0.01$ ) and also with obligation to obey the police ( $r=.319, p>0.01$ ;  $r=.285, p>0.01$ ).

Finally, the factor **Procedural Justice** has a strong relationship with trust in the police ( $r=.820, p>0.01$ ), and the correlation between this factor and obligation to obey the police is statistically significant with moderate strength ( $r=.375, p>0.01$ ). The results of the correlation analyses did not show significant correlations between police legitimacy and other factors/variables which we described in the article. Thus, demographic factors (sex/gender and age) are not playing a significant role in shaping trust in police, likewise self-control or lifestyle. It is very important to understand that the variable "Cooperation with police" does not significantly correlate with any of factors.

Figure 1 shows the correlation between trust in police and obligation to obey the police, as parts of Police legitimacy, and identified factors.

Figure 1: Relationship between police legitimacy and identified factors.



## DISCUSSION AND CONCLUSION

The first objective of this paper was to describe Police legitimacy in Sarajevo (Bosnia and Herzegovina) through the eyes of students. We began by reviewing theoretical perspectives on this topic, and by doing so, crucial factors have been identified and a relationship between each other has been examined. In presenting the findings, we first have presented some descriptive statistics, and we noted that students are very cautious in assessing Police legitimacy. To know the causes, we examined the variables “Trust in police” and “Obligation to obey the police”. According to Reisig et al. (2013), these are two crucial segments of Police legitimacy.

Results show that trust in the police in our student population is not at a high level. In this context, trust is believing that the police have the right intentions and are competent to do what they are tasked to do (Hough, Jackson, & Bradford, 2013). Therefore students do not believe the police can be characterized in this manner, and according to their opinions, they also will not accept an obligation to obey the police in all cases. That can be a significant problem if we consider the fact that survey respondents were students of criminal justice, security studies and law. On the other hand, it is very important to consider doubt in the criminal justice system, precisely doubt in functionaries’ moral credibility. Robinson (1995) dedicates special attention to this factor. The results indicate

that a significant part of students view the criminal justice system with less moral credibility. If we add the attitude about limited police effectiveness we get a complete picture. Generally, through the students' eyes the image of police in Sarajevo is negative, and the worst thing is their experience with criminal justice system. They frequently reported police violations of the law more when compared to respondents without such experiences. These findings contradict somewhat the Tyler and Fagan (2013) study, who found that experiencing procedural justice during a personal experience increases legitimacy. How each community perceives law enforcement depends on each police department. It is thus essential that police programs and tactics be tailored to meet the specific needs of the neighborhoods (Brown & Benedict, 2002). Namely, we should give the impression that the public and the police are on the same side. But how can we do that? According to Tyler and Fagan (2013), the police can generally enhance their legitimacy by using fair procedures.

The article examined beliefs of students about certainty of sanctions for some criminal offences. It seems that most respondents think that as offenders, they will not be arrested and punished. That could be an indicator of police working or not working effectively. On the other hand, most respondents have strong moral beliefs, and they blame offenders. Moral beliefs play a significant role in decision making processes about compliance with the law (Wright, Caspi, Moffitt, & Paternoster, 2004). We should probably expect cooperation with the police and obey the police decisions from people with high level of moral beliefs.

In the eyes of students, the style of police contact with citizens is not at a high level. In his works, Tyler dedicates special attention to this factor (Hough et al., 2013), which is usually significant in considerations about police legitimacy, because fair and legal treatment also demonstrates that the police are acting in the interests of the wider community.

On the other side, this article examined relationships between two linked parts of police legitimacy and factors such as low self-control, lifestyle, procedural justice, Cooperation with the police, perceived compliance by the police with the law, Legal Cynicism, Deterrence, Personal Morality, Police Effectiveness and Moral Credibility. Many of these factors indicate a strong and moderate relationship with trust in the police. Obviously, low trust in the police reduces police legitimacy in the eyes of the public. If we consider obligation to obey the police, the conclusion will be similar but not identical. The analyses show that trust in the police is a far more salient antecedent than the obligation to obey the police. Similar results have been noted by Reisig et al. (2013).

Some of the identified indicators do not show a significant relationship with Police legitimacy, but that does not mean that we should ignore them. Namely, we should note the aforementioned limitations of the research, and improve the methodology in future studies.

In the end, results from this study should serve as an inspiration for the next phase of research, and as indicators for their better realization. Considered from the perspective of the social justification of this work, it can be expected that the results will contribute to making policing policy. It is important to note that the police cannot function without the support of the public, so they should strive to work in ways which maximize public cooperation.

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## Appendix 1

*Descriptive Analysis of Experiences with Criminal Justice System (N=583)*

<b>Variable</b>	<b>Frequency</b>	<b>%</b>
<b>Role in official contact with criminal justice system</b>		
Hearsay witness	67	11.5
Eyewitness	116	19.9
Person who has committed a minor offence	148	25.4
Suspect of a crime	56	9.6
Someone who reported a crime	139	23.8
Victim of a crime	142	24.4
<b>The way of response of criminal justice system institutions</b>		
No personal communication	279	47.9
Very professional	54	9.3
Mostly professional	172	29.5
Unprofessional	36	6.2
Unprofessional and rude	31	5.3
Cruel and accusatorial	11	1.9

## Appendix 2

*Descriptive Analysis of Students' Victimizations (N=583)*

<b>Variable</b>	<b>Frequency</b>	<b>%</b>
<b>Victim of a crime</b>		
Yes	171	29.3
No	412	70.7
<b>Type of a crime</b>		
Theft	436	74.8
Break-in/burglary	386	66.2
Rape/sexual assault	4	0.7
Armed robbery	3	0.5
Arson	60	10.3
Assault	91	15.6
Fraud	89	15.3
Other crime	25	4.3

Type of experienced victimization		
Non-violent	81	13.9
Violent	67	11.5
Incident description		
Bad experience and still suffering	22	3.8
Bad experience and no longer suffering	54	9.3
Not so bad experience	52	8.9
No impact on respondent	55	9.4
Missing	399	68.4

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## Crime Mapping in Bosnia and Herzegovina Applied on the Municipality of Stari Grad in Sarajevo<sup>39</sup>

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*Summary: Geographic information systems use computer-processed geographical maps to visualize and access large amounts of data that are stored in specific databases. This way, police agencies can more easily access information and events regarding the volume and trends of criminal activities. This paper will analyze the possibilities of crime prevention through three aspects in terms of GIS: crime mapping, criminal analysis and investigative and pre-investigative actions. In addition, the possibilities provided by these systems in improving crime control will be applied on the municipality of Stari Grad in Sarajevo. In a previously conducted research relating the usage of these systems in police practice in Bosnia and Herzegovina, the authors noticed that police agencies are partially using or not using these technologies at all. In conclusion, the authors will indicate the possibilities and prospects of developing GIS technologies and using them on a daily basis in police agencies of Bosnia and Herzegovina.*

*Keywords: crime mapping, Geographic information systems, law enforcement agencies, Bosnia and Herzegovina*

### INTRODUCTION

Traditional systems of operational and analytical work are having more and more difficulties to respond to the challenges of the contemporary forms of crime, in particular in terms of accuracy and speed of getting usable data for prediction and decision support at various levels of the formal social control. Geographic information systems (GIS) are using computer processed maps to aid in the visualization and access to a large amount of data in the respective databases. In this way, significantly facilitate and speed up the identification of critical information and events related to the occurrence and trends of crime by law enforcement agencies, as well as their timely response. Therefore, GIS is an important link in the fight against crime by providing tools for mapping and analyzing

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<sup>39</sup> Authors: Muhamed Budimlić Muamer Kavazović, Predrag Puharić, Sandra Kobajica. Published in: *Criminal Justice and Security in Central and Eastern Europe, From Common Sense to Evidence-based Policy-making*, Book of Proceedings, pp 497-510, Ljubljana, Slovenia, 2018.

crime. In addition, it allows the analysis of complex and seemingly unrelated events and display of layered, spatial maps.

As for the prevention and combating of crime GIS can be used at three levels: mapping of crime, crime analysis and investigative and preliminary investigation, in this paper the authors will address all three aspects of the use of these systems, with particular emphasis on the opportunities and benefits that such systems provide in improving institutional responses to crime. Theorizing the current state of the specified issues in Bosnia and Herzegovina (BiH), in the conclusion it will be emphasized the possibilities and prospects of development of these technologies and greater use in the daily work of police agencies.

### **MAPPING CRIME IN CRIMINOLOGY**

The study of crime from the perspective of its spatial distribution is an integral part of the emergence and development as well as modern empirical endeavor within criminological science. Although the indications of the debates that are based on the geographic spread of undesirable behavior can be found in the oldest historical sources, however, as the first systematic work in this area is usually associated works of Adolphe Quetelet (1796-1874), who, among other things, in analyzing statistical demographic indicators from the mid 19<sup>th</sup> century claimed that there were significant statistical differences in the phenomenology of crime in the way that there are distinguished categories of youth, men, poor and unemployed and less educated members of the population. Most prominent among his thesis are the one on geographical distribution of crime, according to which the less crime was in places where poor people were prevailing with high unemployment rate, and that the crime was much more manifested in the places where richer inhabitants lived and where the rate of employment was higher (Net Industries, 2018). Quetelet's contemporary, Andre-Michel Guerry (1802-1874) also dealt with the issue of distribution of crime in different geographic areas, particularly in terms of the relationship of crime of natives and newcomers (Ignjatović, 2007). As significant scientific legacy of Guerry, detailed maps showing the distribution of crimes against property and violent crimes in certain regions of the then France are listed.

Modern criminology, especially concepts that rely on known and confirmed theoretical definition from the beginning of the twentieth century, such as the range of the theories of social organization (or social structure, as is also frequently cited in the literature), develops models to verify the hypothesis that in the focus of analysis of criminal phenomenon are placing environment or space in which the crime is "played out". Schmallager (2006) in the structure of sociologically oriented theory emphasizes, in this regard, the theory of social disorganization, that as basic concept develops and relies on,

among others, to the category of social ecology and ecological theory, the Chicago criminological school, delinquent areas, and especially cultural diversity which molds the criminology of place, ambient criminology, defensible space and the concept of “broken windows”

On this occasion, the authors will refer to the thesis that are set in the criminology of place,<sup>40</sup> as it is presented by Weisburd, Groff, & Yang (2012), which can be used in developing the research background of this paper. This theoretical concept in the literature is often referred to as ambient criminology as part of the environmental criminological theoretical base. In developing thesis established by theories of routine activities and situational crime prevention, this concept emphasizes the importance of geographic location and architectural characteristics of prevalence in criminal victimization. As a result of study, focal points (hot spots) of criminal activities are being determined, including neighborhood, some streets, as well as individual residential and commercial facilities (Schmallager, 2006). Thus, taking into account and referring to the earlier studies of Shaw and McKay, Stark (1987) stresses that there must be a significant relationship between space and maintenance (level or rate) of crime. Consequently, he developed the concept of deviant neighborhoods through 30 important points of which he particularly emphasizes categories of poverty and population density. It is believed that communities with these characteristics will set the condition of major challenges for the crime outside the houses (the poor) and especially the youngest categories that are facing a lack of control by adults and weaker results in the school that diminish the adequate conditions and prospects for a successful life. In such communities (deviant neighborhoods) there are increased chances of access to the sites that offer the opportunity for criminal activity. Afore mentioned categories constitute integral structure of analytical content that are defined in modern instruments for crime mapping, which enables an exceptional potential for application of results of modern criminological research in this area for acquiring new knowledge in the field of phenomenology and etiology of crime and the effectiveness and efficiency of institutions of social reactions to criminal behavior.

Modern law enforcement agencies, by using the theory of routine activities including the concept of environmental criminology, are developing techniques of situational crime prevention in combination with the spatial analysis of crime. As one of the concepts, Mapping and Analysis Program (MAPS) in the National Institute of Justice is used. Mapping of crime, which is used with application of GIS, allows effective use of the capacity of law enforcement agencies, by directly assisting police agencies in the distribution of police

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<sup>40</sup> The Criminology of Place, present in many titles dealing with linking spatial and geographical categories of criminal behavior, which is usually trying to detect and clarify focal point of criminal behavior in the urban areas. For more information, see Weisburd et al. (2012).

forces in places where it is most needed (Schmallager, 2006, pp. 223-224). Several studies suggest the use-value of system of crime mapping, as well as in our neighborhood. In the Republic of Slovenia, Eman, Györkös, Lukman and Meško (2013) emphasize the importance of the latest achievements in the field of crime mapping for the purpose of police work in Slovenia, i.e. Meglič and Eman (2015) indicate the extraordinary possibilities of practical applicability in reducing theft of motor vehicles. The interpretation of findings presented on the maps is simpler and more comprehensible, just like mapping also enables the presentation of different factors on selected maps. This facilitates comparison and the establishment of mutual impacts of demographic, environmental and other factors for researchers (Hacin & Eman, 2014). The greatest advantage of GIS is the possibility to see and recognize a new relationship between the analyzed crime and other data via the created map. For the police, crime mapping enables precise placement of hot spots or hot areas, and consequently more efficient planning of police operational activities (Eman, Györkös, Lukman, & Meško, 2013).

In the analysis of crime, GIS is relying on a number of categories of data, so in addition to the distribution of crime in the area, the most commonly used data are one on seasonal and temporal characteristics of the crime as well as the distribution of crime according to the characteristics of the perpetrators. In terms of spatial distribution, crime can be traced from the global point of view, regional as well as a distribution on the rout village-city, as well as the ecology of crime in urban areas. Crime mapping, according to numerous scientific and professional and practical analysis, is helping to make decisions when managing law enforcement, and in formulation of quality control strategy of crime and the tactical analysis to predict the movements of criminal groups and their geographical profiling. As one of the most important field of use of GIS, criminological research emphasizes the importance of monitoring criminal activities, where two areas of use are differentiated, in order to help police services and to create and monitor policies relating crime combatting. In this regard, it is particularly important the value in use at higher levels, considering the fact that in many cases is confirmed that by the application of these methods it is easier to control and more efficiently monitor the crime, and reach more precise forecast of the illegal phenomena.

### **GEOGRAPHIC INFORMATION SYSTEM-TERM AND HISTORICAL DEVELOPMENT**

GIS are a tool that allows the classification of selected events in space and time. In other words, assists in the collection, storage, retrieval, transformation and presentation of spatial and time data of selected (criminal) events (Klinkon & Meško, 2005, p. 133, Eman, Györkös, Lukman, & Meško, 2013). The very acronym can be used for the Geographic Information Science (Lynch & Foote, 2017). GIS applications are tools that allow users to

conduct searches of data, analyze spatial data, enter and change data on maps, and present the results of these actions (Clarke, 1986; Maliene, Grigonis, Palevičius, & Griffiths, 2011). The science of geographic information, among other things, deals with concepts, applications and systems related to the concept of GIS (Goodchild, 2010).

Father of modern GIS is considered to be Roger Tomlinson, in whose work from 1968 titled „*A Geographic Information System for Regional Planning*” this term was used for the first time (The 50th Anniversary of GIS, 2012; Tomlinson, 1968). Historically, the first use of spatial data and geographical representation for the purposes of visualization dates back to the 19th century when Picquet used epidemiological data, the percentage of deaths from cholera in Paris using different shadowing (Picquet, 1832). Shortly thereafter, one of the earliest successful application of geographical methodology was the use of spatial data to discover the causes of cholera in London's Soho. Marking a location on a map of London where infected people died and linking them in clusters John Snow was able to discover that the cause of the infection is local spring (Gunn & Masellis, 2007).

The advance of technology has led to a steady increase in the possibilities of use and visualization of spatial and geographic data. In early 20<sup>th</sup> century, a process of photo zincography was used that allowed the display of maps with different layers for data presentation. This characteristic of display of data in layers, is the most important characteristics of modern GIS. It must be emphasized that presentation of the data in this way cannot be considered as independent GIS, but in order for that to happen, it is necessary that the data are presented in layers and on the maps, and practically connected with appropriate databases, rather than having independent photos (Fitzgerald, 2007). The development of computer systems, particularly related to the development of nuclear weapons, in the early 1960s of the last century, led to the first system that had the basic characteristics of modern GIS for general use (Fitzgerald, 2007), and the first real GIS named Canada GIS is developed in 1960 in Canada and served for planning of agricultural crops.

Ongoing advancement of information technology and development of the Internet has led to possibility, in the late 20<sup>th</sup> and early 21<sup>st</sup> century, that various types of GIS data can be searched through the Internet. It has been developed and a series of so-called open source GIS platforms that can run on various operating systems and various devices which led to the growing availability of various geospatial data via the world wide web (Fu & Sun, 2010), and the development of web mapping. Web mapping is the process, by which maps are used, created by GIS and within WWW technology. Maps are, thorough this technology, available to users for viewing, but also for modifying and input of spatial data. In this way, web mapping is more than just a web cartography, this is a service by which users can

choose what type of data will be supplied to them. When planning a web GIS platform, especially important are aspects of data processing which is more related to the problem of data collection and server infrastructure and planning, as well as data storage and algorithms work, than to the type of data that the user will enter (Kraak, 2001). The World Wide Web (abbreviated WWW or the Web) as a technology is an information space where documents and other web resources are identified by Uniform Resource Locators (URLs), interlinked by hypertext links, and accessible via the Internet (W3C, 2004).

In recent years there has been an increase in the use of GIS platforms that are available for use as well as to easily available applications for mapping. Some of them have a programming interface that allows users to create custom applications and access to huge amounts of geographic data (street maps, satellite images, data for geocoding, data transport, etc.). Web mapping is enabled and group entering of geodata (Goodchild, 2007) in projects, of which the most popular is OpenStreetMap, a free map of the world.

#### **POSSIBILITIES OF APPLICATION IN LAW ENFORCEMENT AGENCIES**

GIS use computer-processed maps to visualize and access large amounts of data that are stored in specific databases. In this way, by use in the law enforcement agencies, it can be more easily and almost instantly spot the critical information and events related to the occurrence and trends of crime. The procedure that is, when it comes to research in criminology and criminal purposes, directly associated with the use of GIS is called geographic profiling (Lee Lerner & Wilmoth Lerner, 2005). According to the same authors, this method consists of psychological and geographical profiling, and as the term is created by the Canadian criminologist Rossmo and involves the use of computers to attempt predictions of the places where crime will be committed by serial perpetrators in relation to their permanent or temporary residence.

GIS is an important link in the fight against crime by providing tools for mapping and analyzing crime. Ability of agencies to respond to crime often rely on different data from multiple agencies and sources. The ability to access and process data through visualization in space and time, allows agencies appropriate and timely response. GIS platform helps to coordinate the massive amounts of data from multiple sources.

GIS allows the analysis of complex seemingly unrelated events and display of layered, spatial map. One very good example of the use of GIS is a prison institution, where this system can provide analysis and mapping of the prison population as well as equipment and space and thus ensure the safety of inmates, by separation of gang members, identifying high-risk or potentially violent inmates, and identifying dangerous places within

space plan of this institution. According to Carter (2003), Garson and Vann (2001), Paulsen (2004), Ratcliffe (2004), Vann and Garson (2003), Wilson (2007), etc. this reduces the possibility of internal violence with better command and control. Furthermore, GIS, combined with the possibilities of location devices such as Global Positioning System (GPS) makes it easier to track the movement of high-risk inmates or endangered staff across the institution.

GIS systems are used by many law enforcement agencies around the world for so-called hot spot analysis, by which the place of execution of different types of crimes (such as murder, car theft etc.) are drawn on maps. Such programs in such cases help the police to classify the crimes and identify hot spots, and thus identify areas for their future activities (intensive supervision or different types of so-called secret operation police activities). It should be noted that the hot spot analysis identifies the location at which the offenses were committed while the geographic profiling aims to identify the person who committed criminal offense.

In the prevention and fight against crime GIS can be used at three levels: mapping of crime, crime analysis and investigative and preliminary investigation. In combination with GPS, GIS can be used to track the movement of criminal offenders on probation. GPS receivers installed in police cars can help more efficient deployment and use of police officers in preventing and combating crime. In 2005, some police units in San Francisco were equipped with Personal Digital Assistants (PDAs) by which police officers can use certain information from the GIS while on patrol (Lee Lerner & Wilmoth Lerner, 2005).

In order to adequately describe the role of GIS in the work of police and related agencies, first should be defined what are the key roles and services provided by such organizations and try to offer the appropriate level and type of improvement of these services through GIS platform.

Beck (2014) states that the role of police agencies (including adaptation to a police system) can be reduced to the following services and responsibilities: The answer to the calls for response (emergency calls and calls related to quality of life); detection of the offense and finding the culprits (intelligence and investigative work and analyst of the offense); public order (protection of special events and control of protests and gatherings); application and coercion of criminal and other laws (search, detention and control); preventive work (proactive/intelligence work, community work and reporting to the public).

Below are listed just some of the areas of police work in which GIS can offer better and more efficient work. When it comes to logistical support to modern policing and the

organization, through GIS platform is easy to monitor and manage the work of the Closed-Circuit Television (CCTV) system, direct and plan the route of the vehicle, i.e. to manage the complete vehicle fleet, manage load of employees, etc. In the area of planning and analysis, using GIS can be performed so called hot spot analysis of crime, planning in case of special events (concerts, political rallies, etc.), to plan critical infrastructure and to perform virtually all types of predictive analysis. When talking about the management of field work, it can be planned and monitored process of taking statements and locations of witnesses, tactical planning, set alarm based on location, to provide field support to investigative actions, have virtually real-time information on all aspects of the field work of members of the agency (Tennant & Bichler-Robertson, 2001).

GIS platforms in analysis and visualization of data provide invaluable help. Using them is possible to visualize the data in real time and on the basis of these data to create presentations for informing the officials and the public, conduct performance evaluation of agencies and individual teams and officers, to monitor developments in real time which is especially important when it comes to the extraordinary events as concerts, festivals and similar types of gatherings where the security situation can change very quickly. It is necessary to emphasize the role of GIS in monitoring social media, which is very important in the fight against terrorism (Beck, 2014).

When it comes to law enforcement agencies, data that are usually entered into a GIS are: violations, calls, detention, going out to the site, data on persons on probation, critical infrastructure, location of cameras, location of the position of the vehicle and more recently information from social networks (Beck, 2014). In this way, GIS supports a wide range of users and agencies such as analysts, investigators, officers, administrators, officers for relation with media and the public, and of course management of staff at all levels.

Modern GIS in the fight against crime, strive in their work as much as possible to facilitate and provide information for police work in several fields such as: Predictive and preventive police work (geographic profiling, time patterns, weather conditions, information about the field risk, socio-economic indicators and repeating patterns of events); The analysis of data related to mobile systems and GPS (location of base stations, linking call data with the locations of base stations and pass of calls and mobile device in relation to a base station and connect the path); Integration with systems for criminal intelligence analysis (finding and analysis of links, identification of key events and optimize the use of geospatial platform); The development and use of control panels; Increased mobility (maps available

on all devices, the ability to access and without an active connection and data transfer in all directions in real time).<sup>41</sup>

### **THE POLICE STRUCTURE IN BIH AND POSSIBILITIES OF GIS**

The police system in BiH is a complex organization. The same is basically divided into state and entity level (the Federation of BiH and the Republika Srpska). Additional level is the Police of Brčko District of BiH, which represents independent organizational structure of police, according to Sijerčić-Čolić & Radičić (2015). At the state level, there are following police agencies that formally, as independent police organizations are under the jurisdiction of the Ministry of Security of BiH: State Investigation and Protection Agency, Border Police, the Directorate for Coordination of Police Bodies of BiH, Foreigners Affairs Service, the Agency for forensic examination and expertise, the Agency for education and professional training and the Agency for police support. Police organizations in the Federation of BiH entity is decentralized police structure consisting of the Ministry of Interior of the Federation of BiH (which in its structure, as an independent organizational unit, contains the Federal Police Directorate and Ministries of Interior of the ten cantons (each in its organization has the Police Directorate). Ministry of Interior of the Federation of BiH and cantonal Ministries of Interior have strictly separated competencies that are prescribed by the Constitution of the Federation of BiH and the Law on Internal Affairs of the Federation of BiH and of each of the cantons.

Police organizations in the entity of Republika Srpska is centralized police structure which is composed of eight organizational units, and the most important is Police Directorate. Police Directorate performs its work through organizational units at the headquarters and six Public Security Centers. Public Security Centers are implementing their work through the public security stations, police stations and police sections. From April of 2017, the new organizational structure is in place, that instead of the existing Public Security Centers introduced the police administrations, and now there are ten of them (The Republic of Srpska Ministry of the Interior, 2015).

From the above-mentioned fact, it is evident that the police organization in BiH is incoherent and differently organized structure. This does not present a difficulty for the implementation of GIS platforms, since GIS in its initial stages is primarily tied to the place and manifestations. In this case, it means that such activities may be linked to the scope of work of concrete police agencies, and therefore the same, depending on its scope of work

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<sup>41</sup> More on GIS usage for data visualization from and for police agencies, see Boba (2005), Burnett, (2007), Clarke and Eck (2014), Harries, (1999), etc.

and concrete operational interests can use this kind of platform, depending on their specific needs. At a later stage after collecting larger amounts of data, as well as, on the basis of the same, getting new knowledge, such knowledge and information can be shared with other police agencies. Because of possible future data exchange, it would be good to take into consideration compatibility of applications (in cases that law enforcement agencies purchase such applications independently). Also, with the exchange and storage of such data is necessary to take into account the existing legal provisions (primarily in the field of personal data protection), and, if necessary, consider the introduction of additional bylaws (regulations, instructions, guidelines, procedures, etc.).

According to available sources of information in BiH, GIS is used in many areas such as cartography, spatial planning, water supply and electrical infrastructure, etc. When it comes to law enforcement agencies, and specifically police agencies, this is not the case. In fact, in many police agencies, there are ideas for using GIS in specific operational actions. In particular, the Directorate for Coordination of Police Bodies of BiH for a long time had an idea to implement GIS in operational activities within their competence. However, in actual policing in BiH, GIS is not used.

From the above presented facts, it is clear what are the benefits of GIS platform. Also, it is clearly visible possible future direction for use of such platforms in BiH and that all functionality of the above-mentioned platforms can be well applied in BiH police agencies. Given the scope of the possible ways of applications in the initial stages, when it comes to operational policing, it would be most appropriate to implement the so-called hot spot analysis, but when it comes to controlling and managing the use of police forces and resources it would be most appropriate to start with activities of mapping of locations of movement of the police force in combination with GPS data.

When specifically talking about the area of the municipality that is the subject of this research, the same falls under the jurisdiction of the First Police Directorate of the Ministry of Interior of the Sarajevo Canton which is one of the seven police departments in the area of the Sarajevo Canton (Sarajevo Canton Ministry of the Interior, 2015).

## **THE METHODOLOGICAL FRAMEWORK**

The paper focuses on GIS, their historical development, concept and importance of system security. The objectives of the paper are arising from the subject of the paper, primarily related to the analysis of registered crimes in the municipality of Stari Grad Sarajevo in 2017, and the identification of “hot spots” for certain types of criminal activities, and identifying possible trends of these forms of crime, and making proposals for preventive activities of the police authority.

In order to achieve defined goals, a limited and focused theoretical research of mapping crime category was conducted, including a review of the positive norms that deal with this issue. Elementary methods used are: content analysis, method of description, classification, specialization and compilations. In addition, an empirical research of secondary data from the official records of the Police Administration of the Ministry of Interior of the Sarajevo Canton was conducted. In this section, we have applied descriptive statistics method i.e. frequencies with related visualizations (heat maps). Theoretical basis of the paper is set to theses which are highlighted in the criminology of place or, as is more often called, environmental criminology, without excluding other theoretical concepts of criminology and concepts of other sciences outside or within criminology.

## RESEARCH RESULTS AND DISCUSSION

Basis of the research are data on movement of crime in the municipality of Stari Grad, obtained from the Police Administration of the Ministry of Interior of the Sarajevo Canton. These data include total crime statistics registered by the 1<sup>st</sup> Police Department (Report on registered criminal offenses for the period January – December of 2017 / crimes by a known perpetrator, unknown perpetrator and subsequently solved offenses, document No. 02/5-2-68/18 from 27.3.2018.)

Municipality of Stari Grad is one of the four municipalities of the city of Sarajevo. According to the Department of Cadastral of Municipality Stari Grad Sarajevo, the surface of the municipality is 57.07 square kilometers with an average altitude of 541 meters. Based on the results of the census held in October 2013, Stari Grad municipality has 36,976 inhabitants.

Crime data were initially analyzed with an intention to divide proper types-forms of crime, according to the manner of commission of the offense. After that, individual data are entered to an appropriate Google Maps in order to spot crime trends or detect hot spots. Although there is a large number of both commercial and proprietary software as well as software under one of the licenses for free and open use<sup>42</sup>, we decided to use Google Maps in combination with Fusion Tables.

There are several reasons to use Google Maps in this work. Most programs, especially those with specialized crime mapping modules, are of a commercial nature, and we were focused on free and open platforms. Furthermore, Google Maps is not a GIS application in

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<sup>42</sup> Some of the most well-known and most useful programs of this type can be found at the following addresses: <https://gisgeography.com/commercial-gis-software/> and <https://gisgeography.com/free-gis-software/>

the traditional sense, and we felt that the use of Google Maps is a good indicator of the underlying technology and availability of the spatial data visualization systems.

Even using such basic and simple technology provides a clear insight into the spread and patterns of criminality, and we think that this is a good argument for the introduction and active use of GIS in the police agencies of BiH.

Before the graphic with explanations is displayed, we will briefly discuss the official statistical data on registered forms of crimes in the selected spatial and temporal framework of the research. So, in the municipality of Stari Grad Sarajevo, during 2017 the competent police institution has in the records a total of 456 cases that have been registered as statutory offenses. In Table 1, by using the method of counting, it is presented the structure of offenses under the chapters of the Criminal Code of the Federation of BiH, in which the values are reported in absolute numbers and through relative numbers in percentages, in which are visible ratios between registered forms of crime by groups or by legally protected form of value. Thus, it is quite visible the absolute dominance of registered illegal behavior against the property, which make up almost three quarters of the total of registered crime in the territory of the observed municipality, which means that law enforcement agencies at the local level are most engaged with this type of crime. Following this type of crime are crimes against human health, and criminal offenses against marriage, family and children, while all other registered forms make up less than 5% of the total registered crime in this police institution during this period.

Table 1

*Criminal offenses in BiH*

Group of Criminal offenses (COs) in accordance with FBiH CC	Frequency	Percent	Valid Percent	Cumulative Percent
COs against life and limb	10	2.2	2.2	2.2
COs against freedom and rights of individuals and citizens	20	4.4	4.4	6.6
COs against marriage, family and youth	23	5.0	5.0	11.6
COs against human health	35	7.7	7.7	19.3
COs against property	340	74.6	74.6	93.9
COs against the public safety of persons and property	9	2.0	2.0	95.8
COs against traffic safety	16	3.5	3.5	99.3
Law on the Acquisition, Possession and Carrying of	3	.7	.7	100.0

## Weapons and Ammunition

<b>Total</b>	<b>456</b>	<b>100.0</b>	<b>100.0</b>
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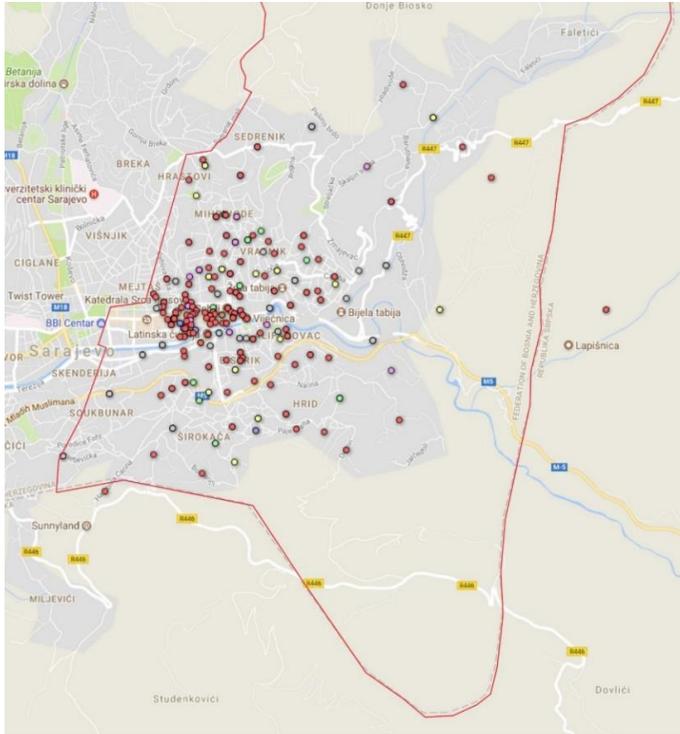
*Source: Report on registered criminal offenses for the period January – December of 2017 / crimes by a known perpetrator, unknown perpetrator and subsequently solved offenses, document No. 02/5-2-68/18 from 27.3.2018. – 1<sup>st</sup> Police Department of the Ministry of Interior Canton Sarajevo*

The first graphic (Figure 1) illustrate the territorial distribution of registered criminal offenses in the municipality of Stari Grad Sarajevo according to the type of the crime or group of crimes of the current criminal law.

The following map (Figure 2) shows the intensity of load of registered criminal offenses in some parts of the Municipality of Stari Grad Sarajevo. With this, it is clearly evident that the highest concentration of registered crimes is in the central, and most urban areas of the municipality.

Last geographical illustration (Figure 3) shows the intensity of the load of property crimes. These forms of crime is shown due to the fact that it is the most evident type of the crime in this municipality, as we have pointed out in previous analysis of official statistical data of registered crime.

Figure 1 *Territorial distribution of registered criminal offenses*



Ikona	Grupa KD
	COs against property
	COs against marriage, family and youth
	COs against the public safety of persons and property
	COs against human health
	COs against life and limb
	COs against freedom and rights of individuals and citizens

*Source: Report on registered criminal offenses for the period January – December of 2017 / crimes by a known perpetrator, unknown perpetrator and subsequently solved offenses, document No. 02/5-2-68/18 from 27.3.2018. – 1<sup>st</sup> Police Department of the Ministry of Interior Canton Sarajevo*

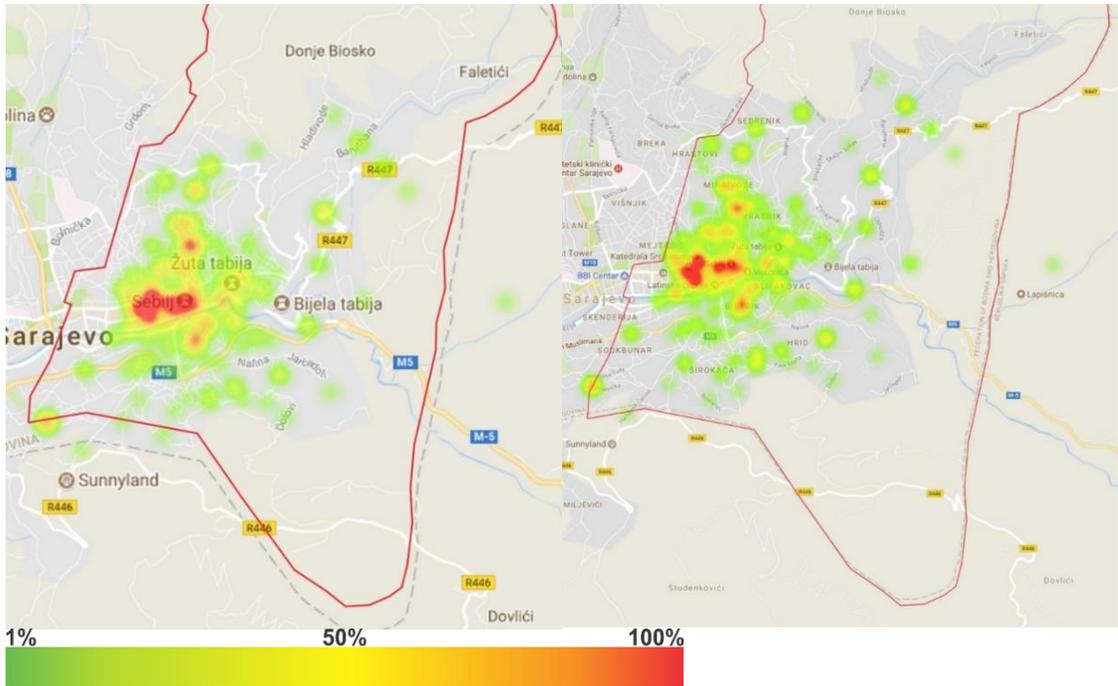
Last geographical illustration (Figure 3) shows the intensity of the load of property crimes. These forms of crime is shown due to the fact that it is the most evident type of the crime in this municipality, as we have pointed out in previous analysis of official statistical data of registered crime.

Figure 1

Figure 2

*The intensity of load of registered criminal offenses*

*The intensity of the load of property crimes offenses*



*Source: Report on registered criminal offenses for the period January – December of 2017 / crimes by a known perpetrator, unknown perpetrator and subsequently solved offenses, document No. 02/5-2-68/18 from 27.3.2018. - 1st Police Department the Ministry of Interior Canton Sarajevo*

We believe that the results of the conducted research confirm that better results can be expected from GIS-based analytical and operating systems, in terms of accuracy and speed when obtaining useful police management data, thus supporting the main thesis of this paper.

The obtained results support the thesis that it is possible to conduct analyses of complex and unrelated events on the example of selected police management reports and show everything in different layered maps of the chosen area. The institutional response to criminality can thus be significantly improved by mapping techniques, both in the criminalization process as well as pre-investigative actions.

We hope that this paper will look at social and scientific significance at the local level, and that it will be applied in a broader scientific context in this area. Additionally, we believe that the results are partially limited because of quality constraints of the data obtained

from official police management analytical services. However, this objective disadvantage aims to the segments where it is possible and necessary to qualitatively improve the contents and collecting, analyzing and presenting procedures of registered crime police records.

## CONCLUSION

As a relatively new research tool in the prevention and suppression of crime, GIS today represent an essential factor in any policy of combatting crime. Their development, is not even nearly finished. However, the techniques that are, as a part of this scientific discipline, developed and applied, significantly advanced the work of modern security services.

When it comes to BiH, according to available sources, GIS are used in many areas such as cartography, spatial planning, water supply and electrical infrastructure, etc. When it comes to local law enforcement agencies, unfortunately, this is not the case. Results of the study indicate that law enforcement agencies in their daily work, are using only basic analytical methods and tools.

From presented insights, numerous benefits of using GIS platform are visible. Also, the possible, future directions for the use of such platforms in BiH are clearly visible.

Law enforcement agencies in BiH have quality data but lack the sophisticated software and educational programs that would contribute to reaching conclusions in timely and appropriate manner. In addition, the current complex structure of the police organization in BiH potentially complicates coordinated approach to the implementation of this type of system in the work of law enforcement agencies, both in terms of procedure, and in the aspect of the possible incompatibility of data exchange between different agencies. In this regard, if they start with the application of these systems, it is necessary to make sure that applications that are used are mutually compatible. In the future use of GIS, it is necessary to adjust the existing procedures or laws and bylaws that regulate the methods of processing, use and storage of data.

So, the police institution that is responsible for the registration and reporting of crime, in their official reports stated that they are predominantly engaged with property crime, which represents 3/4 of the total number of registered crime.

When it comes to spatial distribution, it is noticeable that most of criminal offenses are registered in the urban area of the municipality, and in the central zone in which almost all major economic, tourist, cultural and institutional capacities are situated.

Based on the analyzed data, and on maps that are created according to that, it would be necessary to carry out analysis of existing plans of patrol activities and activities of the community-policing program of the police department, i.e. the implementation of these activities according to the distribution of crime on the territory of the municipality.

Through research it was determined that the software applications used to present the distribution of crime may be used for the analytical and prognostic work of concrete police agencies, and in the form of a proposal, will be offered to the local police agency.

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