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# ACCURACY OF BODY MASS INDEX BASED ON SELF-REPORT DATA AMONG LAW ENFORCEMENT CADETS

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**Abstract:** BACKGROUND – Height and body mass are often self-reported by study participants. However, the accuracy of this data compared to measured values is limited in tactical trainee populations. This study's purpose was to compare the accuracy of self-reported height and body mass to measured values within a US law enforcement cadet population, and determine how these estimations affected BMI classifications. METHODS – Self-reported and measured body height and body mass for twenty-six (n = 26) male and female cadets (males – age: 31.32 ± 10.04 years; measured height: 178.07 ± 9.87 cm; measured body mass: 92.44 ± 19.37 kg; females – age: 25.67 ± 1.53 years; measured body height: 168.17 ± 4.01cm; measured body mass: 78.94 ± 11.30 kg) were analyzed. RESULTS – Significant differences between estimated and measured height ($p < 0.001$), body mass ($p < 0.05$), but not BMI ($p = 0.281$) were revealed. CONCLUSION – Self-reported body height and body mass were not accurately reported when compared to measured values. However, reported resulted in accurate BMI classifications.

**Keywords:** anthropometrics, health assessment, police, obesity.

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## INTRODUCTION

The physical demands of law enforcement officers (LEOs) range from sedentary (i.e. administrative work) to strenuous (i.e., those such as pursuit, body drag, stair climbing or arresting uncooperative suspects) (Dawes et al., 2018). In that regard, occupational health and physical performance of LEOs are very important components for safe, effective, and efficient job performance (Dawes et al., 2018; Dawes et al., 2016; Kukić et al., 2018; Steinhardt et al., 1991). For this reason, physical fitness of LEOs is typically a mandatory part of police training and in some law enforcement agencies it is used as a tool for selection of candidates (Koropanovski et al., 2020; Lagestad & Van Den Tillaar, 2014; Lockie et al., 2019; Dawes et al., 2019b). Physical fitness could be defined as health-related and performance-related, whereby anthropometrics and body composition play an important role (Dawes et al., 2018; Kukić et al., 2018; Kukić et al., 2020; Kukić & Čvorović, 2019; Riebe et al., 2018). However, the assessment of anthropometrics and body composition is not always feasible due to limited equipment, trained personnel, and/or time. Considering the extent to which increased body mass (BM) relative to body height (BH) can negatively affect the health (Garbarino & Magnavita, 2015; Violanti et al., 2017) and physical performance (Dawes et al., 2018; Dawes et al., 2016) of LEOs, accurate yet feasible methods for evaluation of anthropometric status should be identified for the LEO population.

Body mass index (BMI) has been extensively utilized in public and occupational health (Bhaskaran et al., 2018; Ćopić et al., 2020; Ernsberger, 2012; Kukić et al., 2020) as it only requires a person's BM and BH for the calculation (Eknoyan & Adolphe, 2008; Čvorović et al., 2018). This is of importance given that people of different sizes may differ in BM merely because they are taller, rather than having greater amounts of body fat. Longitudinal body dimensions, such as BH, follow a particular specific pattern during growth (Kirchengast, 2010), while components of the body that constitute the body volume, such as skeletal and fat tissue, could be altered by physical activity, hypokinesia, nutrition, education, and socioeconomic constructs of society (Dinsa et al., 2012; Kukić et al., 2020; Kukić & Čvorović, 2019; Vuković et al., 2020). Therefore, changes in body composition of adults (i.e., increase or decrease in body fat and/or skeletal muscle mass) often reflect in changes in BM, leading to changes in BMI.

Although BMI does not provide specific information on the source of either body volume or size (Provencher et al., 2018; Rothman, 2008), the validity of its utilization relies on consistent associations with biological and socioeconomic factors, such as age, sex, education, occupation, and income (Ball et al., 2002; Boyce et al., 2008; Kukić et al., 2019; Sobal, 1991; Sörensen et al., 2000). In that regard, the World Health Organization and American College of Sports Medicine often times use the standard values of BMI for the evaluation of health status (Riebe et al., 2018; WHO, 2017). These values are easily attainable and are cost-effective, which is of high importance for law enforcement agencies that need to assess large groups of people in a short time. Therefore, multiple studies on LEOs utilized BMI to evaluate obesity rates in LEO populations (Alghamdi et al., 2017; Dopsaj & Vuković, 2015;

Kukić & Dopsaj, 2016). Accurate self-report BMI could provide important information about an officer as it provides insights into body status, and indirectly, physical fitness and health (Bhaskaran et al., 2018; Riebe et al., 2018; WHO, 2017). Noting this need for accurate reporting and associated time constraints in a LEO population, research by Dawes et al. (2019a) reported the acceptable accuracy of self-report BMI within a sample of police officers.

Considering that cadets are to become LEOs, their ability to accurately self-report BM and BH, thereby BMI could establish standardized procedures for obtaining this information. Moreover, these measures could provide insight into their self-awareness about their body status, which is important if their body status needs improvements. However, acknowledging the work by Dawes et al. (2019a), the accuracy of self-reported measures in law enforcement cadet populations has not yet been established. In that regard, the aim of this study was to evaluate the accuracy of BMI calculated from self-reported BM and BH among a cohort of law enforcement cadet. The researchers hypothesize that self-reported BH and BM data would not be significantly different from measured values and that accurate reporting would lead to accurate BMI classifications.

## METHODS

### *Experimental approach to the problem*

Self-reported and measured BH and BM data were collected from law enforcement cadets belonging to a US law enforcement agency upon entrance into their respective police academy. This data were then provided to the primary investigator for analysis and comparison.

### *Subjects*

Self-reported and measured BH and BM data for twenty-six (n = 26; males = 23, females = 3) law enforcement cadets (males – age = 31.32 ± 10.04 years; females – age = 25.67 ± 1.53 years) from one US based law enforcement agency located in the Rocky Mountain Region were collected and utilized for this analysis. Prior to data collection, law enforcement cadets were informed of the study's purpose and were asked to provide informed consent allowing investigators to utilize their self-reported BH and BM data, as well as allowing members of the training staff to measure their actual BH and BM. Ethical approval to analyze this information was obtained from the Oklahoma State University Institutional Review Board (IRB 16-041) for human subjects.

### *Procedures*

All self-reported and measured BH and BM measurements were collected indoors at the law enforcement training facility. Additionally, all data were collected in the morning before training began on the first and second day of training academy. The protocols for collection of these measurements are detailed hereafter.

*Self–reported age, BH and BM***:** Age (years), BH (in), and BM (lbs) values were self-reported by the cadets on a standard data sheet provided to each of them by the training staff in the morning, prior to training. All imperial measures, such as inches (in) and pounds (lbs), were converted to metric values for analysis.

*Measured BH and BM*: BH (cm) and BM (kg) were measured shoeless, using a portable stadiometer (Seca® 222, California, USA) and a digital electronic scale (Health-O-Meter®, McCook, IL, USA) following procedures previously reported by Dawes et al. (2019a).

*Body mass index (BMI) calculation and classification:* BMI was calculated during analysis after converting the measurements of BH and BM into the appropriate metric units. BMI was derived using the equation BMI = body mass (kg) / [height (m)]$^2$. Once calculated, National Institute of Health (1998) BMI classification ranges were used to group officers by weight status (Table 1).

**Table 1.** *Body Mass Index (BMI) classification according to the National Institutes of Health, 1998*

| Weight Status | BMI Values |
|---|---|
| Underweight | < 18.5 kg/m$^2$ |
| Normal | 18.5 – 24.9 kg/m$^2$ |
| Overweight | 25.0 – 29.9 kg/m$^2$ |
| Obesity I | 30.0 – 34.9 kg/m$^2$ |
| Obesity II | 35.0 – 39.9 kg/m$^2$ |
| Obesity III – Extreme obesity | > 40.0 kg/m$^2$ |

### *Statistical analysis*

Collected data were entered into a computer file suitable for statistical analysis using the Statistics Package for Social Sciences (SPSS) (Version 25.0; IBM Corporation, New York, USA). A descriptive statistical analysis was conducted to determine the mean values and standard deviations for the total sample and on all collected data. Comparisons between self-reported and measured values for each of the variables were conducted using a series of paired samples t-tests with alpha levels set at 0.05 a priori. Cohen's effect sizes ($d$) were calculated as the ratio of the difference in mean scores to standard deviation, following the formula: $d = (M_2 - M_1)/SD$, where $M_1$ and $M_2$ were the means of the groups investigated and the SD was a pooled standard deviation of compared groups. The magnitude of the effects was defined as follows: small = 0.2, moderate = 0.6, large = 1.2 and very large = 2.0 (Sullivan & Feinn, 2012)

## *Results*

The descriptive data and comparisons between estimated and measured anthropometrics for this sample are presented in Table II. The results of the paired samples t-tests revealed significant differences in both, estimated and measured BH ($t(24) = -4.34$, $p < 0.001$), and estimated and measured BM ($t(24) = -2.575$, $p = 0.017$), whereby the differences were trivial size (Figure 1). However, in this study, the self-reported data had 100% of law enforcement cadets classified into the same National Institute of Health's BMI classification scale as the categories determined using the objective measures. There were no significant differences revealed between estimated and measured BMI ($t(24) = 1.104$, $p = 0.281$). Further, when separately evaluating BMI data based on measured BH and BM, it was found that one cadet in this study was "underweight", four were "normal weight", eight were "overweight", 10 were classified as "obesity I", two were classified as "obesity II", and 0 were classified as "obesity III" (Figure 2).

**Table 2.** *Descriptive data and comparisons*

| **Variable** | Self-Reported Mean ± SD (range) | Measured Mean ± SD (range) | Differences Mean ± SD (range) |
|---|---|---|---|
| **BH (cm)** | 178.36 ± 10.34** (157.48 – 195.58) | 176.88 ± 9.87 (158.00 – 196.50) | 1.48 ± 0.47 cm (-0.08 – 0.52) |
| **BM (kg)** | 91.87 ± 19.52* (61.36 – 143.18) | 90.82 ± 18.95 (59.90 – 139.73) | 1.05 ± 0.57 kg (1.46 – 3.45) |
| **Estimated BMI** | 28.79 ± 5.07 (19.01 – 44.03) | 28.95 ± 5.09 (18.93-43.37) | 0.16 ± 0.02 (0.08 – 0.66) |

*Significant difference at $p \leq 0.05$; **Significant difference at $p \leq 0.01$

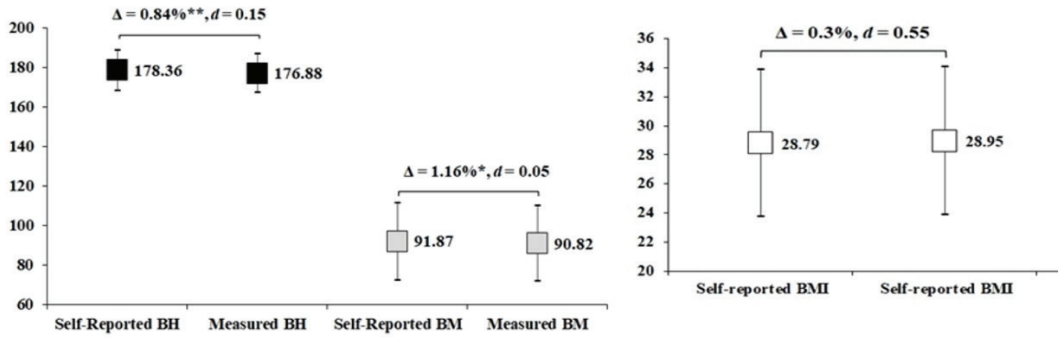


**Figure 1.** *Relative differences (Δ [%]) and effect sizes (d) between self-reported and measured anthropometric indices*

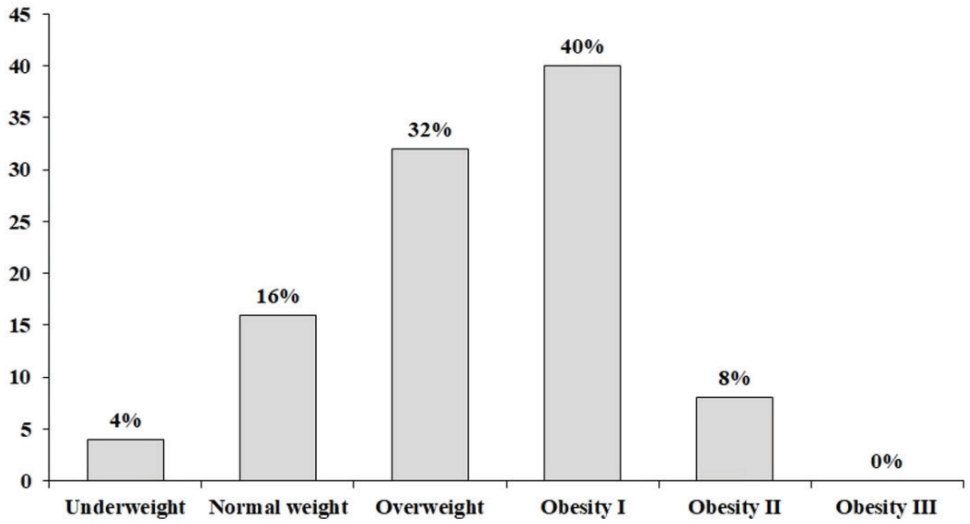


**Figure 2.** *Prevalence of cadets according to BMI classification*

## DISCUSSION

The purpose of this investigation was to compare the accuracy of self-reported BH and BM data to measured values among a population of law enforcement cadets, and determine if correct BMI classifications could be determined using self-reported data. It was discovered that law enforcement cadets reported significantly greater BH and lower BM when compared to measured values. However, no significant differences were discovered when calculating BMI based on self-reported or measured data. Based on these results, it appears that self-reported BH and BM data, though less accurate, may allow for an accurate assessment of general weight status via BMI among law enforcement cadets. This is the first study to investigate the accuracy of self-reported anthropometric data in the law enforcement cadet population. Based on these findings the researchers rejected the hypothesis that self-reported BH and BM data would not be significantly different from measured values. However, the researchers rejected the hypothesis that no differences in this data would lead to accurate BMI classifications. It seems that the results from this study have implications for strength and conditioning coaches and training staff that are responsible for developing health and wellness interventions for law enforcement cadets, and for researchers and other health experts who, due to time constrictions or resource availability, often must rely on self-reported BH and BM measures in order to stratify law enforcement cadets into groups based on weight status. It may be concluded that self-reported anthropometric data can be used as an easy and cost-effective tool for accurately determining the BMI in this population, despite inaccuracies in self-reported BH and BM.

Numerous studies have documented significant differences between measured and self-reported BH status, with the

tendency to overestimate (greater than measured) being very common (Bowring et al., 2012; Nyholm et al., 2007; Wen & Kowaleski-Jones, 2012; Martin et al., 2016). Additionally, differences have also been reported between sexes, where males generally overestimate BH and both sexes underestimated BM (Olfert et al., 2018). Several factors may be responsible for this occurrence including inadequate training regarding BH estimation, self-report bias, and desire to please. The results of this study are consistent with these findings. Self-reported BH significantly differed from measured BH by 0.8% (± 4.6) on average, where cadets overestimated self-reported values. However, these results are in contrast to those presented by Dawes et al. (2019a) who found no significant differences between self-reported and measured BH among LEOs. The results of the current study suggest that cadets tend to be less accurate than LEOs and similar to the general population when providing self-report BH data (Dawes et al., 2019a; Maukonen et al., 2018; Olfert et al., 2018; Bowring et al., 2012; Nyholm et al., 2007; Wen & Kowaleski-Jones, 2012; Martin et al., 2016). In fact, four law enforcement cadets underreported their BH, 17 over-reported their BH, and four law enforcement cadets were exact in their estimations. However, none of these estimations resulted in a misclassification of BMI for the cadets in this study. For that reason, self-reported BH and BM values can be utilized to accurately calculate BMI in the instance that there are limited resources and/or time to conduct measurements.

Previous investigations have illustrated inaccuracies between self-reported and measured BM among general populations (Maukonen et al., 2018; Olfert et al., 2018). Specifically, self-reported BM tends to be underestimated (lower than measured) (Bowring et al., 2012, Nyholm et al., 2007; Wen and Kowaleski-Jones, 2012; Martin et al., 2016). Similar to BH, inadequate training regarding BM estimation, self-report bias, and desire to please could contribute to inaccuracies in self-reporting BM. Among the sample of law enforcement cadets in this study, self-reported BM was significantly lower than measured BM by 1.2% (± 2.9) on average. It was discovered that six law enforcement cadets underreported their BM, 15 over-reported their BM, and four law enforcement cadets were exact in their measurement. However, none of these estimations resulted in a misclassification of BMI for the officers in this study. Thus, when used in conjunction with self-reported BH, self-reported BM can serve as a reliable replacement for actual BM measurements if the goal is to calculate BMI and classify cadets based on their weight status.

Self-reported BH and BM data have been used in previous research to estimate BMI and overall weight status among both general and tactical populations (Bowring et al., 2012, Nyholm et al., 2007; Wen and Kowaleski-Jones, 2012; Martin et al., 2016). If misreported or misrepresented, this self-reported data can lead to inaccurate estimations and misclassifications of an individual's weight status. In this study, when using self-reported data, 100% of the law enforcement cadets were classified correctly according to the National Institute of Health's BMI classification scale and as classified by the measured values. Additionally, BMI from self-reported and measured BH and BM values only differed by 0.16 kg/m$^2$ (± 0.02) on average. Thus, it appears that within this population self-reported BH and BM could be used to accurately determine epidemio-

logical information (i.e. general health risk or status) and as an alternative anthropometric measure if there are limited resources or access to assess such.

A notable limitation to this study is that it did not analyze the relationship between self-report bias and weight status. That is, assessing whether intentionally underestimating or overestimating BH and BM occurs for specific weight statuses. Previous research conducted by Maukonen et al. (2018) compared self-reported and measured anthropometrics in assessing obesity in adults. The investigators reported that there was a clear tendency for participants classified as overweight and obese to underestimate their BM. Additionally, this bias was much greater in overweight and obese participants than those of normal weight. Furthermore, a low power to detect differences in BMI based on sample size and group stratification, a smaller female sample compared to the male sample, and the accuracy of equipment used by participants and researchers could each be considered a potential limitation. Future studies may find it beneficial to investigate differences between self-reported BH and BM and measured BH and BM between law enforcement cadet groups stratified by weight status and sex (Maukonen et al., 2018).

## CONCLUSION

The results of this study suggest that law enforcement cadets inaccurately self-reported both their BH and BM when compared to measured values. Several factors may be responsible for this occurrence including inadequate training regarding BH and BM estimation, self-report bias, and desire to please. However, based on the results of this study, when using a broad BMI classification scale, self-reported BH and BM can be used to accurately determine BMI classification groups. When the ability to objectively measure BH and BM for BMI determination is not viable for law enforcement staff, self-reported data can be used as a surrogate. However, if any of the data indicates a health risk (i.e. BMI > 25 kg/m$^2$), or if BH and BM directly relate to occupational tasks, it is recommended that staff use more accurate and/or additional methods to directly measure BH, BM, BMI, and adiposity.

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# SOME PSYCHOLOGICAL IMPACTS ON JUDGING IN CRIMINAL CASES WITHIN THE SUPREME COURT OF CASSATION OF THE REPUBLIC OF SERBIA[1]

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**Abstract:** Following hypothesis of Andrew Watson, American professor of Psychiatry and Law, the author analyses certain psychological impacts on behavior of judges and examines the relationship between their idiosyncrasies and their judicial decisions. The survey encompasses the judges of Criminal Department of the Supreme Court of Cassation of the Republic of Serbia and, also, for comparative reasons, the judges of Criminal Department of the First Basic Court in Belgrade. Considering the main issues there is no great discrepancy between answers given by the judges of the Supreme Court and those of the Basic Court. Most responses of the Serbian judges deviate from Watson's conclusions, namely: they do not admit that they feel frustrated due to heavy caseloads, the significant majority of judges are reluctant to acknowledge their prejudices and influence of biases on their ruling, the significant majority of judges are not burdened with the idea of possible misuse of their discretion, they nearly unanimously deny that public opinion and media pressure affect their rulings, etc. Generally, the judges in Serbia are not willing to admit that they cannot always overcome their own subjectivities.

**Keywords:** psychoanalytic jurisprudence, judicial discretion, American Legal Realism, Jerome Frank, Andrew Watson.

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## INTRODUCTORY REMARKS

Psychological influence on decision-making by judges is an old, popular and provocative topic. Multidimensionality of that legal phenomenon necessarily requires a multidisciplinary approach. The need to associate law with other disciplines was predominantly recognized during the second half of the 20th century. This period saw the emergence of a number of interdisciplinary theoretical strategies, like those linking law with economy (Economic Analysis of Law or Law and Economics),[3] with literature (Law and Literature Movement),[4] and with psychology. However, a theoretical approach labelled as "Psychoanalytic Jurisprudence" attracted a more serious scientific interest no sooner than in the 1960s and 1970s, mostly owing to the following papers (Bienenfeld, 1965; Goldstein, 1968; Schoenfeld, 1964). But it became established as a mainstream concept as soon as in 1971 due to the profound and comprehensive contribution by Albert Armin Ehrenzweig in his "Psychoanalytic Jurisprudence" (Ehrenzweig, 1971; Novak, 2016; Vračar, 2000). One of the founding fathers of psychoanalytic jurisprudence was an American judge and legal philosopher, Jerome Frank (1889–1957).[5] That line of thinking fitted well to the American Legal Realism Movement which Frank was developing, promoting the idea that research of jurisprudence should include empirical evidence typical of natural sciences. His denial of law as a system of predictions and logic, launched in his famous book *Law and the Modern Mind* of 1930 (Chase, 1979; Frank, 2009), "fell like a bomb" in old-style legal theory and philosophy. He claimed that judicial decisions were more influenced by psychological inputs than by objective data. Therefore his central research was aimed at revealing the process of judicial reasoning and decision-making in the psychological context and with psychological explanations.

From the point of view of legal science and practice, it may be crucial to consider all possible factors that affect the law making process and particularly the process of applying the law. The man, not a machine, creates and applies the law. Is it legitimate and realistic to expect of a man to rise above all his feelings, subjectivities and biases, surpass his own limits, act like a God, and make a completely objective decision in every single concrete case? Consequently, is it realistic to predict every single legal outcome? Which psychological elements, which stressors – biological causes, social conditions, external stimuli or events – influence judge's behaviour and decision in a particular case? Some authors (Sutherland & Cressey, 1978) notice that, for example, in ordering punishments judges walk a thin line between two conceptions of justice/injustice – 'law enforcement principle' and the 'adjustement principle'. A judge who leans too far toward uniformity and law enforcement, as well as the one who leans too toward disparities of sentence will not display 'the judiciousness, wisdom and compassion' that citizens ex-

3 Most prominent representatives and founders of this approach were the Chicago School of Law professors Ronald Coase and Richard Posner.
4 Its forefathers and representative figures were predominantly James Boyd White and Richard H. Weisberg.
5 Important impetus to psychological jurisprudence was given much earlier by Polish-Russian legal philosopher Leon Petrazycki.

pect. Those authors claim that "Judges' judicial and sentencing behaviour is influenced by participation in social relationships, just as the behaviour of other persons is influenced by their social participation" (Sutherland & Cressey, 1978: 456). However, some researches lead to different conclusion – that judicial background has little direct influence on sentencing behaviour (Myers, 1988). Many other possible theoretically well sounded and quite well founded answers could be offered on the basis of contemplation. But the goal of this inquiry is to seek some answers on a more pragmatic basis – the analysis of attitudes of judges in criminal cases in the Republic of Serbia towards some clearly defined questions in accordance with the questionnaire prepared by the author of this paper.

Some theoretical surveys have pointed to the necessity of undertaking an empirical research to test the above mentioned questions (Avramović, 2012; Avramović, 2018; Frank, 2009; Konečni & Ebbesen, 1984; Nagel, 1982; Sheleff, 1986; Watson, 1988). Some assumptions constitute the main hypotheses of this research, namely: subjective features (personality of a judge) affect judicial decisions to a great extent; legal outcome of a concrete case is relative and cannot be predicted with certainty; the impact of different psychological elements on judicial decision depends on judges' age – in other words, it is related to their experience; there is a kind of convergence between the two great legal systems (common law and continental law) – in continental law countries (including Serbia), judges are increasingly becoming law-makers, rather than just mere law-appliers. The selection of these hypotheses probably derives from the author's previous theoretical research and from his own, regrettably quite short, practice completed in the first level court as a trainee.

## THEORETICAL FRAMEWORK OF THE RESEARCH – FOLLOWING THE PATH OF ANDREW WATSON

Application of law involves at least a few steps: establishing the facts of the case with a certain degree of reliability, selecting the legal norm to be applied, interpreting its meaning (interpretative challenge), and the final decision shaping. In every phase of the law application process there is room for subjective evaluations by the judge, which opens the whole process up to different psychological impacts and challenges.

Findings of the American professor of Psychiatry and Law, Andrew Watson, one of the architects of scientific discipline Law and Psychiatry,[6] are appropriate to serve as theoretical background for the analysis of basic hypotheses selected to be tested in this research (Watson, 1988). The basis for the analysis are the answers to the survey questions given by the criminal judges of the First Municipal Court (Basic Court) in Belgrade, and the judges of the Crimi-

6 Andrew S. Watson (1920–1998) had a very interesting intellectual background. Firstly, he finished undergraduate studies in zoology, and after that medical, and psychoanalytic studies. He was an assistant professor of Psychiatry and associate professor of Psychiatry and Law at the University of Pennsylvania. Since 1959 he was engaged at the University of Michigan. In 1966, he became a full professor in both law and medicine, and after retirement 1990, emeritus in both disciplines. Beside his academic career he had private psychiatry practice.

nal Department of the Supreme Court of Cassation of the Republic of Serbia. To enable comparison and test the results of the research more profoundly, we held additional interviews with the criminal judges of the First Municipal Court (Basic Court) in Belgrade, be it one of the biggest and most significant first level courts in Serbia.

Watson came to his conclusions following Jerome Frank, who was one of the most radical and famous representatives of the so-called American Legal Realism, a theoretical view which is still quite popular in the US (Frank, 1953; Frank, 1973; Frank, 2009; Vukadinović & Mitrović, 2019). However, his attitudes were so rigid that scholars often have labeled Frank's idea as "digestive jurisprudence" due to his famed statement that legal outcome of a particular case could sometimes depend on whether the judge was hungry or overeaten during the trial. Due to his extreme view Frank was criticized even by his American fellow scholars who also belonged to Legal Realism Movement (Cohen, 1935; Llewellyn, 1931). Namely, Frank's starting point is the "basic myth of legal certainty". He roots "the basic myth" back in childhood, because infants have a fear of the unknown and strive for safety and certainty. Children overcome those fears by reliance on their "omniscient, omnipotent and infallible father". Eventually, as they grow older and face reality, the belief in an omnipotent father disappears. However, Frank observes that many mature people keep that infantile need even in their adulthood. They search for their father-substitutes not only in different spheres of life and persons (such as the priest, the ruler, leader of a certain group), but also in law and, accordingly, in the personality of the judge. Then they perceive the judge as an infallible being, a man whose decisions are completely predictable and who guarantees security in the unsecure world. Thus, even among the adults originates or survives "an illusion of legal certainty" (Frank, 2009: 17). Despite their rigidness, Frank's attitudes should not be neglected and proclaimed as valueless. At least he had courage to point to something that all lawyers, particularly judges, tend to hide even from themselves – the fact that the outcome of a concrete case is often relative. The same phenomenon was observed by Watson, who decided to further develop Frank's idea from the psychological point of view.

Whereas Frank was satisfied with elementary psychoanalytic explanations of judges' behaviour grounded on basic *ego* defending mechanisms (like suppression and rationalization), Watson tries to step forward and extend research to some other psychological means that judges use to maintain the myth of legal certainty, and consequently make themselves feel comfortable and calm (Watson, 1988: 937–938).

Watson was aware that his research would not produce more significant results in terms of eradication of identified predispositions of people that affect ruling by judges beyond any doubt. He was satisfied with awaking subjectivities among judges, by generating a desire in the judge to "learn about his psychological self and optimize his chances for dealing responsibly with all of his personal quirks, biases, and inclinations" (Watson, 1988: 960). The hypotheses examined in this research are mostly based on the dominant psychological stressors pointed by Watson.

## EXAMINATION OF PARTICULAR PSYCHOLOGICAL IMPACTS ON BEHAVIOUR OF JUDGES IN THE REPUBLIC OF SERBIA

The author is well aware that inquiries as a method of research in social sciences comprise some weaknesses but their major strenght is that they are the only mean to reach some figures, particularly those which are products of psychological processes. Also, the author knows that the sample used in this research is relatively small (projected to be expanded in the future research) and that it comes from the jurisdiction of a single country – Serbia. The responses came from 12 criminal judges of the Supreme Court of Cassation of Serbia and 19 judges from the first level court (the First Basic Court) in Belgrade. One may object that the sample is small. However, the Supreme Court of Cassation has within its Criminal Department 13 judges and only one of them did not take part in the survey. The Criminal Department of the First Basic Court in Belgrade (out of three Basic Courts in Belgrade) consists of 22 judges of which only three opted out. This high percentage of judges deciding to take part in the study was quite encouraging. The overall impression is that they cooperated in the research with enthusiasm. Quite obviously, judges were interested to share their thoughts on those issues and they understood the importance of those questions. In any case, they accepted to make a kind of self-analysis of their feelings and professional behaviour. Most of them were ready to face those queries, make a self-portrait and, possibly, reexamine their professional performance. The reliability of the results is increased as the group of interviewed individuals was homogenious, it encompassed highly educated people with great personal responsability, established social sensibility, the persons who are well aware of the importance of that research. Also, the reasearch was not conducted individualy and randomly but institutionaly and systematically. And last but not least, the survey was fully voluntary and anonymous. Both Frank and Watson had grounded their conclusions firstly relating to the judges in criminal cases, and therefore this inquiry encompassed only that category of judges.

The survey questionnaire was mostly shaped to meet the abovementioned and other assumptions determined by Watson.

### *The image of a judge*

Like any other person, judges care quite a lot about the opinion that their colleagues have of them. Obviously, every judge is under constant "observation" by his fellow colleagues. He is expected to be objective, honest, courageous, kind, emotionally stable, firm and at the same time sensitive, empathetic, patient, and highly intellectual, with a sense of fairness. Expectations are enormous. But every person, including a judge, retains in himself his deeply rooted values, and affinities and prejudices that he has accumulated and maintained for years. To preserve the wishful image of a "fair and just judge", among other things, a judge sometimes departs from his own implanted values. And, of course, it can sometimes generate an immense internal conflict he could be facing. Addi-

tional internal conflict can be caused by a primordial desire to be altruistic; however, the empathy disappears with time, as judges deaden emotionally, by continually doing the same type of job, so that they perceive a man in prison in the same way as a man in the living room (Watson, 1988: 941–943).

In responding to the question *Do you care about the opinion of other judges about you?*, eight judges of the Supreme Court answered "yes", one said "no", one was "not sure", while two did not give any answer. On the other hand, 10 judges of the Basic Court responded "yes", seven said "no", while two were "not sure". The answers suggest that the Supreme Court judges care a bit more about their fellow colleagues' impression of them than their younger first instance counterparts do. By summing the answers of judges from the two courts, we arrive at 18 judges responding "yes" (62.97%), eight saying "no" (27.59%), three "not sure" (10.34%) and two not responding at all. Consequently, the prevailing answer to this question corresponds well to Watson's conclusion that the opinion of other judges affects a judge himself.

The second question was: *Does the growing caseload make you frustrated*? Two judges of the Supreme Court responded "yes", eight said "no", one was "not sure" and one did not answer, while among the Basic Court judges, six responded "yes", eleven said "no" and two were "not sure". The issue of high caseloads affects more the Basic Court judges, as expected, because they have to deal with substantially greater number of cases. Nevertheless, one should bear in mind that the caseload of the Supreme Court, having had jurisdiction over the entire country, is also substantial, and that those cases are more complicated and demanding (Supreme Court of Cassation, 2019). Altogether, eight judges answered "yes" to this question (26.67%), 19 responded "no" (63.33), while three were "not sure" (10%). This result does not fit Watson's attitude that continual case overload frustrates judges.

The last question about the judge's self-image read: *Do you sometimes have a feeling of empathy towards the accused person?* In the Supreme Court, only one judge said "yes" (8.33%), eight answered "no" (66.67%) and three opted for "sometimes" (25%). Within the Basic Court, eight judges said "yes" (42.11%), two responded "no" (10.53), and nine opted for "sometimes" (47%). These data suggest that the feeling of empathy is considerably less common among the experienced judges of the Supreme Court (although it could also be explained by the lack of personal contact with the accused person). Nevertheless, the differences in explanation are remarkable. The attitude of the Supreme Court judges leads to Watson's assumption that the absence of empathy is common among judges. However, taken together, the answers of the Supreme Court and Basic Court judges neither confirm nor conflict with Watson's attitude – nine judges answered "yes" (29.03%), ten said "no" (32.26%), and 12 stated "sometimes" (38,71%). Judge's experience seems to be a crucial factor that could move the final conclusion on this question towards Watson's statement.

## *Personal biases*

Watson believes that not every man, and consequently not every judge, denies the existence of certain prejudices, being aware that it is psychologically normal. Already as children, we acquire cognitions of good and bad that we implant in our values, creating in that way a kind of "archaic biases", as he names it. By getting older people are becoming more rational and, accordingly, some of the old prejudices are disappearing, while new political, social, economic and other ones are replacing them. In any case, the childish black and white vision of the world is vanishing. A judge must face his own prejudices to be able to resolve cases in a fair manner, overcoming personal biases. The demand *Iudex aequitatem semper spectare debet*, postulated back in Roman law, is still authentic. And this is precisely the point where new emotional conflict arises within a judge - between the "images of how he thinks a judge *should* behave versus how he is *inclined* to decide in response to old values retained" (Watson, 1988: 945).

The first question on the track of judges' prejudices was: *Do you recognize any kind of prejudice in your behaviour*? Only one judge of the Supreme Court responded "yes" (8.33%), ten of them responded "no" (83.33%), and one was "not sure" (8.33%). Basic court judges painted a bit different picture: eight of them responded "yes" (42.11%), nine said "no" (47.37%), and only two were "not sure" (10.53%). This structure of answers may look a bit strange. Curiously, while almost every experienced judge of the Supreme Court denies the fact that every man, including the judge, has some kind of prejudices, younger judges of the Basic Courts feel quite differently. One possible explanation, however, for this strange picture is that the experienced judges who recognize prejudice spontaneously try to get rid of it and behave like they do not have any. Nevertheless, in sum, nine judges of both courts answered "yes" (29.03%), 19 opted for "no" (61.29%), and three were "not sure" (9.68%). Thus we arrive at the dominant answer that judges do not recognize their own prejudices, which contradicts one of the basic Watson's statements.

The next question that followed logically was: *Could you completely distance yourself from your prejudices during the ruling process*? Nine judges of the Supreme Court answered "yes" (75%), two said "no" (16.67%) and only one was "not sure" (8.33%). As for the Basic Court, 14 judges responded "yes" (73.68), only one said "no" (5.26%), and four were "not sure" (21.05%). It is particularly significant that all nine judges of the Basic Court who have responded negatively to the previous question (those who declared themselves as not at all prejudiced) have confessed here that they are able to distance themselves from prejudices in judging! Similarly, out of 10 judges of the Supreme Court who denied having prejudices, eight responded that they could distance themselves from bias when judging. Finally, the result in total shows that 23 judges responded "yes" (74.19%), only three "no" (9.68%), while five were "not sure" (16.13%). It contradicts Watson's assumptions even more.

## *The need to decide*

A particular type of psychological pressure on judges is the need to decide many issues, concerning not only the verdict but also other different decisions in a particular case (especially the procedural matters, such as determining the date of hearing, the court summons, etc.). Namely, the final outcome may depend on the resolution of some trial flow issues that may look quite bizarre at first glance. A rudimentary social tendency that Frank labels as the basic legal myth of "hunger for certainty in law" and "craving for a non-existent and unattainable legal finality" is tumbled to the judge who is expected to meet those public expectations. So, along with his internal psychological pressure to achieve legal certainty, he also faces social pressure. "A judge may well seek to convince himself that he has those oracular powers that would enable him to find certainty in order to alleviate his own doubts. To whatever degree he falls prey to that temptation, he will operate in a world of pure delusion" (Watson, 1988: 946).

Also, when facts of the case or related laws lead a judge to the conclusion that he considers unjust, he has to resolve psychological conflict or find in some way other facts as relevant or use a creative interpretation of the legal norm. That unavoidable task, in Frank's and Watson's view, a judge will perform either consciously or unconsciously, whereby he will resort to a kind of rationalization (Watson, 1988: 948). "Not infrequently this means that in writing his opinion he (*judge*) stresses (to himself as well as to those who will read the opinion) those facts which are relevant to his conclusion – in other words, he unconsciously selects those facts which, in combination with the rules of law which he considers to be pertinent, will make 'logical' his decision" (Frank, 2009: 145).

Considering the psychological state of the judge's mind when making a decision, Watson points to another source of stress – revival of the childish phantasy of omnipotence. Among mature people, the fantasy of omnipotence vanishes due to the pressure of reality. However, the power vested in judges could revive the old conviction that he must always be right if he just works studiously enough. "Unless such a judge has lost his sense of reality completely, the ongoing press of daily events should pull him back to the awareness of his human fallibility and hopefully, will allow him to take a more humble approach towards his tasks" (Watson, 1988: 951).

In accordance with these conjectures, the subsequent question was: *Do you feel pressure due to the expectation that you are always obliged to make a decision?* In the Supreme Court of Serbia, all 12 respondent judges answered "no", while four judges of the Basic Court answered "yes", 14 said "no" and one was "not sure". Evidently, a significant majority of judges of the two courts have given a nearly unanimous answer – that they do not feel that kind of pressure – which contradicts Watson's opinion.

The next question was *Do you rely upon your own feelings (intuition) during the decision-making process?* Nine judges of the Supreme Court responded positively (75%) and only three negatively (25%). At the Basic court level, 11 judges answered "yes" (57.89%), six said "no" (31.58%) and two were "not sure" (10.53%). It could have already been expected that

more experienced judges of the Supreme Court would more easily admit that intuition affects their decisions; curiously, however, a significant number of younger judges did the same. Taken all answers together, it is evident that the majority of judges acknowledge the influence of intuition on their decision-making process, which is the finding that aligns with the Watson's conclusions.

Regarding the question *Do you think that judges are law-makers in the Serbian legal system?*, nine judges of the Supreme Court responded positively (75%), only one negatively (8.33), while two were uncertain (16.67%). Nine judges of the Basic Court also responded positively (47.37%), six did not agree with the statement (31.58%) and four were uncertain (21.05%). Reasonable expectation that younger judges do not think that they create law was confirmed; however, taken together, the results show that 18 judges accept that perception (58.06%), seven of them reject it (22.58%) and six of them are uncertain about it. It not only confirms the Watson's statement that judges do create law, but it also proves that two great legal families – common law and continental law – are converging, and particularly that case-law is becoming a formal source of law in the civil law countries. This opinion is strongly supported by the great majority of the experienced Supreme Court judges.

## *Stress from problems with power*

In performing judicial duties, the judge certainly has very wide powers. Although their framework is somewhat broadly defined by legal rules, and the code of judicial ethics, independence of the judge is still great. Considering the broad right of discretion that judges exercise, Watson believes it to be another cause of internal conflict. For example, judges may react differently to an aggressive impulse of a party or a lawyer in the case. With their powers and responsibilities in mind, they could respond by calm behaviour, controlling their reaction (using the ego defense mechanism of reaction formation), or they may lose control and react improperly and aggressively, reflecting the repression or denial of the restraint a judge is supposed to employ. Although every judge knows that he is expected not to react improperly, his strong psychological impulse causes a strong internal conflict within himself (Watson, 1988: 952–954).

Bearing in mind the stressors related to judge's powers, the following questions were employed for testing.

*Are you aware how wide the judge's discretion that you dispose of is?* Within the Supreme Court, all 12 judges responded affirmatively, while within the Basic Court, 16 judges responded positively and only three of them were uncertain. Nearly all judges are aware of that privilege and burden.

*Do you react to aggressive impulses of parties or lawyers restrainedly?* Nine judges of the Supreme Court declared that they do not remain calm, two of them said "yes", and one did not respond. Conversely, only five judges of the Basic Court declared that they do not remain calm, ten of them stated that they do, and four answered "sometimes". It can be concluded that older and more experienced judges feel free to express their emotional reactions to aggressive approach of other parties (it is likely that they are diminish-

ing their internal psychological conflict). On the other hand, younger judges tend to suppress their reaction. However, one must bear in mind that Supreme Court judges have little contact with parties and lawyers; hence, their answers are based on their previous experience in trial courts. Nevertheless, the responses correspond with Watson's thesis that judges react differently to external aggressive impulses which in any case cause in them a kind of internal conflict.

*Are you burdened with the idea that you could misuse your judicial discretion?* Only three judges of the Supreme Court said "yes" (27.27%), eight of them responded "no" (72.73%) and one did not respond at all. Quite similarly, only one judge of the Basic Court said "yes" (5.26%), 17 responded "no" (89.47%) and one was "not sure" (5.26%). The predominant answer was negative – most of the judges are not burdened with the idea of possible misuse of judge's discretion, which deviates from the Watson's proposition. However, it is quite significant that the majority of judges responding to the previous question answered that they relatively rarely stay calm upon aggressive impulses by parties or lawyers, concurrently feel quite relaxed regarding the possible misuse of judge's discretion. An observation by a prominent representative of the Scandinavian Legal Realism, Alf Ross, seems to offer a possible answer to this issue: "It may be an interesting problem of social psychology why one should wish to conceal what really takes place in the administration of justice. Here we must be content to state that it seems a universal phenomenon to pretend that the administration of justice is a simple logical deduction from legal rules without any evaluation by the judge" (Ross, 1959: 154).

### *Stress from sentencing tensions*

A particular kind of pressure upon a judge emerges during the process of bringing a verdict. Along with numerous personal reasons (Frank would call them "idiosyncrasies" – peculiarities, conscious or unconscious values of an individual), there comes additional tension from the public, particularly in issues of "convicted culprits". The community pressure could be even stronger for those mindful of their professional career, re-election or appointment to a higher court. In a word, Watson is convinced that influence of the public is inevitable and that it causes an additional internal conflict for a judge (Watson, 1988: 954–955).

This conclusion is more or less confirmed in the interview with the President of the Supreme Court of Cassation of Serbia, Judge Dragomir Milojević, who answered a similar question: "It is sure that media announcements of arrests or publicizing that some cases are expected to be initiated do not ease the position of the judge to whom a "famed" case is assigned for adjudication. Media often proclaim in advance that someone is a great criminal, dangerous murderer, etc. Those public qualifications cause a heavy burden for the judge who is to handle such a case. Could it be related to political pressure? Perhaps yes, perhaps no. Either way, however, different types of pressure upon a judge do exist. And it comes not only from the person who gives this kind of statements, but also from those who publish it" (Milojević, 2019).

A similar testimonial was given by the President of the Court of Appeal in Belgrade, who once said: "I would not be sincere if I said that I do not react, like any man, to different texts in newspapers when they are in any sense connected with judiciary. I only try to distance myself from those inputs as much as I can by relying on my long-standing experience" (Milenković, 2018).

Consequently, following these considerations, the question of the survey was: *Does the public and media pressure affect your decisions?* The results were amazing. Not a single judge of the Supreme Court said "yes", eight of them explicitly denied (66.67%) and four were uncertain (33.33%). Similarly, in the Basic Court, only one judge responded that the public opinion and media pressure do affect his decision (5.26%), 17 responded negatively (89.47%) and only one was uncertain. Thus, we obtained a nearly unanimous answer that the public and media pressure do not affect decision-making by judges. This finding strongly contradicts Watson's thesis, as well as the statements of the two presidents of the highest courts in Serbia. There are different possible reasons for the judges being so unanimous in answering negatively, and one of them is that they were not completely sincere.

3.6 Conflicts over personal needs versus professional demands

It is quite common, particularly in Serbia, that judges have a lot of cases and little time, making them unable to pay the same amount of attention to all cases. The continuous overloading of cases generates additional psychological pressure on judges, including the feeling of not being capable enough. Work pressure particularly affects judges of the perfectionist kind, who still have the fantasy of omnipotence. For Watson, it is clear that omnipotence of a judge is just an illusion and that a judge who continues to cherish that fantasy is inevitably faced with failure (Watson, 1988: 956).

In that context, the following question was formulated: *Have you ever called into question your capabilities due to objective difficulties to give a verdict in due time?* It is basically the question which could 'put on trial', to some extent, the judge's feeling of omnipotence (or 'phantasy of omnipotence'), as Watson calls it. The judges of the Serbian Supreme and the Basic Court were of similar opinion. Ten judges of the Supreme Court responded negatively, and only two of them did not respond. Likewise, 14 judges of the Basic Court responded "no", three of them answered "yes", and two were "not sure". Contrary to Watson's view, most judges in Serbia seem accommodated to that kind of pressure; they do not doubt their capabilities on that ground and many of them basically have the illusion of omnipotence.

The subsequent question in that context was: *Is your private life affected by your work overload?* A certain difference can be noted in the answers of the Supreme Court and the Basic Court judges. In the Supreme Court, four judges answered positively, three responded negatively, three were uncertain, and two did not respond at all. Nine judges of the Basic court responded that their private life is affected with their work pressure, eight decided to check the answer "no" and two of them were "not sure". Contrary to Watson's conviction that judges feel the pressure of workload in their private lives, the judges of the highest and the first level Serbian courts are quite divided in their answers; therefore, this examination can neither confirm nor deny Watson's thesis.

## EXAMINATION OF POSSIBLE "JUDICIAL SELF-HELP" IN OVERCOMING PSYCHOLOGICAL TENSIONS

Watson identified six major conflicting situations, stated above, which represent dominant psychological stressors. While not excluding other possible stemming grounds of stress, he believes that those situations are dominant in causing internal conflict in judges and, consequently, that it adversely affects the establishment of legal certainty.

Therefore he took a step forward tending to offer a therapy to prevent those problems, labelling it as "judicial self-help". The principal remedy for a judge's problems of psychological tension is to be able to resolve the conflicts which produced the tension (Watson, 1988: 957). His main suggestion for judges how to overcome those tensions is to develop self-awareness. He suggests different approaches, like conversation with family members and friends (but also psychotherapy, including systematical judicial training sessions), widening of the legal knowledge, dialogues with colleagues who have the same problem in order to understand that he or she is not the only one with a problem.

When they fail to resolve the internal conflicts and endless search to reach the just decision, judges usually resort to "mechanistic" approach to the application of law (Watson, 1988: 957). They are thus able to justify the concrete legal outcome strictly by law. Firmly relying upon the law, judges basically shift responsibility on it. This practice is a kind of "*ego* defense mechanism of projection", whereby a judge projects his discontent with the decision on someone else.

At the end of his study, Watson gives advice to lawyers – basically the one that they already know well: that it is essential to get well-acquainted with the personality of the judge who is in charge of their client's case (Avramović, 2018).

These Watson's observations provided a basis for formulating the final set of questions for the questionnaire.

A. *Would you accept psychoanalysis treatment in order to face your own prejudices and get to know yourself better?* Three judges of the Supreme Court responded "yes", six opted for "no", two were "not sure", and one did not answer. At the Basic Court level, eight judges said "yes", six said "no" and five were "not sure". The result of the examination is curious: younger (Basic Court) judges were more open to that challenge than the older ones (from the Supreme Court). However, the judges of the two courts are quite divided on this issue. They evidently do not share on a large scale the opinion of Watson and Frank that psychoanalytic treatment of judges is helpful in gaining self-awareness, and that it could even be curative. That attitude of criminal judges in the Republic of Serbia is more in accordance with Posner's attitude that psychoanalysis of the judges, as suggested by Frank, is ridiculous because "apart from the time and expense involved, there is no basis for the claim that psychoanalysis has nontherapeutic value – for example, that it can improve the judgment of a normal person" (Posner, 2010: 118).

B. *Have you ever hidden behind the law in order to avoid your own responsibility for the certain legal outcome?* On this question, the answers of the two courts were more similar. Of the Supreme Court judges only two admitted that they have ("yes" 16.67%), nine that they have not ("no" 75%), and only one was

uncertain (8.33%). Only one judge of the Basic Court answered "yes" (5.26%), 16 of them answered "no" (84.21%) and two were "not sure" (10.53%). Altogether, the result is quite consistent: the majority of judges of the two courts have answered that they never hide behind the law to escape responsibility for the legal outcome (25 of them – 80.65%), three were uncertain about it (9.68%), and only three judges answered positively to this question (9.68%). This statistics strongly contradicts not only Watson's but also one of the main Frank's conclusions.

C. The third question of that set was: *Do you think that it is necessary to acknowledge to the law students the fact that concrete legal outcome is relative (uncertain)?* Nearly all judges of the Supreme Court answered positively (only one said "no"). Correspondingly, 13 judges of the Basic Court were positive, three of them were uncertain, and three opted for "no". Although the question is quite delicate, particularly from the educational point of view, it may sound a bit strange that it triggered the highest degree of unanimity of all judges.

## CONCLUSION

Significant *discrepancy* in answers of the Supreme Court of Cassation and the Basic Court judges is striking only in terms of empathy towards the accused person. The feeling of compassion is much more prevalent among younger judges of the Basic Court, while older and more experienced judges of the Supreme Court have nearly completely lost that kind of feeling. The answers of the Supreme Court judges are well in agreement with Watson's attitude that with the passage of time, and the accommodation to that profession and its challenges, the feeling of empathy is gradually disappearing. Myers also comes to a similar conclusion. His research shows that older judges are more punitive than younger judges (Myers, 1988).

The *confirmed* Watson's assumptions by the judges of both courts are not so numerous. Most judges, particularly those from the Supreme Court, do care about the opinions that their colleagues will have about them. Also, the majority of judges (especially of the Supreme Court) admit that they rely upon their intuition when they are deciding a case. A further general conclusion is that it seems that judges are more and more converting into law-makers within the Serbian legal system. It could be a specific kind of confirmation that continental legal systems are gradually and spontaneously embracing some common law system features. Finally, different reaction of judges to aggressive behaviour by parties or lawyers accounts for another Watson's assumption confirmed by this research.

Judges are generally quite divided in their opinions concerning the impact of their workload on their private lives. Their answers can neither support nor deny Watson's thesis (*neutral*) about the inevitable impossibility of harmonizing professional duties with private needs and the frustration it causes for judges. Moreover, although Watson recommends that all judges should undergo psychotherapy in order to confront their own prejudices and develop self-awareness, judges are quite divided on that issue. Nevertheless, it is not possible to state that the Serbian judges have a high

level of responsiveness in terms of the need for psychotherapy and self-awareness developing.

Responses by the Serbian judges to other issues *deviate* significantly from Watson's presumptions. There is a general unwillingness of judges to admit that they feel frustrated due to heavy caseloads. The significant majority of judges are reluctant to acknowledge their prejudices and influence of biases on their ruling. They unanimously reject the existence of psychological pressure due to the expectation that they must always decide and always be right in their decision. Although generally aware of how wide the discretion they enjoy, the significant majority of judges are not burdened with the idea of possible misuse of it. The judges nearly unanimously deny that the public opinion and media pressure affect their rulings. This denial is in contradiction not only with Watson's presumptions, but also with the public statements of the presidents of the highest courts in Serbia. Contrary to Watson's view, the majority of judges in Serbia do not have doubts in their capabilities and many of them basically maintain the illusion of omnipotence. Also, most of them asserted that they did not hide themselves behind the law and they were willing to accept their own responsibility for the outcome of the case.

However, generally and *substantially*, the attitudes of the Serbian judges are in agreement with Watson's, but most of all with Frank's general conclusion that most of the unpleasant experiences judges suppress into unconsciousness, maintaining in that way the myth of legal certainty. It all results in their unwillingness to break the 'basic myth' and generally admit the fact of uncertainty of a legal outcome and unawareness of their 'idiosyncrasies' which undoubtedly more or less affect their decision-making. On the other hand, nearly all judges are of the opinion that law students must be acquainted with the fact of uncertainty of the legal outcome. Hence, it was possible to observe, and now it becomes obvious, that the majority of judges acknowledge their own role in the law-making process and consequently recognize the fact of uncertainty and relativity of the legal outcome. However, what judges do not want to recognize is the existence of a causal link between their idiosyncrasies (preconvictions) and their discretion on the one hand, and relativity of the legal outcome, on the other. In fact, the judges want to shift from themselves the potential responsibility for a certain legal outcome. If the majority of judges, as the inquiry has shown, have a role in the law-making process, if the legal outcome is uncertain and if the public opinion and media do not affect the court decision, then what does the legal outcome depend on, if not the judge himself? That observation is in accordance with Nagel's conclusion reached after examination of 313 state and federal supreme court criminal judges in the USA: "Because criminal cases frequently involve value oriented controversies, however, and because different background and attitudinal positions tend to correspond to different value orientations, there will probably always be some correlation between judicial characteristics and judicial decision-making in criminal cases" (Nagel, 1962: 339).

This research shows that judges do not readily admit that, like other people (and not like gods), they cannot always overcome their own subjectivities and their deeply rooted values. They are supposed to be a mere law – the "reason without passion". It seems that judges have great

expectations from themselves, similarly as Rudolph von Jhering expected that a judge should not see before him the concrete individuals about whom he is deciding but abstract persons in the masks of plaintiff and defendant (Ihering, 1913: 297–298). A judge, a man made of flesh and blood, not a machine (or "judge Hercules" as Ronald Dworkin should say), can in some instances act irrationally and unpredictably, depending on his own current feelings and circumstances. Therefore, in those situations (but not only then, as we do not know when and what will induce a certain kind of reasoning) predictability of a legal outcome becomes mission impossible. Consequently, this research basically confirms the observation of Frederick Bernays Wiener that: "Judges are men, conscientious men, virtually all of whom work hard to eliminate personal predilections from the task of adjudication. Even so – they are still human beings, they are not electronic automatons" (Bernays Wiener, 1962: 1024).

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# NEW POSSIBLE MULTIDIMENSIONAL MODELS FOR CLASSIFICATION OF THE BASIC LEVEL OF PISTOL SHOOTING SKILL

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**Abstract:** The aim of this paper was to provide a possible methodological solution for monitoring of the marksmanship training progress and evaluation of the level of shooting skill acquisition with service pistol CZ99. The second aim was the idea of development of a screening model for gender-dependent classification of the police personal, other security personnel and sport-oriented personnel in relation to their basic marksmanship skill. The research sample included a total of 83 participants (Men = 53, Women = 30) initially divided into four qualitative categories according to the personal shooting experience and shooting skill level. The applied principal component analysis has revealed a highly stable structure of the component matrix of the extracted factor. The following variables had the highest descriptive value in relation to the shooting skill in the respective samples regardless of distance: Men - an averaged value of the hit circles on the target and rounds fired, the index of efficiency considering precision and a coefficient of variation of hit circle achieved during the shooting at the target; Women - an averaged value of the hit circles on the target and rounds fired, the index of efficiency considering precision, a coefficient of variation of hit circle achieved during the shooting at the target and the index of efficiency considering accuracy. On the basis of the obtained results highly statistically significant ($p \leq 0.000$) specific multidimensional models were developed which enabled statistically significant classification of the participants relative to the pistol shooting skill classification. The accuracy of the defined equation model for estimation of shooting skill score classification was 59.7 and 61.5% for men and 68.6 and 68.0% for women in relation to the examined shooting distances of 6 and 10 m, respectively.

**Keywords:** shooting skill, police officer, multidimensional model, pistol shooting training.

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## INTRODUCTION

Although shooting is one of the most highly developed sports, it is primarily rooted in the law enforcement and military, the structures that have obligatory and, more importantly, practical need for proficient firearms use (Vučković et al., 2008, Moon et al., 2014). It is considered that police officers are armed for their own safety and for the protection of the public (Kayihan et al., 2013). Regardless of the current incidence level of life-threatening situations (Anderson et al., 2002; Morrison & Vila, 1998), police officers must be adequately trained in order to react properly. This may require an officer to aim and fire a weapon under various conditions of psycho-physiological stress, and a failure to accurately do so can result in possible harm to the officer, suspect or general public (Muirhead et al., 2019). Also, the final act of using the gun is shooting and given that the shot needs to be as safe as possible for all parties involved, police officers must train to either improve or maintain their marksmanship skills and the acquired skill has to be continuously perfected and maintained during a professional career (Dopsaj et al., 2019). Consequently, the firearms training is an obligatory part of police officers' training that is typically organized by the agency – as specific as a standardized methodological process (Kayihan et al., 2013; Morrison & Vila, 1998; Vučković et al., 2008).

This is accomplished through the process of regular shooting training and evaluation that are considered a standard in police and law enforcement agencies worldwide (Anderson & Plecas, 2000; Kayihan et al., 2013; Silk et al., 2018). The ultimate goal of regular shooting training is to produce immediate and cumulative effects that will result in improved marksmanship and enhanced tactical efficiency (Vučković et al., 2005). As the standard-issue service weapon of the police is a handgun, it is only natural that the majority of police firearms training is geared toward handgun proficiency which encompasses two basic handgun skills: gun handling and marksmanship (Charles & Copay, 2003).

Given that marksmanship is multidimensional space consisting of different measures, the evaluation and monitoring of marksmanship performance should include different measures. The two most commonly used measures of marksmanship skill are accuracy (i.e. the extent to which the centre of the group of shots is close to the centre of the target) and precision (also referred to as consistency, i.e. the size of the group) (Johnson, 2001). One of the commonly used ways to measure accuracy is the average value of the points hit on the target, while the primary measure of shooting precision is the mean radius of the group which refers to the average of the straight-line distances between the centre of the shot group and each shot (Johnson, 2001). In addition, other measures could be used in order to gain perspective and improve the quality of information regarding the progress of the training process and the level of acquired skill. For example different indexes that can provide information regarding the degree of shooting efficiency, as well as the coefficient of variation that is defined as the ratio of the standard deviation to the mean, are commonly used in statistics to show the extent of variability of the results in relation to the group mean (Vincent, 2005).

Given the mentioned above, accurate evaluation of firearm proficiency requires the application of multivariate methods for identification of the structure of underlying measures that de-

scribe the outcome with the highest level of accuracy with classification of performance in relation to the achieved composite score (Hair et al., 1998). The aim of research was to provide a novel multidimensional methodological solution for monitoring of the marksmanship training progress applicable in practice. Further aim was to develop gender-dependent classification algorithms that would enable the accurate classification of the police or other security oriented personnel in relation to their basic marksmanship skill.

## METHODS

This research could be classified as an applied scientific research. The main measurement method was field testing, while the measurement itself was conducted using a direct method.

## SAMPLE

The research sample included a total of 83 adult participants (Male = 53, Female = 30) of different levels of shooting experience (5.5 ± 3.4 years). The main characteristics of males were age = 37.6 ± 12.0 years, body height = 181.7 ± 5.9 cm, body mass = 86.9 ± 9.6 kg, and body mass index = 25.76 ± 2.67 $kg \cdot m^{-2}$. The main characteristics of females were age = 24.2 ± 3.6 years, body height = 167.4 ± 5.3 cm, body mass = 61.7 ± 8.2 kg, and body mass index = 21.89 ± 2.07 $kg \cdot m^{-2}$. The overall sample was divided into four qualitative categories relative to shooting experience and shooting skill level: 1) beginners (n = 24 [29.9%]), who had no previous experience in shooting, were provided with one hour of introductory training in pistol handling; 2) intermediates (n = 23 [27.7%]), who completed the basic shooting course with a total shooting experience of three months; 3) experienced (n = 20 [24.1%]), who had completed the basic and advanced shooting course with a total shooting experience of at least one year, and 4) professionals (n = 16 [19.3%]), who had completed the basic, advanced and professional shooting course with a total shooting experience of at least two years. In relation to the total sample, 22 subjects were police officers, 8 practical shooter competitors, 20 recreational shooters and 33 the students of the Faculty of Sport and Physical Education of the University of Belgrade who voluntarily applied for the study. The research was carried out in accordance with the declaration of Helsinki and the recommendations of the guiding physicians in biomedical research involving human subjects (Williams, 2008), as well as with the ethical approval number 484-2 of the ethical board of the Faculty of Sport and Physical Education, University of Belgrade.

## TESTING PROCEDURES

All testing was conducted in the closed type shooting range "Target" in Belgrade during October 2018 and May 2019, using Zastava CZ 99 standard service pistol (https://en.wikipedia.org/wiki/Zastava_CZ_99). All shootings were realized

on a Standard International Shooting Sport Federation (ISSF) 25m precision pistol shooting target from the distances of 6 and 10 m using the randomized trial method according to the procedures described earlier (Dopsaj et al., 2018, 2019). All shooting sessions were performed from the standing position (diagonal or parallel, depending on individual style of shooters) with both hands grip, using precision shooting on a standard pistol 50 x 50 cm circular target with 5 bullets per distance (6 and 10m) with no aiming period time limit. The shooting results were analysed for each shot using the custom-built software SSSE Version 1 (Kos, 2018; Kos et al., 2019).

## VARIABLES

The level of shooting performance was assessed in relation to the accuracy and precision using nine variables.

Evaluation of precision:

1) AVG6m and AVG10m - Average score of the hit circles on the target and rounds fired achieved at the distance of 6 m or 10 m, expressed numerically;

2) $EFFIC_{Prec6}$ and $EFFIC_{Prec10}$ – the index of efficiency in precision, calculated as a ratio between the actual sum of points realized and the maximal hypothetic sum of points (5 x 11 = 55), expressed as a percentage value.

3) Evaluation of accuracy:

4) cV%6m and cV%10m – the coefficient of variation of hit circles achieved during the shooting (i.e. relative between-shots dispersion) calculated as standard deviation (SD)/AVG6m or 10m • 100, expressed in %;

5) $EFFIC_{Accu6}$ and $EFFIC_{Accu10}$ – the index of efficiency in accuracy, calculated as a ratio between the performed sum of hits in the target area and the number of fired bullets, expressed as a percentage value.

6) Evaluation of basic shooting skill index:

7) $SSI_{6m}$ and $SSI_{10m}$ – the shooting skill index, calculated as a ratio between the average value of the sum of hit circles on the target and the coefficient of variation squared, calculated for each shooting distance ($SSI_{6m}$ = AVG6m / $cV\%6m^2$, and $SSI_{10m}$ = AVG10m / $cV\%10m^2$).

## STATISTICS

All raw data were analysed using the descriptive statistics, i.e. using mean, standard deviation (SD), the coefficient of variation (cV%), the standard error of mean (SEM), minimum and maximum (MIN and MAX). Principal component analysis was used to identify to what degree investigated variables constitute significant factors of shooting performance. The Oblimin rotation followed by the structure matrix was used to hierarchically rank the variables within the factors of each shooting distance. In this manner, the hierarchical structure of the significance of the variables in relation to each extracted factor was determined relative to the shooting distance and gender. After that, all variables that projected more than 90% on the factor were extracted as dominantly significant in defining the basic shooting skill in standing position relative to the examined shooting distance. With a new extracted set of the most discriminative basic shooting skill variables, the new factor analysis was performed in order to define the final factor structure which was necessary for calculation of the multidimensional score. This score presented the final information regarding the

overall positioning of the tested subjects in the group in relation to the examined basic shooting skill. Also, this score was defined in relation to gender for each shooting distance and represented the basic shooting skill criterion variable (Basic Shooting Skill Score - BSSS). Multiple Regression Analysis (MRA) was used in order to determine the specific equation for the evaluation of BSSS. As a final procedure, a Discriminant analysis was applied and the resulting classification was compared with the initial group classification of the participants in order to determine the predictive validity (Hair et al., 1998). The level of statistical significance was set for the probability of 95% and p-value at 0.05.

## RESULTS

Table 1 shows the descriptive results of the examined variables in relation to the sample. The results for both genders have shown that the average value of the shot at the 6 m shooting distance was higher than that at 10 m, which was followed by lower variation in results at 6 m compared to 10 m. Furthermore, the $EFFIC_{prec6}$ was higher compared to $EFFIC_{prec10}$ as well as $EFFIC_{accu6}$ compared to $EFFIC_{accu10}$, which reflected in higher SSI6m than SSI10m.

**Table 1.** *Descriptive statistical data in relation to the shooting distance and according to gender*

| | | | Mean | SD | SEM | Min | Max |
|---|---|---|---|---|---|---|---|
| **Male** | Precision | AVG6m | 8.44 | 1.56 | 0.19 | 3.40 | 10.60 |
| | | $EFFIC_{Prec6}$ | 76.83 | 14.31 | 1.75 | 24.73 | 96.36 |
| | | AVG10m | 7.03 | 2.09 | 0.34 | 1.20 | 10.20 |
| | | $EFFIC_{Prec10}$ | 62.70 | 20.96 | 3.36 | 5.09 | 92.73 |
| | Accuracy | cV%6m | 17.65 | 14.35 | 1.77 | 4.38 | 89.69 |
| | | $EFFIC_{Accu6}$ | 99.70 | 2.44 | 0.30 | 80.00 | 100.00 |
| | | cV%10m | 37.14 | 31.80 | 5.09 | 5.08 | 156.49 |
| | | $EFFIC_{Accu10}$ | 95.38 | 13.35 | 2.14 | 40.00 | 100.00 |
| | Index | SSI6m | 12.14 | 14.89 | 1.82 | 0.04 | 53.06 |
| | | SSI_10m | 4.49 | 7.94 | 1.27 | 0.01 | 34.07 |
| **Female** | Precision | AVG6m | 6.69 | 2.72 | 0.46 | 0.80 | 9.60 |
| | | $EFFIC_{Prec6}$ | 58.13 | 28.29 | 4.78 | 2.91 | 87.27 |
| | | AVG10m | 5.65 | 2.95 | 0.59 | 1.00 | 9.60 |
| | | $EFFIC_{Prec10}$ | 46.14 | 31.70 | 6.34 | 2.55 | 87.27 |
| | Accuracy | cV%6m | 42.63 | 45.07 | 7.62 | 0.70 | 162.98 |
| | | $EFFIC_{Accu6}$ | 89.14 | 20.20 | 3.41 | 40.00 | 100.00 |
| | | cV%10m | 69.41 | 67.19 | 13.44 | 5.08 | 223.61 |
| | | $EFFIC_{Accu10}$ | 76.80 | 28.68 | 5.74 | 20.00 | 100.00 |
| | Index | SSI6m | 4.69 | 6.29 | 1.06 | 0.00 | 27.69 |
| | | SSI10m | 3.12 | 6.99 | 1.40 | 0.00 | 34.07 |

Table 2. shows the results of the Factor analysis. The amount of extracted and explained variance ranges from 71.943% for male sample for 6m shooting to 81.314% for female sample for 10m shooting.

**Table 2.** *Results of principal component analyses (factor analyses)*

| Variables | Component Matrix | | | |
|---|---|---|---|---|
| | **Male 6m** | **Female 6m** | **Male 10m** | **Female 10m** |
| AVG | **0.958** | **0.957** | **0.966** | **0.974** |
| $EFFIC_{Prec}$ | **0.965** | **0.974** | **0.984** | **0.980** |
| cV% | **-0.945** | **-0.971** | **-0.977** | **-0.962** |
| $EFFIC_{Accu}$ | 0.568 | **0.907** | 0.822 | **0.961** |
| SSI | 0.730 | 0.657 | 0.598 | 0.555 |
| Initial Eigenvalues -Total | 3.597 | 4.062 | 3.888 | 4.066 |
| % of Variance | 71.943 | 81.248 | 77.766 | 81.314 |

Table 3 shows the basic shooting skill model prediction equations. AVG, cV% and $EFFIC_{Prec}$ single out as the most discriminative for the measured basic shooting skill at both shooting distances in males, while AVG, cV%, $EFFIC_{Prec}$ and $EFFIC_{Accu}$ were the best predictors in females. In Table 4, the results of the Discriminant analysis are presented. At the general level, the results show that with the applied methodology and defined models, on average 68.0% shooting skill level can be successfully classified i.e. recognized.

**Table 3.** *Results of the Multiple Regression Analysis and the defined BSSS model prediction equations*

| Gender / Distance | MRA Model Summary | | ANOVA | | Basic Shooting Skill Score (BSSS) prediction equations |
|---|---|---|---|---|---|
| | Adj. $R^2$ | SEE | F | p | |
| **Male 6m** | 1.000 | 0.003 | 9.65 | 0.000 | BSSS = -6.033 + (AVG • 3.734) – (cV • 0.382) + ($EFFIC_{Prec}$ • 0.407) |
| **Male 10m** | 1.000 | 0.003 | 4.19 | 0.000 | BSSS = 20.513 + (AVG • 2.699) – (cV • 0.175) + ($EFFIC_{Prec}$ • 0.271) |
| **Female 6m** | 1.000 | 0.003 | 3.02 | 0.000 | BSSS = 15.940 - (AVG • 1.588) – (cV • 0.098) + ($EFFIC_{Prec}$ • 0.156) + ($EFFIC_{Accu}$ • 0.208) |
| **Female 10m** | 1.000 | 0.004 | 1.28 | 0.000 | BSSS = 28.569 - (AVG • 1.443) – (cV • 0.063) + ($EFFIC_{Prec}$ • 0.135) + ($EFFIC_{Accu}$ • 0.149) |

**Table 4.** *Summary of Canonical Discriminant Functions – classification results*

| Gender / Distance | | | Shooting Level | Predicted Group Membership | | | | Total |
|---|---|---|---|---|---|---|---|---|
| Classification Success | | | | Beginner | Intermediate | Experienced | Professional | |
| **Male 6m** | 59.7% of selected original grouped cases correctly classified. | % | Beginner | **66.7** | 23.8 | 0.0 | 9.5 | 100.0 |
| | | | Intermediate | 22.2 | **55.6** | 0.0 | 22.2 | 100.0 |
| | | | Experienced | 0.0 | 33.3 | **0.0** | 66.7 | 100.0 |
| | | | Professional | 0.0 | 15.8 | 0.0 | **84.2** | 100.0 |
| **Male 10m** | 61.5% of selected original grouped cases correctly classified. | % | Beginner | **44.4** | 55.6 | 0.0 | 0.0 | 100.0 |
| | | | Intermediate | 13.3 | **66.7** | 0.0 | 20.0 | 100.0 |
| | | | Experienced | 0.0 | 25.0 | **0.0** | 75.0 | 100.0 |
| | | | Professional | 0.0 | 9.1 | 0.0 | **90.9** | 100.0 |
| **Female 6m** | 68.6% of selected original grouped cases correctly classified. | % | Beginner | **94.1** | 0.0 | 5.9 | 0.0 | 100.0 |
| | | | Intermediate | 16.7 | **16.7** | 66.7 | 0.0 | 100.0 |
| | | | Experienced | 0.0 | 12.5 | **87.5** | 0.0 | 100.0 |
| | | | Professional | 0.0 | 0.0 | 100.0 | **0.0** | 100.0 |
| **Female 10m** | 68.0% of selected original grouped cases correctly classified. | % | Beginner | **90.0** | 10.0 | 0.0 | 0.0 | 100.0 |
| | | | Intermediate | 0.0 | **71.4** | 0.0 | 28.6 | 100.0 |
| | | | Experienced | 0.0 | 25.0 | **0.0** | 75.0 | 100.0 |
| | | | Professional | 0.0 | 25.0 | 0.0 | **75.0** | 100.0 |

## DISCUSSION

This study aimed to provide a novel multidimensional methodological solution for monitoring the marksmanship training progress applicable in practice and to develop gender-dependent classification algorithms for accurate classification of marksmanship skill of police or other security personnel. The main findings showed that the applied methodology differentiates the beginner and intermediate shooters from the experienced and professional shooters. The fact that it has not differentiated between the experienced shooters and professionals suggests that the structure of the used tests (standing still and aiming with unlimited time) may be insufficient to identify the difference between more experiences shooters.

The application of the principal component analysis has determined a highly stable structure of the component matrix of the extracted factor, while the highest level of saturation in description of the relevant factor regardless of distance was provided by AVG, $EFFIC_{Prec,}$ and cV% in men and AVG, $EFFIC_{Prec}$, cV%, and $EFFIC_{Accu}$ in women. The results have shown the lowest level of saturation of SSI in relation to the gender and the examined shooting distance. Consequently, it could be concluded that the discriminative value of this variable in relation to the shooting method (static position) and distance (6 and 10 m) is not satisfactory from the aspect of valid evaluation of service pistol shoot-

ing proficiency. This was further confirmed by the regression analysis as only SSI did not enter the prediction models, while other variables predicted 100% of the BSSS.

These models enabled statistically significant classification of the participants relative to the initial classification of the participants and relative to the achieved shooting proficiency when using a standard service weapon. The accuracy of classification was about 1.8% higher for 10 m distance in males and about 0.8% higher for 6 m distance in females. Note that more experienced males were all classified as professional at both shooting distances, while more experienced females were classified as experienced at 6 m and as professional at 10 m distance. In addition, the classification rate was higher at 6 m distance, which could be the reason for higher accuracy at 6 m in females. However, both male and female results indicate that the used methodology is sensitive but that more advanced shooting test should be used to differentiate between the experienced shooters by utilizing the value of this methodology to a higher degree. It should be pointed out that, when considering men, the defined models have the highest level of successful identification in the professional group that entirely consisted of the members of the police, gendarmerie and the department for the protection of persons and objects, where the classification accuracy was the highest for both shooting distances. Higher classification accuracy for the longer distance supports the notion that with the increase of test difficulty the accuracy and sensitivity may increase.

Considering the initial classification of the participants based on the shooting experience, the established model did not identify any participant as experienced but intermediate or professional for both shooting distances in males and females. However, the percentage of intermediate was lower and the percentage of professional higher at the 10 m shooting distance for males and vice versa for females. This further suggests that the novel methodology provides higher classification accuracy as it uses the actual measures of marksmanship skill rather than shooting training history.

The presented results clearly indicate that the expert classification of the service pistol marksmanship based solely on the shooting score is inadequate in relation to the overall proficiency level. It should be noted that in all 4 cases (2 distances x 2 samples) the applied analyses produced only 3 groups in relation to the shooting proficiency. Thus, it can be concluded that the application of multivariate statistical procedures and the use of composite measures enable more accurate identification of the level of marksmanship skill. The defined methodology could be used as accurate model of evaluation of marksmanship skill of police officers and security personnel. It could be developed as standardized assessment procedure that could be used in shooting training, as it would indicate what exactly the problem is (accuracy or precision), if the shooting is not at the minimal required level.

## CONCLUSION

Based on the results of this research it can be concluded that highly statistically significant multidimensional models for classification of the basic level of shooting skill when using a service pistol CZ 99 have been defined. The model was defined by the application of complex statistical models based on different variables that define dimensions of shooting proficiency such as accuracy, precision, and efficiency. These models showed a good classification accuracy of relative to their shooting proficiency. Also, it has been determined that, when considering males, the defined models are the most efficient in the classification of the group of professionals, while when considering females, the most efficient classification is achieved in the group of beginners. In general, it can be concluded that in relation to the scientific methodology and for the needs of classification of the level of basic shooting skill using a service pistol CZ 99, the defined multi-dimensional models can be used with a high level of practical applicability. Moreover, the applied statistical method revealed that the used shooting tests were insufficiently complex to differentiate between the participants who were more experienced in shooting. More advanced tests could be used for this purpose in order to utilize the full potential of the defined statistical model.

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# DEFINING IRREDENTISM AS A SECURITY PHENOMENON

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**Abstract**: Irredentism as an inevitable element of expansionistic strategy still remains a fascinating concept and a subject of research in political science and security intelligence to boot. The subject of this paper is the origin of irredentism as a security phenomenon, the analyses of its numerous transformations and the resilience of this phenomenon in all country legal systems. The specific attention has been appointed to typology of irredentism alongside the goal of identifying the irredentist strategies throughout history until today, accompanied by an aspiration to identify the current potentially irredentist countries. Expansionistic doctrine cannot be observed as an internal affair of a country, but it is a generator of international crises, potentially growing into regional and further into global conflict. Analysing numerous theoretical views in this field, the authors' intention has been to verify the structural characteristics of irredentism together with the initial partakers of conflicts alongside irredentist potential.

**Keywords**: irredentism, ethnic conflict, political violence, international relations.

## INTRODUCTION

Irredentism is a complex, synchronized strategy which is jointly realized by the individuals, groups, political decision-makers and institutions from national and international level with a goal to unify all the territories where the members of one nation live into a unique, undivided political entity. Due to its distinctiveness and mobilizing effects which it fabricates to the internal structures, as well as to the international community, irredentism is a fascinating security phenomenon on multiple levels. For creating such a joint national politics, many nations experienced an international community condemnation, but even the possibility of an open conflict would not stop their intention

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to fight for the ancient ethnic territories to which the members of their people claim the right either on a legitimate or an assumed historical right. Therefore, the expansionistic politics often creates a multi-layered, specific bond between the parent state and the individuals together with the groups from both sides of the border, and greatly asserts nationalism in its radical form, also motivates the bearers and the followers of irredentist strategies to make the ultimate sacrifice in order to achieve the supreme goal, i.e. to unify all kinsmen into one country.

The primary goal of this paper relates to the analysis of irredentism, identification of its causes, nature and manifestation forms, which helps us to establish adequate typology of this complex phenomenon. Taking into account the fact that irredentist ideas create strong nationalist mobilization, and represent a factor that strengthens national unity, they potentially produce a serious security threat and generate a multi-level security challenge.

Since the fall of the Berlin Wall, the world has become much more economically, politically and culturally interdependent, but economic inequalities have intensified globally, which has significantly influenced ideological-identity, religious, national and ethnic differences producing international security instability. In the past decades, we have witnessed ethnic differentiation on numerous grounds, but we have also often witnessed the interference of other states and military coalitions in the internal affairs of sovereign and internationally recognized states, which is the basis of potentially tragic irredentist policies.

Regardless of the dramatic effects which it causes to the internal affairs of a country, the relations of that country with neighbouring ones, but also the effects it can cause on a wider, regionally-global plan, irredentism is an unspecific occurrence in the international politics. However, this expansionistic strategy deserves a scholar attention, bearing in mind the fact that staggeringly high percentage of modern countries, in greater or lesser percentage of its population, contains one or more national minorities which hold a certain amount of conflict potential inspired by the secessionist and expansionistic aspirations.

How can we define irredentism? The previous studies of the domestic authors have not given much attention to this phenomenon, which was mainly observed in the context of the complex discordant relations between the Serbs and the Albanians in the territory of Kosovo. On the other hand, the foreign publications have acknowledged the security significance of this occurrence, and the numerous authors, trying to define irredentism, have delved into the fields of security intelligence, alongside international relations, but also into the fields of sociology, political science and psychology, which gives the irredentism multidisciplinary characteristics.

Taking into the account the fact that the research authorities both in domestic and foreign publications have defined differently this multi-layered occurrence, it is important to emphasize that the majority of the researchers are united in the attitude that when it comes to irredentism there are several key partakers - apart from the ethnic groups with the irredentist potential, the existence of the "host state" and the "parent state" is essential. The "host state" refers to the country which is inhabited by the members of the certain ethnicity with the irredentist potential, i.e. the members of the people who aspire to leave the current country to unify with the members

of their own people, who are usually the majority in the neighbouring country. On the other hand, the "parent state" represents the subject of the international law, which expresses the attention to merge the territory inhabited by its kinsmen with manifested secessionist potential and refuses to acknowledge the current state's authority on the questionable territory. Therefore, when defining irredentism it is essential to bring this phenomenon into a correlation with other numerous phenomena, such as the right to self-determination, revisionism, annexation, and especially with occurrence of secessionism, which alongside its manifestations is the closest to irredentist strategy. In numerous publications the parent state is often called "kin-state" or "homeland-state", and these terms mostly serve as a more accurate definition of the country which tends to have the historical and ethnic bonds with the separatist-irredentist group in the other, most likely neighbouring country.

## THE ORIGIN OF IRREDENTISM AND ITS "LONG-LASTING" CHARACTER

Even though an aggressive expansionistic politics is present ever since humans have started to unify into the organized political communities, terminological definition of unification of all kinsmen into a distinctive international legal subjectivity occurred in the second half of the 19th century. The origin of irredentism as a movement is connected to the Italian nationalistic thinkers, who continued the heritage of Risorgimento, a culturological and political movement to unify Italy which lasted throughout most of the 19th century. Namely, the first ever to use this term was Matteo Imbriani, the founder of the nationalistic organization better known as "Association for the Unredeemed Italy" (*Associazione pro Italia irredenta*), which was founded in 1877 with the goal to unify all the territories inhabited by Italians into one common country, using the national euphoria after the final Italian unification. In the article "Italian Italy" - *L'Italia degli Italiani* (Janković, 2014: 227), Imbriani is particularly focused on "unredeemed brothers", i.e. the kinsmen who remained beyond the borders of the parent state after the forming of Italy as a country, and he brought the concept of the "unredeemed" directly together with the territories which were, at that time, inhabited by the members of the Italian people and located in the former Austro-Hungarian Empire. Following its founding principles "Association for the Unredeemed Italy" primarily commended absorption of the "unredeemed territories" Istra, Dalmatia, Trentino, together with the cities Tirol, Trieste, to the newly formed Kingdom of Italy, previously separating these territories from Austro-Hungarian Empire. Considering that all the nationalistic leaders of the Kingdom of Italy called the above mentioned regions and cities *terra irredenta* ("unredeemed territories"), the name irredentism denotes every doctrine envisioned with the goal to unite ethnically, geographically and historically immediate parts of population of the neighbouring countries into one common political frame (Chazan, 1991: 1). A successful irredentist strategy in Italy introduced the concept of irredentism (*irredentismo*, *irredento*, Latin *redimere*: redeem, liberate or release)

to a wider purpose on an international level, and even today it is used to define the activity of the individuals, groups and countries who have a tendency to bring back the ethnic kinsmen who are "stranded on the wrong side of the border" (Horowitz, 2003: 10).

Regardless the national ethos which was presented through expansionistic activities on the individual, but also institutional level, the concept of irredentism swiftly became declaratively forbidden by the official Italy, which was forced to do that after it joined the military alliance founded in 1882 under the name of the *Triple Alliance*, which, apart from Italy, consisted of Austria-Hungary and Germany. According to such external political orientation, Italy was officially able to disregard its own expansionistic politics, therefore all the organizations which would appoint to the irredentist strategy in their name were disengaged and among them was *Associazione pro Italia irredenta*, which formally ceased functioning the same year. However, the new Italian nationalistic organizations of different names soon emerged, but they were almost identical when it comes to ideology of the political orientation, and the role of the Italian expansionistic politics bearer befell the organization *Pro Patria* – the Homeland Association, founded in Trento in 1885. The authorities in Austria-Hungary Empire forbade them to act during 1890, and the very next year the National League was founded (*Lega Nazionale*), which carried out its irredentist activities through the legal forms of manufacturing and cultural societies, sports associations, etc. (Cattaruzza, 2017: 32-33).

During the first decades upon the unification of Italy, the Italian irredentism experienced a range of transformations, but it remained a constant in the national foreign politics until the end of the World War II. That is why the several authors from the former Yugoslavia, like Dragovan Šepić (Šepić, 1963), warned us on a "tough continuity of irredentist ideas" (Bertoša, 1989: 36) in Italy, which was renewed during the fascist dictatorship, and the same author points out the "constants and transformations" (Šepić, 1974; Šepić, 1975) of the phenomenon in the Italian expansionistic politics. Therefore, it is wrong to observe the Italian irredentism only as a country's expansion during the World War II (the territorial expansions in Albania, Dalmatia, Slovenia, etc.), but also the roots and causes for its longevity certainly need to be connected to the period of the Italian unification, even in several decades before this occasion, i.e. the beginning of Risorgimento.

The expansionistic politics between the two World Wars did not directly exploit the concept of irredentism, but according to all its manifestations it is unambiguously clear that the matter in question was the classic irredentist strategy. The main bearers of an aggressive foreign politics of that era (apart from fascist Italy) were Horthy's Hungary and the Nazi Germany. The Hungarian nationalists, in the first decades after the Great War ended, gathered around the idea of revisionism, blaming the Treaty of Trianon for the unjust borderlines of their country, and the highlight of this ethnocentric politics were the so called "Vienna Arbitrations" in 1938 and 1940, by which Hungary mostly came back to its pre-Trianon borders.

The Nazi doctrine of the Third Reich was similar to Hungarian revisionism, and it was based on the Hitler's interpretation of the "habitat" (*Lebensraum*), the concept which had been used in the decades of the imperialistic politics of the German Empire at the end of the 19th century and the beginning of the

20th century. Namely, in the first few years after the Great War ended, even Max Weber observed the irredentist activities as an inevitable part of a national survival. The letter written by this German sociologist to Professor Goldstein in 1919 stated that "*if the Pols should invade Danzig and Thorn, or the Check move into Reichenberg, the first task is to establish a German irredenta. I cannot do it myself, because I do not have the physical strength. But every nationalist must do it, especially the students. Irredenta means: nationalism with revolutionary instruments of force*" (Mommsen & Osterhammel, 1987: 312). Weber thought the post-war German country can evade the loss of the significant part of its territories only if German people and the political leadership succumb to the revolutionary and irredentist strategies, and therefore left for the younger generations to preserve The German Empire (so called "the Second Reich").

In the Nazi bible "My Struggle" (*Mein Kampf*), Hitler used the idea of the "habitat" in order to justify the future expansionistic politics of the Nazi Germany, and therefore, as one of the key conclusions he states that "the foreign politics of a people's state needs to provide the existence of a race within a country, on this planet, in a way that between the number and the exponential growth of people on the one hand, and the size and the benefits of a soil on the other hand create healthy, life sustainable, natural relation" he adds "only sufficiently large space on this planet guarantees freedom for people's fights" (Smiljanić, 2011: 418). Hitler ascended the concept of *Lebensraum* up to the level of the ultimate ideological principle of his movement, and emphasized that the nationalistic party "has to, regardless the "traditions" and prejudices, find the courage to gather our people and their strength in order to advance towards that street, which from today's confinement of the habitat emerges this people to a new soil and therefore they are forever relieved of the danger to perish on this land or as a slaved people accommodate others (*Ibid*: 420). The fatal politics of the Third Reich, which was founded by Hitler, led the great German nation into the largest conflict in the history of the mankind, and the epicentre of this doctrine definitely was the aggressive national foreign politics.

## THE MODERN USE OF THE TERM IRREDENTISM

Nevertheless the irredentism occurs as a security phenomenon in the Italian nationalistic circles in the second half of the 19th century, the shaping of the irredentist strategies (observed by the academic community of today), appeared even in the post-revolutionary France, in other words together with the birth of the nation as a concept. The national ethos, which defined the European politics of the 19th century, had brought the first wave of irredentism along with the Italian and German expansionistic politics, and this early phase of the irredentist strategies was ended with the World War I. The comprehension of irredentism between the wars and its definition was modified under the influence of the self-determination doctrine of a nation which was introduced by the US president Woodrow Wilson at the Paris Peace Conference and the expansionistic interpretation of this doctrine in Germany, Italy and Hungary led to the new global

conflict with devastating consequences. The post-war irredentism was formed as a direct consequence of the colonial system's downfall, and the conflicts inspired by the irredentist legacy were mainly moved to Africa and Asia, where the withdrawal of the colonial forces created numerous problems, especially closely connected to the disputable territory divisions, where the borders of the newly formed countries would not match the ethnic redistribution on the African continent (Somalia, Kenya, Ethiopia) and in Asia (the Kurds expansionistic politics, Cashmere, etc.). The irredentist period that occurred at the end of the last century brought this phenomenon back to the European Continent, directly as a consequence of the Dissolution of the Soviet Union and the Yugoslav federation, and the unresolved territorial aspirations even today represent the cause of the numerous frozen conflicts in the post-USSR and post-Yugoslavia territories. The direct military interventions in the last decade of the 20th century were the most common way of regulating the conflicts in the countries of the so called "Third World" (41%, or 368 of 904 interventions were armed conflicts), and they were performed by the significant partakers of the international scene accompanied by the neighbouring countries with significantly smaller military potential; the strategies of the diplomatic involvement were realized in 36% of the cases (323 of 904 interventions), while the economic power was conducted in almost half less compared to the military interventions (in total 23% cases of foreign interventions – 213 of 904 interventions) (Khosla, 1999: 1150-1151).

Although, in the current political science and security literature, the very concept of a state sovereignty is increasingly relativized, therefore question justifiably arises as to whether states are entering a phase of "post-sovereignty" (Jovanov, 2015: 150), during the last decade of the 20th and the first two decades of the 21st century the current irredentism questions were reshaped, and the great number of the new ones emerged regarding expansionistic politics and analysis of irredentism as a security concept. The broad spectre of doubts regarding this phenomenon was related mostly to the recognition of the cause by which the certain individuals, groups and even states participate in conducting political violence on a foreign country's territory, then in the motives of the political subjects who in the certain situations intervene in foreign conflicts, while in another similar situation they do not partake, and also there is a tendency to confirm whether the irredentist strategies are influenced by the internal political opportunities or the climate of an international level? Alongside with that, there are many questions related to the influence of the foreign interventions to the intensity of ethnic conflicts (Paquin & Saideman, 2008), while the certain researchers have tried to provide the answers to the following questions: why are certain countries more likely to engage in international disputes which possess an irredentist potential; why is the international legislature that regulates the third party engaging modes being ignored by certain countries, while being respected by the other international subjects; what are the essential reasons for specific countries to avoid mediation, and therefore insist on a belligerent resolve of ethnic tensions; and finally, what are immediate causes of the increases in aggressive foreign affairs of the states that are directly engaged to the escalation of the irredentist conflicts (Carment & James, 2000). Irredentism has definitely

been recognized as a concept of "turning jointly group identity into political streams" (Fuzesi, 2006: 67), and on that account there rose the need for its multi-layered terminological definition.

There are countless modern definitions of irredentism, and most of the researchers of this segmented phenomenon start by separating the basic elements which are contained by every expansionistic politics. Firstly, as an object of analysis one must take a demeanour of an individual, groups or political movements gathered around the idea to unify all the members of the same ethnic group into one complete, inseparable political community. In the same manner, irredentism in most of the cases is observed as an anti-state concept which is based on redefining the state borders which were internationally acclaimed, and that shift is usually conducted violently, with an extensive implementation of an institutionalized and non-institutionalized political violence. Furthermore, irredentism as an essential segment of the expansionistic doctrine has always been a synchronized activity of a group, which craves unification with its ethnic kinsmen and the key political elements in the parent state which support unification, consequently, the usual subject of analysis is a uniformed behaviour of the observed subjects from both sides of the border. Finally, the focus of the researchers is on the very objective of irredentism, which represents the essential element to distinguish irredentism from separatism, as it is the most related occurrence. That is to say, the primal intention of irredentist partakers in an expansionistic strategy is not to gain its own statehood, which is the main intention of separatism, but the focus is on incorporating of a territory which is separated from the existing country into the neighbouring country largely inhabited by its ethnic kinsmen.

Along with identifying the primary elements of irredentism, the researchers are mainly focused on the set of samples which create the climate in which the expansionistic doctrine with all its complex occurring embodiments emerges. Hence Saideman and Paquin postulate the ethnicity as a primal source to ethnic conflicts, and therefore conclude that separatism and expansionistic politics are the consequences of the strong ethnic bonds and ethnic conflicts built inside a country, but also the ethnic relations among cross-border kinsmen (Paquin & Saideman, 2008). Saideman defines expansionistic doctrine as "seemingly irrational foreign policies" (Saideman, 1998: 87), and adds that irredentism is the biggest threat to safety in Europe after the downfall of the communism. This author signifies irredentism as a product of selfish ambitions of political leaders, who, in order to strengthen their own internal political positions, reach to irredentist rhetoric, therefore neglecting the norms of an international community.

On the other hand, Thomas Ambrosio has joined the internal and the external causes trying to comprehend the basis of the conflicts inspired by expansionistic pretences, thus concluded that the political leaders in this kind of situations are faced with both the pressure from the local nationalist, but also with the warnings of the international partakers which can grow into an open international confrontation. Ambrosio, therefore, highlights that the rigidity or the flexibility of the environment is a significant element in creating a domestic irredentist climate, so the expansionistic ethnic politics is directly linked to an affirmative, or a restrictive attitude of an international

community, when it comes to this matter. This author has pointed out that the irredentism has not been given an adequate research attention in a long time, mostly because the ethnic conflicts have been experienced as inner-state, and not as an international problem, and adds if these ethnic conflicts were analysed from the international system point of view, that was done through secessionism and not through irredentism. Furthermore, he concludes that for a long time irredentism has been in the interlude between the research that focused on the ethnic conflicts and those researches that focused on the conflicted international affairs. As the main reason for this misleading practice he points out the long and dominating realistic approach in the relations between the countries, which denied the influence of nationalism and ethnicity in general to the international relations, and ethnic sentiments were observed solely as the means to animate and mobilize the domestic population of the nationalistic orientation in order to strengthen the position of the country at an international level (Ambrosio, 2001).

Unlike Thomas Ambrosio, who acknowledges the activities in international community as a trigger to escalation and de-escalation of irredentist strategies, Chazan (Chazan, 1991) and Gagnon (Gagnon, 1994/95) accept the absolute importance of internal relations and the domestic politics while creating expansionistic strategies. Brubaker expands the set of causes for the appearance of irredentism, and advocates the thesis that the success of secessionist-irredentist strategies depends on the so called "triple bonds": activities of the group aiming for separation, activities of the country which the group inhabits (homeland state) and activities of a parent state which the separatists wish to unite to (Brubaker, 1996: 4). He names the phenomenon of irredentism "homeland nationalism" (Brubejker, 2003: 293), in other word nationalizing, expansionistic nationalism which is logically turned on the outside, beyond the borders of the existing country, and the parent state in an irredentist conflict he observes as an "external national homelands" (Brubaker, 1996: 4). This author gives irredentism a particular attention, and analyses it as a consequence of redefining nationalism, i.e. creating nationalistic discourse behind the former "Iron Curtain" in the years after the collapse of the Eastern Bloc.

Observing irredentism as a security phenomenon in the last decades of the 20th century, the majority of authors were linking this concept to Africa and Asia, i.e. to the post-colonial conflict legacy in the numerous countries on these two continents, but at the end of the last century the irredentist conflict was definitely perceived in the wider region in the Balkans, respectively in South-eastern Europe (the Albanian and Croatian problem in the former Yugoslavia, the Hungarian expansionistic irredentism in Romania, etc.) (Horowitz, 2000: 281). One of the first authors who tried to point out the conflicting potential of ethnicity in inner-state, but also international conflicts was Donald Horowitz. This researcher also established the clear distinction between the two most common forms of territorial corrections under the influence of ethnicity – between irredentism and secessionism. According to him, the foundation of secessionism lies in the rejection of the members of the ethnic group on a territory where they form the majority to acknowledge the government of the country they live in. On the other hand, irredentism is a synchronized activity of political deci-

sion-makers in a group with secessionist pretences and a parent state which is inclined to adjoin a disputable territory inhabited by its kinsmen (Horowitz, 2000b: 182-183). Apart from that, Horowitz suggests that these two phenomena need to be analysed together since, very often, they have an alternative relationship, so he concludes that the ethnic conflicts inspired by secessionist-irredentist legacy are one of the primal reasons for the slow democratic processes in the numerous countries of Africa and Asia, but also on Post-Soviet territories and Eastern Europe (Horowitz, 1993: 35). Particularly, he points out that the innumerable irredentist movements have emerged as a direct consequence of the certain countries forming, and therefore, the great percentage of the similar movements has appeared also as a result of the long-term political tensions and open confrontations in the multi-national communities.

Domestic literature recognizes the concept of irredentism, but mainly through the limited prism of Serbian-Albanian complex ethnic relations. Dragan Simeunović identifies irredentism as a segment of national policy, and points out that the creation of a nation-state is "the materialization of a national political dream" and that "the source of conflict is the definition of national territory as a state territory" (Simeunović, 1995: 47). This author directly connects irredentist efforts with the outbreak of the conflict, and indicates that "the reason for war is greater if it is possible to free the members of one's nation who live in another nation-state" (Simeunović, 2009: 83). He claims that the disintegration of multi-ethnic federations is a significant cause of conflict, because the expansionist efforts of the new nation-states are mainly based on the attitude that "ours is where the smallest part of our nation lives" (Simeunović, 1995: 48). Simeunović concludes that the nation-state indeed survives nevertheless the globalist announcements about its end, and despite the fact that it has been phenomenologically and usefully written off (Simeunović, 2015: 3).

## TYPOLOGY OF IRREDENTISM

Considering that irredentism has established itself as a phenomenon which in its basis contains "the *bilateral* and *simultaneous* pursuit by both parent state and its ethnically kindred brethren in a foreign state of ethno-territorial retrieval across inter-state borders" (Fuzesi, 2006: 18), the basic classification is necessary, together with recognizing its types and common forms. Taking into account countless classification criteria, the most common is the division to classical, common type of irredentism (which is manifested within an ethnic group that desires to separate itself from a host state in order to attach to a country which is mainly inhabited by their kinsmen (homeland), and whose aspirations are supported by a neighbouring country which conceives the same idea of unity of nation in one country) and irredentism *sui generis* (which appears in the cases when the members of one ethnos are scattered around several countries, and therefore they do not have a homeland which could intensify and synchronize the common idea of unification). The typical examples of *sui*

*generis* irredentism are the Kurdish expansionist politics in the Middle East and the Basque ethno-nationalist strategy in Spain and France.

If we observe irredentism as a consequence of political crisis and conflicts, together with social and political turmoil on a national, regional and global scale, it is possible to divide it into post-conflict, post-war, post-revolution, post-colonial, etc. but according to a similar, solely territorial criterion, we can distinguish African, European (Basque irredentism as a separate subtype), Latin American and Asian irredentism (with the Kurdish *sui generis* irredentism). When we observe irredentism as a cause of a specific political behaviour, i.e. when we analyse it based on the types of consequences it produces, we speak of the irredentism that generates institutional and of the one which induces non-institutional political violence.

Finally, taking into consideration the time it took for irredentism to appear and its metamorphosis during the 20th century, irredentism can be classified into:

1) early irredentism (refers to those common forms of an expansionist strategy which occurs in numerous European countries, from the moment it formed in independent Italy and the founding of "*Associazione pro Italia irredenta*" organization in 1877 until the end of the Great War),

2) interwar period irredentism (practiced in the period between Paris Peace Treaty and the beginning of the World War II, whose major characteristic is the synthesis with revisionist strategies of the European nations that were defeated in the World War I – Hitler's Third Reich and Horthy's Hungary), and

3) modern irredentism (and its common forms after the ending of the World War II until today, with a specific emphasis to post-colonial and post-Cold War irredentism).

**Table 1.** *Typology of irredentism*

| **State criterion** | Classical, common type of irredentism | | Irredentism *sui generis* (Kurds and Basques) | |
|---|---|---|---|---|
| **Criterion of political and social causes** | Post-conflict | Post-war | Post-revolution | Post-colonial |
| **Territorial criterion** | African | European (Basque *sui generis* irredentism) | Latin American | Asian (Kurdish *sui generis* irredentism) |
| **Criterion of generated consequences** | Irredentism that generates institutional political violence | | Irredentism that generates non-institutional political violence | |
| **Historical criterion** | Early irredentism | Interwar period irredentism | Modern irredentism | |

## CONCLUSION

It is evident that by the expansion of the scientific knowledge of irredentism and its identification as an essential element of countless international crises and conflicts, there is also the need to develop a typology of this complex phenomenon, and its positioning in security-political sphere as one of the basic roots of instability on a regional and global level. Therefore, this paper's idea has been to bring security repercussions of irredentism closer to national academic and security community, and to place it where it certainly deserves to be, i.e. not to observe the expansionist strategy narrowly when it comes to Albanian-Serbian relations, which has been the situation so far.

In this paper, we have pointed out that irredentism contributes to complex national and political polarization, both in the countries affected by irredentist aspirations and in the countries hoping for territorial benefits after the successful completion of the irredentist campaign. It is also noticeable that irredentist conflicts carry a significantly greater destructive potential in regard to ideological conflicts, mostly because ethnic relatives are idealized and often perceived as family members, and not only as the members of a group who share a common ethnic cultural heritage. This attitude towards cross-border relatives also produces a specific type of ethnic security dilemma, so that a more intense feeling of closeness generates an increased existential threat from members of a rival ethnic group with whom the same living space has been shared for centuries, and imposes political violence as a justified means of struggle.

For the last century and a half, irredentism has experienced many transformations, but undoubtedly important component of an expansionist strategy is its persistence, regardless of the forms of political structure and programme orientation of political parties and coalitions which were at the head of the countries with irredentist potential. Even though the classic bloc division has ended on the international level, where many assumptions about deescalating conflicts on a global level were created about, during the last decades we have witnessed the explosions of ethnic conflicts and separatist-irredentist aspirations worldwide, then unveiling religious, ethnic and nationalistic differences as fundamental genesis for conflicts which cannot be pacified nationally, but only through implementing wider international communities and large military coalitions.

Bearing in mind that irredentism is one of the most direct ways by which an ethnic bond of cross-border kinsmen influences the occurrence of political violence, in this paper, there is a need to commence a typology of anti-state phenomenon, hopefully to identify more easily so called "irredentist state", i.e. those states that tend to exploit ethnic tensions in the neighbourhood for its own political, ethnic, territorial and similar benefits. It is important to mention that irredentism is an exquisite consistent ideological weapon, so the idea of a stately-legal unity of all kinsmen prevailed in numerous states regardless of the form of their political and social structure, global political situation and the influence of international institutional arrangements. By establishing a typology of irredentism, we have tried to point out that irredentism is present even in democratic and autocratic societies, but also in the republics and the monarchies, and the irredentist ideas emerged

in both unitary states and those with federative political structures, so one cannot specify the model of a country which is suitable for the birth and development of a violent state expansion. Irredentism is a continuous process, whose duration is not limited by a mandate of one government or a dynasty in power, but is deeply rooted into the minds of ethnic kinsmen, wherever the members of that people have residence. We have witnessed that expansionist politics is a constant in political actions of certain states during the range of decades or even centuries, and that the expansion and the designation of these ideas is particularly visible during times of crises, through distinctive regional and global conflicts, and radical changes of social and political structures internationally.

Irredentism is one of the potentially most dangerous and the most extreme ways in which ethnic bonds between kinsmen on the both sides of the border can influence the occurrence, escalation and manifestation of inner-state and international conflicts. Ethnic polarization as an element of an ethnic identity in this case is a direct consequence of a high level connection among cross-border kinsmen, and not merely psychologically, but on specifically institutional level. The sense of nurturing the shared history, but also the romanticized assumption of a common future has brought numerous conflicts in the last few decades and centuries, and the expansionist doctrine will be an inevitable component in aggressive strategies of potentially irredentist countries in the years to come. Finally, this type of expansionism from the international community's point of view is the least desirable manner of territorial border adjustments, but the frequent occurrence of irredentist ideas, certainly point to the fact that there is no ideal, sufficiently righteous border division which could adequately satisfy all the parties involved in an irredentist conflict.

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# TEMPORAL DIFFERENCES BETWEEN GENDERS IN THE REALISATION OF SPECIFIC COMBAT TECHNIQUES RELATIVE TO SPATIAL ABILITY

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**Abstract:** In this paper, the time of performing 15 motor tests that consisted of different modalities of punches and kicks was measured on a sample of 44 subjects (24 men and 20 women), as well as the speed of performing cognitive test S1, from a battery of KOG3 tests. The results were obtained using appropriate statistical procedures, and they indicate that women in most cases, from both items, achieved better results compared to men when it comes to a simple motor reaction, while men achieved better results with a complex motor reaction. The obtained concurrence of motor tests with test S1 for men ranges from a complete absence of concurrence for five techniques derived from the left guard to high concurrence for three techniques derived from the right guard. When it comes to women, the absence of any concurrence was registered in two techniques from one and the other guard, and high concurrence for five techniques from the right guard. It is believed that the obtained results can be useful for further teaching process in Special Physical Education.

**Keywords:** punches, kicks, police students, motor reaction, spatial ability.

## INTRODUCTION

The speed of the motor reaction, that is, the duration of mental processes and the performance of movements can be crucial in solving situational-motor problems that the graduates of the Faculty of Security Sciences may encounter in their lifetime commitment. The speed of motor reaction usually means the time of processing certain information in which the corresponding movement begins. Mollon and Perkins (1996) think of reaction time as a time that is used as an indicator of the duration and complexity of mental processes. Similarly, Jensen (2006) interprets reaction time as a measure of the speed of the perceptual-cognitive system expressed through the time

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that elapses from the onset of the stimulus to the response. It is, in fact, a latent time in which certain regulatory processes take place, and which end with a corresponding terminal movement.

Given that security jobs do not exclude activities related to the use of physical force and that efficiency in solving situational-motor problems, especially in new situations, largely depends on the reaction time, it is very important that the graduates can make a decision as soon as possible, and implement an appropriate motor program. The speed of mental processing in real-time and the speed of performing rational and efficient movements is important not only in solving situational-motor problems but also in learning and improving the teaching material in Special Physical Education (Blagojević et al. 2019). Namely, with each type of learning, including motor learning, the task must first be understood, and the activity of the cerebral cortex is necessary for that. Moreover, in motor learning, we cannot exclude the muscular system either, because it takes place not only through the activity of the cortex but also through the feedback system, through the receptors located in the muscles. Depending on the complexity of the motor task the activity of the cortex changes. Thus, with simple tasks, the activity of the cortex is the lowest, and with somewhat more complex motor tasks, the activity is higher, while with complex motor tasks, where extremely large cognitive charges appear, the activity of the cerebral cortex is the highest (Bala, 1999). Therefore, unlike simple tasks, efficient and correct perceptual processing, i.e. cognitive functioning, has a very important say in solving complex motor problems that a professional security worker can encounter.

In the study conducted by Momirović and Horga (1982) which referred to the canonical relations of intellectual and motor abilities (rhythm, coordination, flexibility, strength, and endurance), it was concluded that general cognitive factor is mainly defined by the efficiency of the serial processor. It was also in a significant positive correlation, while with power and endurance it was negatively correlated. Bala (1999) obtained results through the battery of 23 motor tests and the KOG3 battery for the assessment of perceptual, serial and parallel processors, based on which it was concluded that a nonlinear data processing model showed significant correlation, and better explained the common variability of the analysed variable spaces. Additionally, the test of cognitive functioning is a better predictor of motor behaviour than vice versa.

Arlov et al. (1994[a]) conducted a study on a sample of 45 karate masters to analyse the influence of different starting guards (diagonal and linear) on the time parameters of the technique of Gyako Tsuki (common use Japanese terminology) while the examinees were performing an attack, defence, and counterattack from different distances. Based on the analysis of quantitative differences, a diagonal guard could be proposed for fighters who choose a shortened or basic distance, while for fighters who fight from a long distance, the equal use of both guards was suggested. In addition, on the same sample of respondents, it was suggested to use both guards equally when conducting Mae Geri technique (Arlov et al., 1994[b]). Mudrić et al. (2004) found that the average values of the time of performing punches and kicks were different in relation to their complexity. It was stated that in more complex situations of attack, in relation to the situation of unconditional attack (when the respondents knew everything), the planning

time increased and that the time partial parameters of planning an attack with hands were shorter than an attack with feet. He explained this by the fact that leg attacks were more complex techniques than hand-performed techniques. Guzvica et al. (2012) evaluated the speed of simple and complex motor reaction to a light signal with the fourth-year students of the College of Internal Affairs. The obtained results indicated that in a simple motor reaction men were statistically significantly faster than women, while women achieved a statistically significantly better result in a complex motor reaction at the initial speed of movement. However, when it comes to the dominant and weaker side for the whole sample, although there was a certain difference in the speed of the motor reaction, they did not get statistical significance. Vuković et al. (2019) measured the time of simple reaction and the time of choice reaction between preadolescent and early adolescent age boys and girls at different levels of karate training. They found that there was no statistically significant difference between boys and girls when it came to simple reaction time, but that they were statistically significant in terms of mastery. In addition, when it comes to the choice reaction time, statistically significant differences were obtained between the genders at the student level of training and at the subsample of boys.

The time that flows from the moment of occurrence to which one should react and realize a particular technique is a significant factor for the successful performance of police tasks. The educational process and permanent training should result in police officers' training to respond successfully in different situations. In this sense, the aim of this paper is to examine: 1) the time required to perform different modalities of techniques in a condition of one response to one stimulus under familiar conditions and in condition under an alternative stimulus introduced; 2) differences in realisation time between left and right techniques; 3) temporal differences between genders in the realisation of specific combat techniques; 4) the correlation between techniques temporal parameters and cognitive ability.

## RESEARCH METHODOLOGY

This was transversal study, and the existing condition was determined by collecting data through specific tests of motor and spatial abilities. The measurement was performed using Witty SEM wireless training timer (model KD 520, CEI 68-4, Microgate, Bolzano, Italy, www.microgate.it). It was developed to test motor reaction time based on laser technique, and Witty Manager Software was used. Built-in proximity sensor, Witty SEM, allows reactivity testing for specific work on motor-cognitive and coordination skills with a measurement accuracy of ± 0.4 ms.

### *Sample of respondents*

The sample consisted of 44 third-year students at the Faculty of Security Sciences in Banja Luka, of which 24 were men and 20 were women, between

21 and 22 years of age. In the previous schooling, which lasted two semesters, with a weekly load of six school hours, the students have mastered three levels of training in the subject of Special Physical Education. All subjects were clinically healthy, with no visible physical defects or morphological aberrations.

### *Sample variables*

The sample of variables consisted of 15 motor tests and one test from a cybernetic battery of intelligence tests (KOG 3) - test S1. According to the results of the previous research (Paspalj, 2011), the spatial factor is statistically significantly positively related to solving problem situations from Special Physical Education, and is therefore separated from a cybernetic battery of intelligence tests (KOG 3) and used as one of the variables in this research. Test S1 was used to assess the quality of parallel light stimulus processing.

The motor variables related to the simple stimuli are as follows: punch forward from the spot (KZMJ), punch forward sliding (KZUK), hop step and punch forward (KZDO), opposite hand punch from the spot (GZMJ), opposite hand punch sliding (GZUK), hop step and opposite hand punch (GZDO), opposite hand punch with step forward (GZIS), punch and step forward (OZ), kick from the spot (MGMJ), kick ding forward (MGUK), hop step and kick forward (MGDO), semicircular kick forward from the spot (MWGMJ), semicircular kick forward sliding (MWGUK), hop step and semicircular kick forward (MWGDO). The variable is moving forward and opposite hand punch (INGZ) was used to assess a response in conditions with an alternative stimulus introduced.

### *Research procedure and method of measurement*

The research included measuring simple and complex motor responses to a light signal. The measurement was performed in the sports hall in the afternoon in February 2020 at a temperature of approximately 22° C. The respondents were in the prescribed sports equipment and barefoot. The purpose of the research was explained to the students, after which they voluntarily started testing. Immediately before the test, the respondents were acquainted in detail with the tasks that were expected of them.

The time needed for technique realisation on simple stimulus was tested by the respondent, from a fighting stance and middle guard, having the task to react to a known light signal as quickly as possible, from a place, by moving forward ("slipping"), moving step forward and hop step, and taking a punch or a kick in the target. The time needed for technique realisation in conditions with an alternative stimulus introduced was assessed from the position of parallel feet (heiko dachi). With this time, the subject had a choice (50% probability of one of the signals - L1 and L2). At the appearance of the L1 signal, the subject performed a step forward with the left foot and a punch with the right hand (GZ), and at the signal L2, they performed a step forward with the right foot and a punch with the left hand (GZ). They repeated tests three times, all three attempts were

registered, and the best time was taken for statistical data processing. The pause between the previous and the next performance of motor tasks provided the necessary rest and maximum concentration of the subjects. Before performing the test, each respondent took the appropriate distance from the appropriate stance and guard, depending on the tasks. The light signal was located directly in front of the examinee, and the target was a signal lamp at the height of the examinee's head. The results were read at the end of the test, and the person who entered the results for control repeated the results aloud. They placed lamps (Figure 1) so that the subject could see them clearly - in front and at the width of the subject's shoulders so that the distance from the starting position of the subject and both lamps was equal. The time was measured from the beginning of the visual stimulus to the end of the punch or kick. The height of the lamps was adjusted according to the height of the subjects, and the stimulus was given sporadically, at different time intervals.

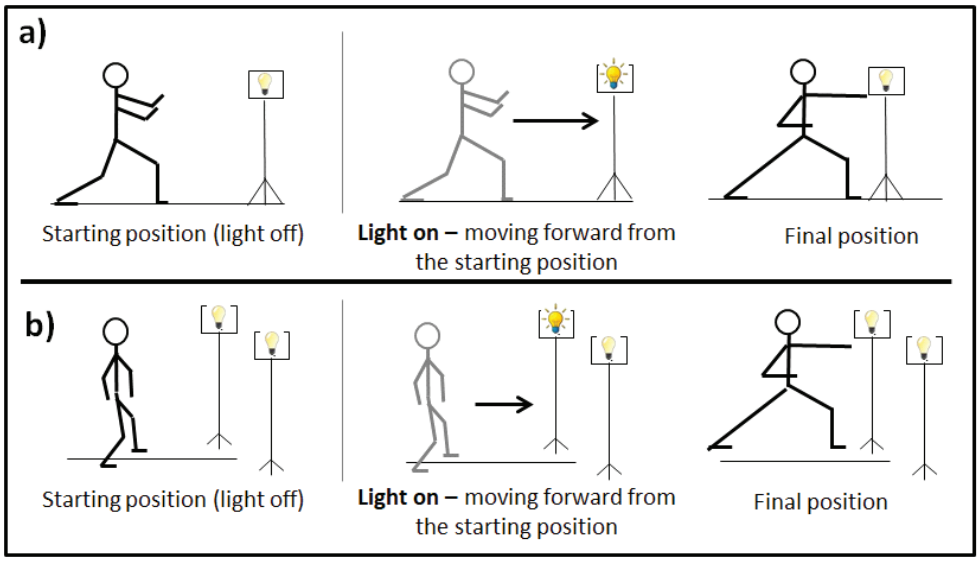


**Figure 1.** *An example of testing technique in the condition a) of simple and b) alternative stimulus*

The Intelligence Test Cybernetics Battery (KOG 3) contains three tests that evaluate the efficiency of the perceptual functions (IT-1 test) of the parallel processor functions (S-1) and the serial processor functions (AL-4). The S-1 test, adapted for population of respondents in this research, was used (Wolf et al., 1995). The test contained 30 tasks where each task had a three-dimensional representation of a group of bricks. The task of the respondents was to find, between the four transverse projections of that group, the one that corresponds to the given representation when that group is observed from a certain direction. The application time was eight minutes, so the test predominantly belongs to the category of strength tests. The metric characteristics (reliability, representativeness, and validity) of the test correspond to the highest psychometric standards (Wolf et al., 1992). Battery standardization was performed on a sample of 52,000 male respondents from Serbia, literate, and aged about 18-20 years (Wolf et al., 1995).

### *Statistical data processing*

The data obtained by the survey was processed by an appropriate statistical procedure. Basic descriptive indicators were calculated, the normality of data distribution was checked using the Kolmogorov-Smirnov test (K-S), and testing of the significance of differences in motor reaction rate between genders was performed by T-test of independent samples. The correlation between parallel information processing and motor reaction rate was calculated using correlation analysis. The analysis was conducted using the Statistical Package for Social Sciences (IBM, SPSS Statistics 20). The significance level was set at 95%, i.e. $p \leq 0.05$.

## RESULTS AND DISCUSSION

Table 1 shows the central and dispersive parameters of the observed variables for men and women derived from the left guard.

**Table 1.** *Descriptive indicators for man and women - left side*

| Group | Men | | | | | Women | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Mean | Min | Max | SD | K-S | Mean | Min | Max | SD | K-S |
| KZMJ | 0.43 | 0.39 | 0.48 | 0.02 | 0.32 | 0.43 | 0.39 | 0.48 | 0.03 | 0.16 |
| KZUK | 0.59 | 0.47 | 0.72 | 0.07 | 0.57 | 0.58 | 0.53 | 0.71 | 0.06 | 0.04 |
| KZDO | 0.80 | 0.74 | 0.86 | 0.05 | 0.02 | 0.84 | 0.80 | 0.93 | 0.04 | 0.01 |
| GZMJ | 0.53 | 0.42 | 0.65 | 0.07 | 0.10 | 0.52 | 0.46 | 0.56 | 0.03 | 0.16 |
| GZUK | 0.71 | 0.63 | 0.89 | 0.08 | 0.12 | 0.66 | 0.60 | 0.70 | 0.03 | 0.16 |
| GZDO | 0.89 | 0.80 | 0.97 | 0.05 | 0.26 | 0.90 | 0.84 | 0.95 | 0.03 | 0.53 |
| GZIS | 0.86 | 0.62 | 1.03 | 0.14 | 0.26 | 0.84 | 0.74 | 0.96 | 0.08 | 0.14 |
| OZ | 0.87 | 0.82 | 0.96 | 0.06 | 0.01 | 0.80 | 0.76 | 0.86 | 0.04 | 0.16 |
| MGMJ | 0.77 | 0.67 | 0.87 | 0.06 | 0.21 | 0.77 | 0.76 | 0.81 | 0.01 | 0.09 |
| MGUK | 0.89 | 0.73 | 1.04 | 0.09 | 0.34 | 0.90 | 0.78 | 1.01 | 0.08 | 0.83 |
| MGDO | 1.08 | 0.92 | 1.26 | 0.11 | 0.60 | 1.07 | 0.83 | 1.28 | 0.15 | 0.59 |
| MWGMJ | 0.83 | 0.75 | 1.02 | 0.10 | 0.02 | 0.83 | 0.82 | 0.88 | 0.02 | 0.00 |
| MWGUK | 0.97 | 0.86 | 1.08 | 0.09 | 0.03 | 0.95 | 0.79 | 1.09 | 0.10 | 0.39 |
| MWGDO | 1.13 | 1.04 | 1.43 | 0.13 | 0.00 | 1.16 | 1.02 | 1.33 | 0.10 | 0.58 |
| INGZ | 1.10 | 0.99 | 1.22 | 0.09 | 0.02 | 1.18 | 0.97 | 1.37 | 0.13 | 0.41 |

**Legend:** Min - minimal result- in s, Max - maximal result- in s, Mean - mean value in s, SD - standard deviation, K-S - Kolmogorov-Smirnov test value, KZMJ - punch forward from the spot, KZUK - punch forward sliding, KZDO - hop step and punch forward, GZMJ - opposite hand punch from the spot, GZUK - opposite hand punch sliding, GZDO - hop step and opposite hand punch, GZIS - opposite hand punch with step forward, OZ - punch and step forward, MGMJ - kick from the spot, MGUK - kick sliding forward, MGDO - hop step and kick forward, MWGMJ - semicircular kick forward from the spot, MWGUK - semicircular kick forward sliding, MWGDO - hop step and semicircular kick forward, INZG - moving forward and opposite hand punch

By reviewing the results shown in the table, it can be determined that in most tests the results are homogeneous. The normality of the schedule was tested using the K-S test, and on that occasion deviations from the normal distribution of results were observed for certain variables. The largest range of results in men, and the largest deviation from the mean value was obtained with the variable GZIS. When it comes to women, the largest range of results, and the largest deviation from the mean value was recorded in the variable MGDO

Table 2 shows the central and dispersive parameters of the observed variables for men and women derived from the right guard. The largest range of results in male group, and the largest deviation from the mean value was recorded for the variable KZDO. The female group showed the largest range of results and the largest deviation from the mean value for the variable INGZ.

**Table 2.** *Descriptive indicators for men and women - right side*

| Group | Men | | | | | Women | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Mean | Min | Max | SD | K-S | Mean | Min | Max | SD | K-S |
| KZMJ | 0.45 | 0.36 | 0.52 | 0.05 | 0.10 | 0.43 | 0.39 | 0.45 | 0.02 | 0.05 |
| KZUK | 0.58 | 0.45 | 0.75 | 0.11 | 0.22 | 0.57 | 0.44 | 0.71 | 0.08 | 0.33 |
| KZDO | 0.86 | 0.54 | 1.10 | 0.17 | 0.19 | 0.82 | 0.72 | 0.91 | 0.07 | 0.26 |
| GZMJ | 0.53 | 0.47 | 0.64 | 0.06 | 0.07 | 0.46 | 0.44 | 0.48 | 0.01 | 0.05 |
| GZUK | 0.69 | 0.62 | 0.79 | 0.06 | 0.03 | 0.61 | 0.57 | 0.66 | 0.03 | 0.11 |
| GZDO | 0.95 | 0.87 | 1.11 | 0.07 | 0.24 | 0.85 | 0.72 | 0.97 | 0.08 | 0.52 |
| GZIS | 0.98 | 0.83 | 1.09 | 0.09 | 0.09 | 0.88 | 0.70 | 0.98 | 0.11 | 0.01 |
| OZ | 0.89 | 0.76 | 0.94 | 0.06 | 0.06 | 0.82 | 0.67 | 0.98 | 0.11 | 0.36 |
| MGMJ | 0.76 | 0.65 | 0.90 | 0.07 | 0.10 | 0.78 | 0.73 | 0.85 | 0.04 | 0.25 |
| MGUK | 0.96 | 0.74 | 1.15 | 0.13 | 0.10 | 0.98 | 0.88 | 1.03 | 0.05 | 0.05 |
| MGDO | 1.25 | 1.03 | 1.44 | 0.14 | 0.17 | 1.14 | 0.99 | 1.30 | 0.12 | 0.24 |
| MWGMJ | 0.92 | 0.75 | 1.05 | 0.10 | 0.06 | 0.86 | 0.75 | 0.99 | 0.10 | 0.17 |
| MWGUK | 1.04 | 0.91 | 1.23 | 0.10 | 0.42 | 0.93 | 0.85 | 1.01 | 0.06 | 0.45 |
| MWGDO | 1.28 | 0.98 | 1.49 | 0.16 | 0.12 | 1.16 | 1.07 | 1.34 | 0.09 | 0.02 |
| INGZ | 1.08 | 0.99 | 1.35 | 0.12 | 0.00 | 1.22 | 0.87 | 1.45 | 0.20 | 0.33 |

**Legend:** Min - minimal result in s, Max - maximal result in s, Mean - mean value, SD - standard deviation, K-S - Kolmogorov-Smirnov test value, KZMJ - punch forward from the spot, KZUK - punch forward sliding, KZDO - hop step and punch forward, GZMJ - opposite hand punch from the spot, GZUK - opposite hand punch sliding, GZDO - hop step and opposite hand punch, GZIS - opposite hand punch with step forward, OZ - punch and step forward, MGMJ - kick from the spot, MGUK - kick sliding forward, MGDO - hop step and kick forward, MWGMJ - semicircular kick forward from the spot, MWGUK - semicircular kick forward sliding, MWGDO - hop step and semicircular kick forward, INZG - moving forward and opposite hand punch

This dispersion of the obtained results can be attributed, primarily to different previous experiences and knowledge that the respondents had, their differences in psychomotor abilities (especially in coordination), i.e., different quality of adoption of the observed techniques. When the obtained mean values of the

results are observed, certain interesting things are noticed. Namely, the women in most cases (from both guards) achieved better results in most variables which relate to a motor reaction on simple stimuli, while the men achieved better results in a motor reaction when alternative stimulus is introduced.

Mudrić et al. (2004) examined the time parameters of karate attack techniques of the students at the College of Internal Affairs in Zemun. They obtained the integral time parameters of an unconditional attack: for a punch with a step (Oi Tsuki) - 936 ms, for a punch with the opposite hand (Gyako Tsuki) - 961 ms, for a kick forward (Mae Geri) - 865 ms and for a semi-circular kick (Mawashi Geri) - 986 ms. The participants in this study, in comparison to the results in the above mentioned research, accomplished average values which were better 86 ms (9.19%) for Oi Tsuki, 461 ms (47.97%) for Gyako Tsuki, 95 ms (10.98%) for Mae Geri, and 96 ms (9.74%) for Mawashi Geri. A possible reason for those differences could be found in the instructions given to the participants. In this study, the instructions were to perform a technique as fast as possible, without emphasising the power.

Table 3 shows the differences between genders in the time of the techniques realisation from the left position. The results show statistically significant differences in four variables, two in favour of the men (KZDO and INGZ) and two in favour of the women (GZUK and OZ). Statistically significant differences were not determined for variables KZDO, GZDO, MGUK, MWGDO, INGZ, KZUK, GZMJ, GZUK, GZIS, OZ, MGDO, and MWGUK. In the variables KZMJ, MGMJ and MWGMJ, men and women achieved identical results. When the obtained results are fully considered, although statistically significant differences were obtained in the same number of variables (two in favour of both genders), it could be noticed that women in most cases achieved better results compared to men. One of the possible explanations for the better results obtained from women in comparison to men lies in the fact that women are on average of lower heights and have shorter extremities, which is why they performed these techniques from a shorter distance. Accordingly, they performed techniques on a shorter path. In addition, a possible cause of such results may be previous experience and knowledge. The obtained a statistically significant difference in favour of men for the variable INGZ, when the alternative stimulus is introduced, could be explained by information processing speed. Additionally, men have better motor potentials for the realization of complex movements. If these results are compared with the study conducted by Guzvica et al. (2012), which was done on a similar population, it could be seen that similar results were obtained. However, in the mentioned research, it was noticed that women needed less time to process unknown information (they started the movement first), but men completed the terminal movement faster.

**Table 3.** *Differences between genders in the time of performing the technique from the left guard*

| Variables | Group | Mean | SD | Std. Error Mean | F | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
|---|---|---|---|---|---|---|---|---|---|
| KZMJ | M | 0.43 | 0.02 | 0.00 | 1.38 | 42 | 0.82 | -0.00 | 0.00 |
| | W | 0.43 | 0.03 | 0.00 | | | | | |
| KZUK | M | 0.59 | 0.07 | 0.01 | 0.60 | 42 | 0.56 | 0.01 | 0.02 |
| | W | 0.58 | 0.06 | 0.01 | | | | | |
| KZDO | M | 0.80 | 0.05 | 0.01 | 5.47 | 42 | 0.00 | -0.04 | 0.01 |
| | W | 0.84 | 0.04 | 0.01 | | | | | |
| GZMJ | M | 0.53 | 0.07 | 0.01 | 12.35 | 42 | 0.58 | 0.01 | 0.01 |
| | W | 0.52 | 0.03 | 0.00 | | | | | |
| GZUK | M | 0.71 | 0.08 | 0.01 | 8.59 | 42 | 0.01 | 0.05 | 0.02 |
| | W | 0.66 | 0.03 | 0.00 | | | | | |
| GZDO | M | 0.89 | 0.05 | 0.01 | 0.80 | 42 | 0.80 | -0.00 | 0.01 |
| | W | 0.90 | 0.03 | 0.00 | | | | | |
| GZIS | M | 0.86 | 0.14 | 0.02 | 5.86 | 42 | 0.56 | 0.02 | 0.03 |
| | W | 0.84 | 0.08 | 0.01 | | | | | |
| OZ | M | 0.87 | 0.06 | 0.01 | 8.91 | 42 | 0.00 | 0.06 | 0.01 |
| | ŽW | 0.80 | 0.04 | 0.00 | | | | | |
| MGMJ | M | 0.77 | 0.06 | 0.01 | 11.42 | 42 | 0.98 | 0.00 | 0.01 |
| | W | 0.77 | 0.01 | 0.00 | | | | | |
| MGUK | M | 0.89 | 0.09 | 0.01 | 0.13 | 42 | 0.79 | -0.00 | 0.02 |
| | W | 0.90 | 0.08 | 0.01 | | | | | |
| MGDO | M | 1.08 | 0.11 | 0.02 | 1.04 | 42 | 0.70 | 0.01 | 0.03 |
| | W | 1.07 | 0.15 | 0.03 | | | | | |
| MWGMJ | M | 0.83 | 0.10 | 0.02 | 33.09 | 42 | 0.98 | 0.00 | 0.02 |
| | W | 0.83 | 0.02 | 0.00 | | | | | |
| MWGUK | M | 0.97 | 0.09 | 0.01 | 0.88 | 42 | 0.60 | 0.01 | 0.02 |
| | W | 0.95 | 0.10 | 0.02 | | | | | |
| MWG-DO | M | 1.13 | 0.13 | 0.02 | 0.51 | 42 | 0.39 | -0.03 | 0.03 |
| | W | 1.16 | 0.10 | 0.02 | | | | | |
| INGZ | M | 1.10 | 0.09 | 0.02 | 1.30 | 42 | 0.02 | -0.08 | 0.03 |
| | W | 1.18 | 0.13 | 0.03 | | | | | |

Table 4 shows the differences between men and women in the time required for the realization of the examined motor tasks from the right posture. The analysis of the results shows that the women achieved better results in twelve variables: KZMJ, KZUK, KZDO, GZMJ, GZUK, GZDO, GZIS, OZ, MGDO, MWGMJ, MWGUK and MWGDO, while the men performed better on the following variables: MGMJ, MGUK and INGZ. However, a statistically significant difference was obtained in nine variables in favour of women, namely in the variables by which the simple motor reaction was assessed. These were: KZMJ, GZMJ, GZUK, GZDO, GZIS, OZ, MGDO, MWGUK and MWGDO in favour of women, while the statistically significant difference in men benefit was obtained for the variable INGZ. The previously given explanation relating to the derivation of left-handed strike techniques is entirely transferable to right-handed strike techniques.

**Table 4.** *Differences between genders in the time of performing the technique from the right guard*

| Variables | Group | Mean | Std. Deviation | Std. Error Mean | F | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference |
|---|---|---|---|---|---|---|---|---|---|
| KZMJ | M | 0.45 | 0.57 | 0.01 | 21.13 | 42 | 0.04 | 0.02 | 0.01 |
| | W | 0.43 | 0.22 | 0.00 | | | | | |
| KZUK | M | 0.58 | 0.11 | 0.02 | 1.94 | 42 | 0.74 | 0.01 | 0.03 |
| | W | 0.57 | 0.08 | 0.01 | | | | | |
| KZDO | M | 0.86 | 0.17 | 0.03 | 6.55 | 42 | 0.34 | 0.04 | 0.04 |
| | W | 0.82 | 0.07 | 0.01 | | | | | |
| GZMJ | M | 0.53 | 0.06 | 0.01 | 73.06 | 42 | 0.00 | 0.07 | 0.01 |
| | W | 0.46 | 0.01 | 0.00 | | | | | |
| GZUK | M | 0.69 | 0.06 | 0.01 | 25.95 | 42 | 0.00 | 0.07 | 0.01 |
| | W | 0.61 | 0.03 | 0.00 | | | | | |
| GZDO | M | 0.95 | 0.07 | 0.01 | 0.21 | 42 | 0.00 | 0.09 | 0.02 |
| | W | 0.85 | 0.08 | 0.01 | | | | | |
| GZIS | M | 0.98 | 0.09 | 0.01 | 3.36 | 42 | 0.00 | 0.09 | 0.03 |
| | W | 0.88 | 0.11 | 0.02 | | | | | |
| OZ | M | 0.89 | 0.06 | 0.01 | 12.81 | 42 | 0.01 | 0.07 | 0.02 |
| | W | 0.82 | 0.11 | 0.02 | | | | | |
| MGMJ | M | 0.76 | 0.07 | 0.01 | 4.91 | 42 | 0.33 | -0.01 | 0.01 |
| | W | 0.78 | 0.04 | 0.00 | | | | | |
| MGUK | M | 0.96 | 0.13 | 0.02 | 12.53 | 42 | 0.60 | -0.01 | 0.03 |
| | W | 0.98 | 0.05 | 0.01 | | | | | |
| MGDO | M | 1.25 | 0.14 | 0.02 | 0.60 | 42 | 0.01 | 0.10 | 0.04 |
| | W | 1.14 | 0.12 | 0.02 | | | | | |
| MWGMJ | M | 0.92 | 0.10 | 0.02 | 0.15 | 42 | 0.07 | 0.05 | 0.03 |
| | W | 0.86 | 0.10 | 0.02 | | | | | |
| MWGUK | M | 1.04 | 0.10 | 0.02 | 5.72 | 42 | 0.00 | 0.10 | 0.02 |
| | W | 0.93 | 0.06 | 0.01 | | | | | |
| MWGDO | M | 1.28 | 0.16 | 0.03 | 6.79 | 42 | 0.00 | 0.12 | 0.04 |
| | W | 1.16 | 0.09 | 0.02 | | | | | |
| INGZ | M | 1.08 | 0.12 | 0.02 | 6.30 | 42 | 0.00 | -0.14 | 0.05 |
| | W | 1.22 | 0.20 | 0.04 | | | | | |

Table 5 shows the results of the partial correlation of the S1 test with the variables of the manifest motor space from the left and right guard for both genders. For the techniques performed from the left position when it comes to men, the analysis showed the absence of any concurrence with the variables MGMJ, GZIS, MGDO, INGZ and MWGDO. Weak correlations was obtained with the variables MWGMJ, GZDO, KZDO, MGUK, OZ and KZMJ while significant correlations at the level of $p < 0.05$ were obtained with the variables KZUK and MWGUK. High correlations at the level of $p < 0.01$ were obtained with the variables GZMJ and GZUK. The results of women showed the absence of any correlations of the variable S1 with the variables MGMJ and MGDO, while poor correlations were recorded with the variables GZDO, OZ, GZMJ and KZDO. Significant correlations at the level of $p < 0.05$ were recorded with variables GZIS

and GZUK and at the level of $p < 0.01$ with variables MWGUK and KZUK, while high and very high correlations at the level of $p < 0.01$ were recorded with variables MWDO, MGUK, KZMJ and INGZ. When it comes to right-handed techniques in the male group, the absence of any correlations with the variable S1 were noted for the variables OZ and MWMJ, while poor correlations were obtained with the variables INGZ and MGUK. Significant correlations at the level of $p < 0.05$ were obtained with the variables GZUK, KZMJ, and MGMJ, while significant correlations at the level of $p < 0.01$ were obtained with the variables GZDO, GZMJ, MGDO, MWGDO and GZIS. High and very high correlations at the level of $p < 0.01$ were obtained with the variables KZUK, KZDO and MWGUK. When it comes to women, for the techniques derived from the right guard, the absence of any correlations with the variable S1 was noted for the variables KZUK and GZMJ while the weak correlation was obtained with the variable MWGDO. Significant correlations at the level of $p < 0.05$ were obtained with the variables MWGMJ and GZIS, while significant correlations at the level of $p < 0.01$ were obtained with the variables GZUK, MGDO, MGMJ, KZMJ and KZDO. High and very high correlations at the level of $p < 0.01$ were obtained with the variables MWGUK, OZ, INGZ, GZDO, and MGUK.

At first glance, the results obtained seem a bit confusing, especially when it comes to a complex motor reaction where the ability to educate is very important. If the observed variables, techniques are compared with natural movements, it is possible to claim that each performed technique has its own code, a record in the nervous system. However, almost all martial arts techniques are more or less modified, adapted, and shaped, in order to be as efficient as possible in their practical use. The observed techniques have also been modified and refined so that there is a certain deviation from coded, inherited movements. Some of them are coordinationally simpler, some more complex, but not to such an extent that they would represent a great cognitive effort. When the techniques are observed in relation to the time required to perform them, given their trajectory, it is easy to notice that they are performed at different path lengths. For example, techniques performed with the hands take less time than techniques performed with the legs (Mudrić et. al. 2004). If the techniques are observed from the point of view of their specification, it could be seen that their efficiency requires, above all, good genetic predisposition (explosive power, speed of individual movement, coordination, and balance), etc. With good performance of techniques, especially in cases of automatism, cognitive stress is minimal. Due to all the above, such results could have been expected. The least cognitive effort was required by the techniques with the least complexity of performance, namely: the punch with the opposite hand in place and the punch with the opposite hand by slipping, which is why a high agreement with the S1 test was obtained. Slightly higher cognitive stress was required for techniques that required greater mobility in the hip joints and techniques that required significant coordination of the whole body, while still being performed with movements that were not common to the subjects. Furthermore, the probability of signal occurrence in a complex motor reaction was 50%, which is a high probability that the subjects were familiar with, so that the choice time was

almost the same as in a simple motor reaction and did not require a significant cognitive charge.

Furthermore, due to the frequency of repetition of the same stimulus, it is possible that its uncertainty was lost, so the motor reaction time was shorter. In contrast, due to the expectation of increased difficulty of the task, certain insecurity in the performance of certain techniques, the activity time of the spa centres was extended, so a certain number of respondents needed more time to react to the light signal. Thus, subjects with greater ability to process information in parallel, greater motor skills, especially those that frequently occur naturally, then better concentration, focus, and perception (which plays a very important role in cognitive functioning), were faster in motor response, especially if these are movements that are more complex and motions. In order to confirm these assumptions and clearly show the relationship between motor reaction and cognitive abilities, we need a more detailed longitudinal research.

**Table 5.** *Correlation coefficients between the variable S1 and the variables for estimating the response to the light signal*

| | | Men | | | | Women | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Left guard | | Right guard | | Left guard | | Right guard | |
| | Variables | Correlation coefficient | Significance level | Correlation coefficient | Significance level | Correlation coefficient | Significance level | Correlation coefficient | Significance level |
| Variable KOG S 1 | KZMJ | 0.37 | 0.07 | 0.48* | 0.01 | -0.87** | 0.00 | -0.65** | 0.00 |
| | KZUK | 0.41* | 0.04 | 0.79** | 0.00 | 0.60** | 0.00 | 0.01 | 0.96 |
| | KZDO | 0.27 | 0.19 | 0.75** | 0.00 | 0.37 | 0.10 | 0.68** | 0.00 |
| | GZMJ | 0.64** | 0.00 | 0.52** | 0.00 | 0.35 | 0.12 | -0.11 | 0.62 |
| | GZUK | -0.65** | 0.00 | 0.45* | 0.02 | -0.46* | 0.04 | 0.62** | 0.00 |
| | GZDO | 0.24 | 0.25 | 0.52** | 0.00 | 0.32 | 0.15 | 0.94** | 0.00 |
| | GZIS | -0.04 | 0.83 | 0.56** | 0.00 | 0.45* | 0.04 | 0.52* | 0.01 |
| | OZ | 0.39 | 0.05 | 0.11 | 0.61 | 0.35 | 0.12 | 0.85** | 0.00 |
| | MGMJ | -0.03 | 0.86 | 0.49* | 0.01 | 0.16 | 0.48 | 0.65** | 0.00 |
| | MGUK | 0.30 | 0.14 | 0.30 | 0.14 | 0.85** | 0.00 | 0.99** | 0.00 |
| | MGDO | 0.04 | 0.83 | 0.53** | 0.00 | -0.01 | 0.93 | 0.65** | 0.00 |
| | MWG-MJ | -0.20 | 0.33 | -0.14 | 0.50 | 0.21 | 0.36 | 0.49* | 0.02 |
| | MW-GUK | -0.43* | 0.03 | -0.96** | 0.00 | 0.60** | 0.00 | 0.83** | 0.00 |
| | MWG-DO | 0.14 | 0.49 | 0.55** | 0.00 | 0.82** | 0.00 | 0.38 | 0.09 |
| | INGZ | 0.10 | 0.64 | -0.22 | 0.29 | 0.92** | 0.00 | 0.92** | 0.00 |

** The correlation is significant at the level of 0.01 (two-way); * The correlation is significant at the level of 0.05 (two-way).

## CONCLUSION

Speed of motor reaction is an ability that is necessary for everyday life, and especially in solving situational-motor problems that the graduates from the Faculty of Security Sciences may encounter while performing their professional duties. The sample consisted of 44 respondents of both genders (24 men and 20 women) who were third-year students at the Faculty of Security Sciences. The study was conducted to determine temporal gender-related differences in performing particular modalities of kicks and punches, in the condition of one response to one stimulus and the situation under the alternative stimulus introduced. The results indicated that the women in most cases achieved better temporal results from the left position in comparison to the men when it comes to the technique realisation on a simple stimulus. On the other hand, the men achieved better results when the alternative stimulus is introduced. The explanation for these findings could be due to anthropometric characteristics, meaning that women are of lower height and consequently perform techniques on a shorter path. The better results that men achieved in the situation of complex stimulus are attributed to a higher level of genetically determined motor abilities, as well as to the faster processing of complex information. When it comes to motor response relationships with the S1 test, which tested the ability to process in parallel, the results were explained by the amount of cognitive stress, higher motor skills, especially those characterized by high natural coefficients, but also better concentration, focus, and perception, especially in situations of more complex movements. The importance of the ability of motor reaction in performing safety tasks is taken into account, and the importance of this research can be seen in the possibility of selection, modelling, and further direction of students' training. It is expected that with carefully selected model characteristics of students and means of training and improvement, it is possible to achieve the practical applicability of martial arts techniques in real-life situations.

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# THE APPLICATION OF THE *NE BIS IN IDEM* RELATED TO FINANCIAL OFFENCES IN THE JURISPRUDENCE OF THE EUROPEAN COURTS

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**Abstract:** In the article, the authors analyze the fundamental challenges in the application of the *ne bis in idem* principle in the practice of the European Court for Human Rights and Court of Justice of the EU and their interpretation of the principle in relation to the application on the criminal offences and misdemeanour offences, including administrative penal offences, against the same person for the same acts. Article followed the development in interpretation of the principle by the European Court of Human Rights in Zolotukhin case to the interpretation of the Court of Justice of the EU in Menci case. European Courts jurisprudence could be used for dialogue on challenges that the Serbian judiciary and tax authories are facing in the interpretation of legislation and application of *ne bis in idem* principle on criminal and misdemeanour procedings against the same person for the same acts. The articile provides the basis for discussion on the unification of court practice.

**Keywords:** financial offences, misdemeanour offences, criminal offences, European courts jurisprudence, ne bis in idem.

## INTRODUCTION

In the field of economic and financial crime Serbia keeps double-track enforcement regime,[2] similar to several European countries that grant administrative and criminal penalties for the same offence (Case *Åkerberg Fransson*, C-617/10; Opinion of AG Cruz Villalón, para. 83).[3] Most countries which have measures for double-track have introduced a variety of tools which prevent

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2 The Law on Tax Procedure and Tax Administration impose a number of misdemeanour tax offences, while criminal offences are prescribed both in the Law on Tax Procedure and Tax Administration.

3 In some countries, penalties are issued by administrative authorities, so it is refered to them as administrative penal proceedings. In the Republic of Serbia sanctions for financial misdemeanors are imposed in proceedings conducted by the misdemeanor court.

an excessive punitive outcome, either through the application of a criterion of proportionality like in Germany or the priority of criminal proceedings over the administrative proceedings like in Spain (*Ibid*).

In Serbia financial offences are listed in different laws that regulate financial and commercial business and in the Criminal Code (*Official Gazette of the Republic of Serbia* Nos. 85/2005…35/2019). This duplication of punitive systems often cause problems in practice, since responsible institutions file for the same conduct both a misdemeanour charge and a criminal charge. However, in such situations when judgement is already passed in misdemeanour proceedings, it is not possible to pass a judgment in criminal proceedings due to the application of the *ne bis in idem* principle (Mrvić Petrović, 2014: 28; Bovan, 2014: 62-74). Bearing in mind similarities of legal description of criminal offences, misdemeanor and economic offences and the possibility of paralel proceedings for the mentioned offences, preventing the possibility of double punishment and violating the principle of *ne bis in idem* is an additional challenge for national legislation and practice. When charges are submittes simultaneously, the misdemeanour procedures are finalized faster so criminal proceedings cannot be conducted due to the application of the ne bis in idem principle (Ilić, 2017: 31). According to Article 8, paragraph 3 of the Misdemeanor Law of the Republic of Serbia no procedure may be initiated against a perpetrator of a misdemeanour who has been found guilty in a criminal proceeding for a criminal offense that includes the characteristics of a misdemeanour and if it has been initiated or is in progress, it cannot be continued and completed. In addition, no procedure may be initiated against the perpetrator of a misdemeanour who has been legally declared responsible for an economic offense that includes the characteristics of the misdemeanour and if it has been initiated or is in progress, it cannot be continued and completed (Misdemeanor Law, *Official Gazette of the Republic of Serbia,* Nos. 65/2013…91/2019 - other law).

With every state having its own independent rules on the territorial scope of its criminal law, there is an inherent hazard of dual punishment (Satzger, 2012: 134). The differences between the national criminal law systems are reduced through establishment of international and regional rules on the application of the *ne bis in idem* principle, particularly in regard to criminal offences that are protecting financial interests of the European Union. For this reason, it is important for national courts to follow jurisprudence of the European Court of Human Rights (ECtHR) and the Court of Justice of the EU (CJEU), when it comes to the financial interests of the European Union.

The *ne bis in idem* principle in the EU has evolved from a domestic legal principal into a transnational legal right (Vervaele, 2005: 117). Implementation of the *ne bis in idem* principle at the national level is important for several reasons, such as the protection of the human rights, protection of the individual from state abuses, proportionality, rule of law, legal certainty, judicial security, due process, respect of res iudicata and interests of social peace and order (Van Bockel, 2010: 25).

Bearing in mind problems in practice regarding the impossibility to conduct criminal proceedings for financial offences against the same person after be-

ing sentenced for misdemeanour, in this paper we will try to make recommendations for unification of the national court practice. Therefore, we will point out the importance of the principe of *ne bis in idem* at the level of the European Union, and thus at the national level and analyse the legal approaches regarding the principle *ne bis in idem* expressed in the judgments of the European Court of Human Rights and and the Court of Justice of the European Union with special reference to the judgements regarding financial offences.

## THE *NE BIS IDEM* PRINCIPLE IN THE EUROPEAN SYSTEMS AND JURISPRUDENCE

The *ne bis in idem* principle is the fundamental principle of the criminal law in many modern legal systems. In some states it is incorporated in the Constitution. In Germany, Article 103 of the Constitution is related to mentioned principle. The same principle is also contained in Article 34 paragraph 4 of the Constitution of the Republic of Serbia. According to that Article no one may be prosecuted or punished for a criminal offence for which he has been, by the final judgment, acquitted or sentenced or for which the indictment has been finally quashed or the proceedings finally suspended, nor a court decision may be amended to the detriment of the accused in the proceedings under an extraordinary legal remedy. The same applies to the conducting of proceedings for some other punishable offence. The right not to be prosecuted or punished twice for the same offence is a means to ensure legal certainty and impartiality (Škulić, 2014: 119).

Increased influence of the EU regulations on national laws and the free movement of goods, people, services and capital within the European Union, had as a consequence raise of the relevance of the international dimension in the criminal justice, and thereby also the risk that a person may be subjected to trial twice for the same criminal offence at the national level.

From the historical aspect, the *ne bis in idem* principle has been applied within one state and it has been limited to the area of the criminal law, which means that it has not been applied to administrative proceedings in which penalties have been imposed. More recently, some states have also extended the scope of the application of the principle to all kinds of criminal proceedings and penalties. However, the application of the principle in transnational cases in which a number of member states are involved can be contested, as well as the issue to which extent a national legal system should respect the discontinuance of criminal prosecution in another state, or whether *ne bis in idem* is applied to such cases as well (Mitsilegas, 2009: 143).

The lack of harmonization in the area of criminal law within the EU and the existence of partial rules on the conflict of jurisdiction create the risk of subjecting the same person to trial twice for the same criminal offence in different member states. The international instruments do not contain general prohibition against prosecution of one person twice for the same criminal offence in two different states. The European Convention on Human Rights in Article 4

of the Protocol 7 stipulates the right not to be convicted or punished twice in the same matter within one state. The provisions of the Convention and Protocol 7 cleary indicated there is no prohibition to try someone twice for an offence for which he has already been finally acquitted or convicted in another state. The interpretation of the territorial application of article 4 of the Protocl 7 is confirmed by the ECtHR in case *Baragiola v Switzerland* (Nenadic, 2014: 145; Case *Baragiola v Switzerland*, App No 17265/90).

The most challenging thing for the interpretation of the ECtHR was *idem* element (the act being judged is the same). The element of *idem* can be assessed based on identity of offender, facts, injured person or legal qualification of the facts (Trechsel, 2005: 391). In practice specific problems may arise when different institutions decide on the same facts, i.e. courts and administrative bodies.

The *ne bis in idem* principle constitutes the European added value in comparison with the international law. Particular challenge is the fact that this principle is differently regulated in several European legal instruments: the European Convention on Human Rights, the Schengen Agreement and the Charter of Fundamental Rights of the EU.

In the European Union *ne bis in idem* principle was regulated in Art. 54–58 of the Schengen Convention. The influence on the acceptance of the *ne bis in idem* principle in the European law had the understanding of the notion of territoriality of the EU and the creation of the Schengen area. Due to Article 54 of the Convention on the Implementation of the Schengen Agreement (the CISA), the *ne bis in idem* principle got the transnational dimension. Mentioned Article stipulates that "a person whose trial has been finally disposed of in one Contracting Party may not be prosecuted in another Contracting Party for the same acts provided that, if a penalty has been imposed, it has been enforced, is actually in the process of being enforced or can no longer be enforced under the laws of the sentencing Contracting Party".

Special provisions on the *ne bis in idem* are contained in the 1995 EU Convention on the Protection of the European Communities' Financial Interests and the 1997 EU Convention against Corruption Involving Officials. However, although basic provisions and exemptions are identical as in the Schengen Convention, there are certain differences (the provisions on cooperation) and, therefore, the question arises as to whether the provisions of the two Conventions are *lex specialis* relative to the Schengen Agreement (Peers, 2013: 837). The mentioned principle is also regulated in Article 50 of the Charter of Fundamental Rights of the European Union.

The Explanation prepared by the authors of the Charter provides the clarification that "in accordance with Article 50, the 'non bis in idem' principle applies not only within the jurisdiction of one State but also between the jurisdictions of several Member States (The Text of the explanations relating to the complete text of the Charter of fundamental rights of the European Union as set out in CHARTE 4487/00 CONVENT 50).

The development of the *ne bis in idem* principle on the European level is determined by the case law of the ECtHR and CJEU and the mutual influence between courts. Interpretation of double-track enforcement regime, penal administrative and criminal proceedings, raised question of the level of protection afforded by the *ne bis in idem* principle of Arti-

cle 4 of Protocol 7 of the ECHR and Article 50 of the Charter. Some authors noted that both European Courts chose to anchor the protection of the *ne bis in idem* at the interface between administrative and criminal law to multiple and often practicaly unforeseeable criteria (Mirandola & Lasagni, 2019: 131). Those criteria diverging from one court to the other also contribute to the general confusion about the effective scope of this principle for individuals as well as national authorities. It seems that there is not a clear criterion and it would require setting clearer rules to encourage coherent legislative solutions (Mirandola & Lasagni, 2019; 133). There are authors who perceive the process of interpretation of the *ne bis in idem principle* by the European Courts as an evolving process that will led to convergence (Vetzo, 2018: 81).

The fact that the provisions in the CISA Convention differ from other international instruments that regulate *ne bis in idem*, including the European Convention on Human Rights, has called for further clarifications of this principle in the EU law. The *ne bis in idem* principle has become an integral part of the EU acquis and by the introduction of this principle as the basis for mandatory or facultative rejection to act upon warrants, or orders sent to instruments of mutual recognition (e.g. the European Arrest Warrant or the European Production Order). None other provision of the criminal law has causes so many dilemmas in the application by national courts as the *ne bis in idem* principle, so the CJEU provided the general guidelines for the interpretation of this principle.

Due to the jurisprudence of the CJEU, the supranational principle has been developed that does not depend on the adoption of additional regulations or harmonization of the substantive law. The decisions of the CJEU influenced on the ECtHR jurisprudence (*Zolutuhkin vs. Russia*). In a way this case constitutes a deviation from the former jurisprudence. According to the standpoint of the European Court of Human Rights Article 4 of Protocol 7 should be interpreted as the prohibition of prosecution or subjecting to a trial of a person for another act to the extent to which that act results from identical facts or the facts that are essentially the same as those in the previous act. It was emphasized in the judgment that it is irrelevant as to what parts of new indictments are confirmed or dismissed in the course of the later proceedings, because the specified Article stipulates the protection of a person from being tried or from being tried in new proceedings, and not the prohibition of another condemnatory or judgment of acquittal Consequently, the court should focus on those facts that constitute a set of factual circumstances related to the same accused, which are inextricably linked together in time and space and the existence of which must be proven in order to pass the condemnatory judgment or to institute criminal proceedings. In the mentioned case the ECtHR rulled that Article 4 of Protocol No. 7 must be understood as prohibition of the prosecution for a second offence if it arises from identical facts. That means that criminal indictment after a final administrative punitive measure for "substantially the same facts" is simply impossible on the basis of the Zolotukhin judgment (Desterbeck, 2019: 137).

In case Luca Menci the Luxembourg Court followed the Strasbourg decision (*Luca Menci Case*, C-524/15). The CJEU noticed that Italian legislation allowed duplication of proceedings and penalties in administrative penal proceedings and

criminal proceedings against the same person for the same acts and noticed that such duplication represented a limitation to the fundamental right guaranteed by article 50 of the Charter and analysed wheter that limitation is justified (The Judgement in *Luca Menci Case*, Para 39). The CJEU integrated the same criteria inaugurated in the case A and B v. Norway by the ECtHR. In Menci case the CJEU was concerned that the duplication of administrative penal proceedings and criminal proceedings against the same person for the same acts, can under certain conditions present a justified limitation of the right guaranteed by Article 50 of the Charter of Human Rights of the EU (Burić, 517: 518; The Judgement in Case A and B v Norway, App Nos. 24130/11 and 29758/11). Although in practice it happens that the CJEU follows the practice of the ECtHR, there are also examples of different points of view, as in the judgment of the CJEU in Menci case regarding the non-payment of VAT.

## FINANCIAL OFFENCES AND APPLICATION OF THE *NE BIS IN IDEM* PRINCIPLE

The criminal law protection of financial interests of the European Union at the same time protects the member states national financial interests, since a part of national revenues collected in the territory of the member states belongs to the budget of the European Union (Matić Bošković, 2016: 247-259). The funds from the budget of the European Union that are spent in the territory of the member states are used to finance, e.g. agricultural and rural development, different administrative costs (Stojanović, 2007: 173). The obligation of the member states to prescribe criminal offences to protect financial interests of the European Union is contained in the Directive on the fight against fraud to the Union's financial interests by means of criminal law (Directive (EU) 2017/1371). Bearing in mind the method of financing of the Union, those are mainly the criminal offences in the protection of financial interests as well, i.e. the criminal offence of tax evasion or state aid fraud (Kostić, 2018: 36). Due to the similarity between administrative offences and criminal offences in the protection of the above interests, the CJEU has also faced dilemmas the same as the ECtHR and the national courts, which were related to the application of the *ne bis in idem* principle.

The Italian court requested the preliminary ruling from the CJEU, since the Italian national legislation, for the same conduct, prescribed both administrative and criminal sanctions (Kostić, 2018: 143-147; The Judgment of the Court of Justice of the European Union, C-524/2015).

The competent national tax administration initatied the administrative proceedings in which the perpetrator of the misdemeanour offence was ordered to pay fine due to the failure to pay the tax liability. However, after the termination of the administrative proceedings against that person, for the same act, the criminal proceedings were instituted, with the explanation that the act constitutes the criminal offence prescribed in Articles 10-bis and 10-ter of the Italian Law on Criminal Tax Offences (Legge sui reati tributari, Decreto legislativo, 10/03/2000

Numero 74, Il testo del Decreto Legislativo 10 Marzo 2000, n. 74 sui reati tributari, aggiornato al Decreto Legislativo 24 Settembre 2015, numero 158).

The CJEU took the stand that the late payment of the value added tax is still penalized. The CJEU decided that the national regulation based on which against that same person criminal proceedings may be instituted due to the failure to pay the value added tax, although the administrative sanction of the penal character has already been imposed upon that person for the same acts in terms of Article 50 of the European Charter, is not violation of the specified Article. However, the national regulation that envisages such a possibility must (The Judgment of the Court of Justice of the European Union, March 20, 2018, C-524/2015):

1) Prescribe such cumulation of sanctions in general interest, whereby criminal and administrative sanctions must have complementary aims;
2) Contain the rules by which the cumulation is limited to what is the absolutely necessary additional burden on the accused person, which is imposed upon him due to the cumulation of proceedings; and
3) Stipulate the rules which ensure that the severity of all the imposed sanctions is limited only to what is absolutely necessary in view of the severity of the concrete act.

The case Akrberg Fransson also concerns the tax offences. The subject of this case was the request for a preliminary ruling concerning the interpretation of the *ne bis in idem* principle in the European Union law took position that Member States that did limit *ne bis in idem,* when implementing and enforcing EU law to criminal law would have to widen their scope or protection in order to include punitive administrative sanctioning (Vervaele, 2013: 225). The preliminary request has been made in the context of a dispute concerning proceedings brought by the Swedish Public Prosecutor's office for serious tax offences. The Court ruled that "the ne bis in idem principle laid down in Article 50 of the Charter of Fundamental Rights of the European Union does not preclude a Member State from imposing successively for the same acts of non-compliance with declaration obligations in the field of value added tax, a tax penalty and a criminal penalty in so far as the first penalty is not criminal in nature, a matter which is for the national court to determine" (The Judgement in Case Åklagaren v Hans Åkerberg Fransson, C 617/10, Para. 50).

Different approach than in the above mentioned case is present in the judgement of the case A. and B. v. Norway. In this case applicants argued that in breach of Article 4 of Protocol No 7, they had been subjected to double jeopardy on account of the same matter. In that situation they have been accused and indicted by the prosecution services and having had tax penalties imposed on them by the tax authorities, which both of them accepted and paid before criminal conviction. The tax decisions became final in December 2008. Before the criminal proceedings this seemed as a violation of the *ne bis in idem* principle (Luchtman, 2018: 1726). The ECtHR concluded that in both cases no violation of Article 4 of Protocol 7 could be established. The criminal proceedings and the administrative proceedings were conducted in parallel and were interconnected. The establishment of facts made in one set was used in the other set; and, as regards the proportionality of the overall punishment inflicted, the

sentence imposed in the criminal trial had taken the tax penalty into consideration (Luchtman, 2018: 1728). Despite that the decision of one of the judges argued that the approach chosen by the majority poses challenges to the authority of the State because that approach contributed to risk of the contradictory decisions and manipulations by the authorities (Luchtman, 2018: 1728).

The Decision in Menci case is different than the Decision of the ECtHR in A and B v. Norway case. According to the opinion expressed in the second decision, States are independent in the regulation of their legal systems and take into account the fact that some States have not ratified Article 4, paragraph 1 of the Protocol 7 of the European Convention on Human Rights. On the contrary, the Menci decision takes the view that the interpretation of Article 50 of Charter depends on the willingness of Member States to respect them. The decision in Menci case is more acceptable, bearing in mind that the criteria taken into account in decision A and B v. Norway could lead to legal uncertainty and non-compliance with the rights quaranteed by the Charter (cited in Vetzo, 2018: 9). Despite the different attitudes excepted in the above mentioned cases, both European Courts deemed it relevant that the proceedings pursued the next complementary aims, desired the foreseeability of double proceedings, reguired coordination between the two authorites involved in the proceedings and insisted on the proportionality of the combination of sanctions (Vetzo: 12). As has been noticed by Vetzo (2018: 20-21), further dialoque between two courts will be necessary for determining the future direction of the principle *ne bis in idem* in internal application. Bearing in mind the afore mentioned, the criterion for the application of *ne bis in idem* principle in the practice of national courts should be more clarified in case law of both Europen courts.

According to certain judgments of the national courts of the Republic of Serbia, the notion of criminal offence in terms of the regulations that govern the issue of legal security in the penal law should be interpreted not only as criminal offences, but also as transgressions and misdemeanour offences (The ruling of the High Court in Novi Sad, Kž 2 94/2014). A trial for a criminal offence is possible if the proceedings were preceded by some other for the offence that can originate from the same event, but differs in the description of the committed act (The judgment of the Appellate Court in Niš, Kž1 1195/2016). In case all the actions undertaken by the accused, which constitute the elements of criminal offences for which he has been pronounced guilty, are of much larger scale and more numerous than the acts on the ground of which he has been misdemeanour sanctioned in the misdemeanour proceedings conducted before a state authority, it would not be possible to talk about the already adjudicated matter (The judgment of the Appellate Court in Belgrade, Kž1 Po1 32/2015). The Constitutional Court of Serbia in the Decision Už-1285/2012 points out that, when assessing the allegations of a constitutional appeal against the violation of the right to legal security in the penal law referred to in Article 34 paragraph 4 of the Constitution, it is necessary to establish whether both proceedings conducted against the appellant of the constitutional appeal were conducted for an act that constitutes a punishable offence. Then whether the penalties are penal in their nature, whether the acts due to which the applicant is criminally prose-

cuted are the same (*idem)* and whether double proceedings (*bis*) existed.

If the description of the criminal offence resulting from the same circumstances differs from the description of the misdemeanour offence, there will be no violation of the *ne bis in idem* principle. If any of misdemeanour offences prescribed in the Law on Tax Procedure and Tax Administration has been committed for which the final judgment has been passed, there will be no obstacle for the passing of a judgment in the criminal proceedings. This is in accordance with the decision in Zolothukin case which takes the view that Article 4, paragraph 1 of Protocol No. 7 to the European Convention on Human Rights must be interpreted as prohibiting the prosecution or trial of a person for another offense to the extent that it arises from the same facts or the facts essentially the same. That means that the merits of the misdemeanour court should not include the facts that are not relevant to its existence, and which represent the facts necessary for the existence and qualification of a more serious offense (cited in Ilić, 2018: 30, 31).

## CONCLUSION

When the application of the *ne bis in idem* principle is in question related to the cases that are tried against perpetrators of financial offences (misdemeanour offences and criminal offences), the jurisprudence of the European courts (ECtHR and CJEU) could raise additional dilemmas within the Serbian judiciary. In Serbia the problem exists in practice, since the authorities competent to discover financial irregularities, i.e. the tax administration, often file both tax-related misedemeanor and criminal charges against the perpetrators of tax offences. Such a processing causes the consequences which are reflected in the inability to conduct criminal proceedings at a later stage, because it often turns out that certain conduct does not constitute a misdemeanour tax offence, but a criminal offence instead.

However, following the jurisprudence of the ECtHR and the CJEU related to the application of the *ne bis in idem* principle could still be possible and applicable in some cases. But sometimes the practices of the mentioned Courts are different in similar cases and it seems that the problems can only be solved at the national level. According to Luchtman it seems that the CJEU shape the principle according to the needs of the European Union (Luchtman, 1749). Bearing in mind that the CJEU managed to avoid in its decisions the conflict whith the practice of the ECtHR, it seems that the best solution is establishing of clear rules at the national level to avoid the breach of the principle *ne bis in idem* in financial offence matters. That is very important for the protection of human rights and legal security at the national level.

Our opinion is that the standing of the CJEU expressed in the proceedings further to the 2015 preliminary ruling in Menci case based on the application of the Italian court would be perhaps more suitable (C-524/2015). According to the position taken, when assessing whether the violation of the *ne bis in idem* principle is in question, one should bear in mind that the cumulation of sanctions is

in general interest, whereby the criminal and misdemeanour sanctions must have complementary aims. Therefore, it could possibly be interpreted that in financial offences the cumulation of sanctions is always in general interest, and then to take care that by imposing misdemeanour and criminal sanctions complementary aims are attained. This means that a sanction in the criminal proceedings could be passed only for the scope of the act of offence that goes beyond the legal description of a misdemeanour offence, which would also imply proportional allowing for the previously imposed sanction or reduction of the criminal sanction so that such processing by the court would not impose an additional burden on the accused person, which emanates due to the cumulation of proceedings. In such a way the requirement that the severity of all the imposed sanctions is limited only to what is absolutely necessary in view of the severity of the concrete offence would also be met. However, in view of the standpoint contained in the judgment, this should be specifically envisaged in national regulations.

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