

# PSYCHOLOGICAL ASPECTS OF POLITICAL CHOICES: FOCUS ON COGNITION, DECISION-MAKING STYLES, AND EMOTIONS IN VOTING BEHAVIOUR<sup>1</sup>

Lucia Viteková<sup>2</sup> and Ivana Václavíková<sup>3</sup>

## Abstract

*The presented paper focuses on the issue of voting behaviour. It aims to determine the importance of selected cognitive factors, decision-making styles and emotional factors in electoral decision-making and behaviour in voters with different political preferences and voters of specific Slovak political parties. The cognitive style was evaluated using the Cognitive Reflection Test - Version 2. Decision-making styles were explored using the General Decision Making Styles Questionnaire and emotion preferences in information processing were evaluated using the following affective states test. Within the research sample (N = 308, average age 36.2 years), distinct groups of Slovak voters were created: 1. based on parties with different ideological orientations, and 2. based on specific Slovak political parties. The predictive significance of the observed characteristics for the choice of a political subject with a particular ideology and the choice of a specific Slovak political party was explored. All the variables monitored – cognitive style, decision-making style, and emotion preferences in information processing – proved to be significant.*

**Keywords:** Political psychology, Voting behaviour, Cognition, Decision-making, Emotionality.

## INTRODUCTION

Political scientists, sociologists, and psychologists have many different models to explain why people sympathize with certain ideologies, parties, or candidates. Research on the behaviour of Slovak voters highlights various topics. Socio-demographic factors behaviour (Gyárfášová, Slosiarik, 2016; Lysek, Zvada, Škop, 2020) or a comparison of social structures and the

<sup>1</sup> This paper was supported by the project APVV-17-0128.

<sup>2</sup> Faculty of Arts, University of Ss. Cyril and Methodius, Nám. J. Herdu 2, 917 01, Trnava, Slovakia. E-mail: [lucia.gazovicova@ucm.sk](mailto:lucia.gazovicova@ucm.sk), ORCID: <https://orcid.org/0000-0001-6788-0274>.

<sup>3</sup> Faculty of Arts, University of Ss. Cyril and Methodius, Nám. J. Herdu 2, 917 01, Trnava, Slovakia. E-mail: [ivana.vaclavikova@ucm.sk](mailto:ivana.vaclavikova@ucm.sk), ORCID: <https://orcid.org/0000-0002-6567-9371>.

related choice of a political party in Slovakia and other European countries (Knutson, 2012) are most often identified as important in electoral behaviour. Based on the foreign research, it is often corruption and its influence on voter behaviour in Slovakia (Klanšja, Tucker, Deegan-Krause, 2016). In recent years, emphasis on psychological factors in research is also observed, e.g., party identification in municipal elections (Horváth, Šebík, 2015), which can be viewed from several perspectives, namely sociological, socio-psychological and economic. The aim of such models is usually to predict the voters' decisions. These voting characteristics provide a relatively reliable idea of how voters are likely to vote, but are not so effective in explaining why voters vote in the way they do. (Lau, Redlawsk, 2006). Slovak voters – citizens of one of “new democracies” - also place an emphasis on radical attitudes, such as the research of ideology regarding racial intolerance (Weiss, 2003) and voting behaviour in connection with Euroscepticism and preferences for extremist parties (Heinisch, Mühlböck, 2015). Only recently, the trend of strictly psychological research has reached Slovakia. Proof of this is the recent study by Baboš, Világi, Soláriková (2019), which experimentally examined the role of emotions, especially anxiety in the formation of radical political attitudes.

In order to clarify the decision-making process from the psychological research perspective, it is essential to identify how voters use the information they receive, i.e., their cognitive characteristics. The way we process information can be described as a cognitive style, which has the properties of reflexivity and impulsivity. These refer to the speed and possible error rate of the cognitive style (Kagan, 1966). Based on previous research on electoral behaviour, this paper reflects the position that there is a significant difference in the use of cognitive styles between people with different political preferences, specifically between liberal and conservative voters (Salvi, Cristofori, Grafman, 2016; Hannikainen, Miller, Cushman, 2017). A related term, but not synonymous with cognitive style, is a decision-making style, which already includes the behavioural component of the decision-making process (Scott, Bruce, 1995). Using a decision-making style allows determining how and with what motivation an individual makes decisions. For example, shall the individual carry out a rational analysis? Shall the decision be precise and based on detail, or shall the decision-making process be finished as soon as possible?

Modern concepts of political psychology do not deny the important role of affect and emotion in political judgment (Marcus et al., 2005; Nosek, Hawkins, Frazier, 2010). The interaction of cognition and emotions plays

an important role in shaping electoral behaviour and decision-making (Redlawsk, 2006), while emotions in all its phases accompany the electoral decision-making process. However, from the point of view of psychological research, in our conditions many topics are left unexplored. The authors of this paper are aware that electoral Decision-making is a complex process in which many factors, including culture, society, sociology, economics, are involved. In psychological research, the authors' interest is focused mainly on individuals. Therefore, the research paper aims to identify which cognitive factors, decision-making styles and emotional preferences in informational processing prove to be important in explaining the choice of a political subject. In this respect, the authors consider it beneficial to explore the significance of the described cognition and emotionality characteristics for electoral decision-making.

With regard to the aim of the research study, the article is conceived as follows. The first section describes the observed constructs (cognitive style, decision-making style, and emotional preferences in information processing) from the perspective of political psychology and previous research in the field of cognition and the role of emotions in electoral behaviour. Furthermore, the intention of the research and its methodology are presented. After clarifying the research procedure, the paper presents findings of the regression analysis in order to determine the predictive significance for electoral behaviour.

## **1 COGNITION AND EMOTIONALITY IN VOTING BEHAVIOUR**

Political cognition or political knowledge refers to studying how individuals understand the political world and how this understanding leads to voting behaviour (Cottam et al., 2004). Cognition is a collective term for the psychological processes involved in the acquisition, organization, and use of knowledge (Bullock, Stallybrass, 1977). Knowledge/information is organized in our minds in the cognitive system in specific structures in beliefs and attitudes (Cottam et al., 2004), such as ideological attitudes. Beliefs are associations that people form between an object and its attributes (Eagly, Chaiken, 1998), and the attitude relates to a construct that, among other things, comprises a behavioural component compared to convincing participation.

Cognition, present in the electoral decision-making process, can be seen through Kahneman's dual-processes theory, which is based on the postulate that two processes (systems) coexist in our minds. While System 1 is fast,

intuitive, and impulsive; System 2 is slow, thoughtful, and controlled (Evans, 2008; Kahneman, 2019). By their definition, these two systems resemble the properties of cognition reflexivity-impulsivity. The Cognitive Reflection Test (CRT) has become a popular method for measuring rational thinking style and normative choice preferences based on dual process theory (Frederick, 2005). The theory of dual processes has long been used in the field of distorted judgments and decisions, where it turns out that a number of prejudices are related to the impulse and intuition of System 1 (Evans, 2008; Kahneman, 2019). Several studies show that there is a link between CRT, distorted judgments, and subsequent decisions. For example, in an intertemporal choice, participants with lower CRT scores showed a stronger preference for immediate lower rewards than for later higher rewards and were therefore more impulsive in their selection (Bialek, Sawicki, 2018; Frederick, 2005; Sinayev, Peters, 2015). In the gambling role, participants with lower CRT scores showed excessive risk aversion and, therefore, were unable to maximize potential earnings (Frederick, 2005). Unsurprisingly, CRT performance also correlated with the scholastic assessment test (SAT, a popular test used for college admissions in the United States), as well as the GPA score (academic performance score), which requires logical thinking and reasoning (Frederick, 2005; Thomson, Oppenheimer, 2016).

Due to the prevalence of the CRT method, a modified and lesser-known CRT-2 method has emerged. A recent study by Cheng and Janssen (2019) explored the relationship between CRT-2 and intertemporal choice for two reasons. First, intertemporal choice, which is based on decision-making that has implications over time, is associated with a number of important life activities (Read, McDonald, He, 2018). For example, one of the finding says that more impulsive intertemporal decisions are associated with lower income (Meier, Sprenger, 2012), lower GPA scores in college (Reimers, Maylor, Stewart, Chater, 2009), and a higher probability of obesity (Schiff et al., 2016) and substance abuse (de Wit, 2008). However, research (Salvi, Cristofori, Grafman, 2016; Bernabel, Oliveira, 2017; Hannikainen, Miller, Cushman, 2017) using a different methodology also offers findings on the difference in cognitive style used in political and non-political tasks between conservative and liberal voters.

Voter decision-making is likely not to differ from most other decisions that people make in their everyday lives. There is therefore nothing special in the political environment that magically helps people overcome the limits of human knowledge. All known about citizens' perceptions of politics suggests that politics is not a critical or everyday problem for most people (Lau,

Redlawsk, 2006). However, in some significant situations, such as presidential elections or, more recently, the parliamentary elections to the National Council of the Slovak Republic held in 2020, citizens are usually unable to avoid being exposed to politics, and there is a stable amount of political information provided. How can people cope with a potentially confusing and overwhelming information surrounding if they are motivated to pay at least some attention to this but are unable to devote superhuman cognitive resources to this task?

Any decision-making, even at the individual level, requires a process of gathering and assessing information. (Lau, Redlawsk, 2006). Several factors may influence decisions, including previous experience (Juliusson, Karlsson, Gärling, 2005), cognitive prejudices (Stanovich, West, 2008), age, and individual differences (Bruin, Parker, Fischhoff, 2007). Awareness of the factors that affect the decision-making process is a pre-condition for understanding the decision-making process itself. The question is also the strategy used by a voter to be capable for making any voting decision. To capture the individual's strategy used in the decision-making process, we operationalize it through the model of decision-making styles by Scott and Bruce (1995). They understand decision-making styles as a characteristic way of perceiving and responding to the decision-making tasks of individuals. It is not a peculiarity of the personality but a habit to react or make decisions in a certain way, which is realized in the context of personality characteristics.

Another input factor is emotions that are critical to political choice by explaining how people communicate about politics, how they seek information and learn, how they make judgments, and how they participate in political life (Crigler, Hevron, 2017). However, primarily by rooted theoretical distinctions between affect, emotions, and cognition, theories of political judgment processing bear indisputable resemblance to a range of dual-process theories popular in implicit social cognition (Strack, Deutch, 2004). In this sense, emotions correspond to implicit, associative processes, and cognition corresponds to explicit processes. As in other areas, evidence suggests that political judgments are influenced by automated processes beyond consciousness or control and intentional processes that reflect individuals' intentions and explicit goals (Nosek, Graham, Hawkins, 2010).

Emotions are generally an integral part of human experience which play a significant role in decision-making processes, including decisions about political choices. Cognitive processes can be influenced by emotions through three basic mechanisms (Bonansinga, 2020) - directing the attention, acting

as behavioural motives, and influencing judgment formation. The research (Gasper, Bramesfeld, 2006) made it clear that people monitor positive feelings because they signal the presence of rewards they want to approach, and people monitor negative feelings because they signal the presence of threats they would like to avoid. Even in political decision-making, people tend to overlook the degree of risk when a positive framework is presented, and, conversely, they focus on the risk when a negative framework is presented (known as the framing effect). In political decision-making, the effect of framing was examined by Bütler and Maréchal (2007), who confirmed the effect of the emotional connotation of the information provided for differences in political choice preferences.

Thus, in addition to the decision-making styles used in political choice, the question remains as to what type of information, in terms of emotional significance, the voters focus on and how they process it in their decision-making process. Finally, it is interesting to answer another interrelated question, i.e. whether potential voters with a preference for different political subjects show their differences not only in cognitive/decision-making styles, but also in what emotional connotations are important for their decision-making process in terms of following and/or ignoring them. Based on the evidence of the role of characteristics on the part of cognition and emotionality in electoral behaviour and also due to the lack of research in the environment of Slovak voters, this paper approaches the exploration of the importance of these variables for leaning to a certain ideological spectrum and for voting a particular political subject.

## **2 DATA AND METHODS**

As Slovakia lacks more detailed research into political psychology and decision-making prediction, the authors have developed two research questions based on the theoretical basis:

- Q1: Which of the monitored variables (cognitive styles, decision-making styles and emotional preferences in information processing) predict a tendency towards voting conservative or liberal political subjects?
- Q2: Which of the monitored variables (cognitive styles, decision-making styles and emotional preferences in information processing) predict a tendency towards voting a specific Slovak political subject?

Quantitative research was carried out from December 2019 to March 2020 using the questionnaire method. It consisted of surveying basic sociodemographic data and a battery of questionnaire methods and experimental tasks supplemented by an explicit question of electoral preferences for a particular political party, based on which the authors judge the inclination to a certain ideological spectrum. Considering this research as a pilot one, the selection of the research sample was carried out by a combination of convenience sampling and snowball technique. Potential participants were addressed online through interest groups on social network Facebook, especially groups with political themes and fan pages of political subjects (e.g. Politika; Občania a politika; Myšlienky Politikov – KOMUNITA; DENNÍK POLITIKA – nestranné, nezávislé diskusné forum bez cenzúry; VEREJNÁ MIENKA; SMER-SD fanklub; KOTLEBA. JE.ĽSNS.JE.KOTLEBA. VOLÍM MARIANA KOTLEBU; Nadácia SME RODINA, KTORÁ POMÁHA – Boris Kollár; etc.). Some of the groups targeted no longer exist. Subsequently, a questionnaire battery was sent to participants in the FB group, which took them about 30-45 minutes to complete. Potential participants were approached through the group message board and through a private message that the researchers sent based on the list of members in the FB group. Extensiveness of the questionnaires (filling time), research mortality and the need for a specific research sample required to select a group of voters of the leading political subjects currently in power from a total number of the questionnaires completed. Subsequently, the data was processed using the IBM SPSS 25 statistical program and subjected to descriptive statistics and regression analysis.

## **2.1 Research methods**

In the section introducing the research methods to the participants, the authors asked for the basic socio-demographic data of participants - age, gender, level of education and residence. One of the questions was voter preferences, specifically the expression of sympathy for the political entities running in the parliamentary elections on 29 February 2020.

Participants' cognitive style was identified using a Cognitive reflection test version 2 (Thomson, Oppenheimer, 2016). The test was designed on the theory of dual processes, which enabled distinguishing the tendency to use a cognitive style, namely intuitive heuristic system 1 and rational system 2. CRT-2 contains experimental tasks. The correct answers were coded with number 1, and the incorrect intuitive answers were coded with value 0.

The participants' approach to decision-making situations were explored applying the General decision-making styles questionnaire (Scott, Bruce, 1995), in Slovak version by Remišová (2015), distinguishing 5 decision-making styles. The "rational style" emphasizes a thorough search and logical evaluation of alternatives in decision-making. The "avoidant decision-making style" is defined by procrastination and avoidance of decisions. "Dependent style" can be described as seeking advice from others and giving direction to decisions by other people. The "intuitive style" emphasizes reliance on premonitions and feelings. The "spontaneous style" emphasizes the feeling of immediacy and the desire to go through the decision-making process as soon as possible. The questionnaire consists of 25 items that are rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), and the value of Cronbach's alpha is 0.793.

Finally, a Following affective states test designed to assess information processing preferences was used (Gasper, Bramesfeld, 2006). Specifically, it evaluates several dimensions: following the positive, ignoring the negative, following the negative, and ignoring the positive. The questionnaire consists of 16 items that use 7-point ratings (1 = strongly disagree to 7 = strongly agree). Each of the four subscales is saturated by 4 items. In our research the value of Cronbach's alpha coefficient was 0.662. The reliability indicator value may be lower due to translation from English, but the value is limited, nevertheless the questionnaire is still considered appropriate. At the same time, in our dataset, none of the 16 items of the questionnaire significantly reduces or increases the observed reliability. The English translation of the FAST questionnaire and the CRT-2 method was provided by two experts in the field of psychology and an expert in English language, while they were verified in the preliminary research and achieved suitable psychometric indicators.

## **2.2 Research sample**

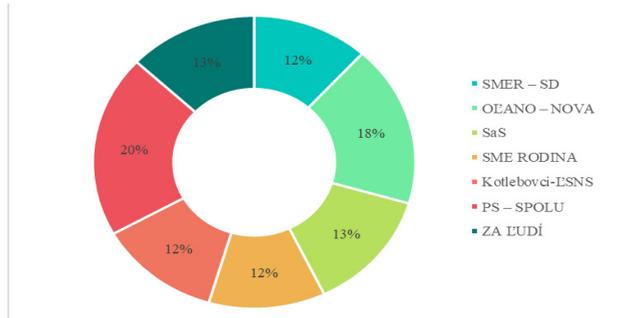
The basic criterion for including participants in the research was that they expressed their sympathy for a political party or parties in the 2020 elections. It was, therefore, possible to categorize the participants based on that criterion. The research focused on the group of 308 voters of the most represented political subjects (Graph 1). The percentage of voters concerning ideological preference is shown in Graph 2. The researchers classified the voters of individual parties into conservative or liberal groups based on the attitudes of the main representatives of specific parties on key

issues in which their conservative or liberal attitudes can be distinguished despite their declared position in the political spectrum. Attitudes toward migration, LGBT community, economy, western or eastern orientations can be considered as key topics in this case. In this context, we consider the voters of the SMER-SD party and the Kotlebovci-ĽSNS party as conservative voters, the liberal voters of the SaS and PS-SPOLU parties. We consider the voters of the OĽANO-NOVA, SME RODINA, and ZA ĽUDÍ parties to be voters of centrist political subjects.

SMER-SD is a center-left to almost left-wing party based on the principles of social conservatism, and the Kotlebovci - ĽSNS party, on the other hand, is a far-right party but also based on national and social conservatism. The currently non-existent center-right two-party coalition PS-SPOLU and the right-wing SaS party both profess an ideology of either classical or economic liberalism.

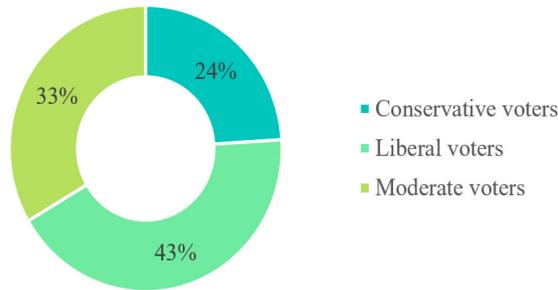
The composition of the research group with respect to gender consisted of 35.9% men and 64.1% women, and their average age was 36.20 (SD = 12.19). The minimum age of the participants was 18 years and the maximum was 71.

**Graph 1:** *Distribution of Voters' Preferences for a Political Party in a Research Sample*



*Source: Authors, based on their own calculations*

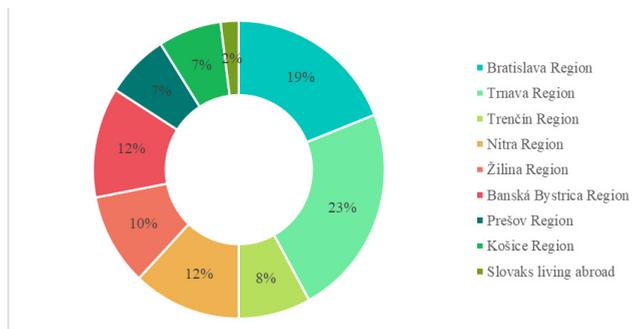
**Graph 2: Distribution of Voters' Preferences for a Political Ideology in Research Sample**



*Source: Authors, based on their own calculations*

The researchers also categorized the participants based on other variables, according to the level of education at primary school, which included 0.5% of participants, 32% of participants completed secondary vocational school, grammar school 12% of participants, first university degree 21.5% (bachelor), 2<sup>nd</sup> university degree 30.2% of participants (master) and 3<sup>rd</sup> university degree (PhD.) 3.8% of participants. The demographic classification of participants into regions is shown in the graph (Graph 3), with all regions of the Slovak Republic as well as Slovak citizens living abroad represented.

**Graph 3: Demographic classification of participants**



*Source: Authors, based on their own calculations*

### 3 RESULTS

Binary logistic regression analysis was used to verify the predictive significance of the examined variables for the choice of conservative or liberal political subjects on a selection from a research sample (N=177). As statistically significant relationships between the variables were confirmed, collinearity was excluded, and the regression analysis operation condition was met. The results of the binary logistic regression analysis are presented in Table 1.

Regarding the results given in Table 1, we can state that the model used explains variability of the choice of conservative or liberal political entity in the participants from approximately 22.1% (Cox and Snell) to 29.8% (Nagelkerke). Variables identified as predictive for choosing liberal political subjects ( $p < 0.05$ ) are following the negative and score in cognitive reflection test (CRT) and, conversely, predictive of the choice of conservative political subjects, the variable ignoring the positive.

**Table 1:** *Predictive importance of voter cognitive characteristics for the preference of the ideological-political spectrum: Binary logistic regression analysis (N=177)*

Variable	B	S.E.	Wald	df	p	Exp(B)
Cognitive reflection (CRT)	0.514	0.205	6.262	1	<b>.012</b>	1.672
Rational style (GDMS)	0.104	0.070	2.223	1	.136	1.110
Intuitive style (GDMS)	-0.101	0.063	2.540	1	.111	0.904
Dependent style (GDMS)	-0.064	0.050	1.638	1	.201	0.938
Avoidant style (GDMS)	0.008	0.041	0.037	1	.847	1.008
Spontaneous style (GDMS)	-0.069	0.054	1.586	1	.208	0.934
Following the negative (FAST)	0.083	0.037	5.001	1	<b>.025</b>	1.087
Following the positive (FAST)	0.021	0.062	0.112	1	.738	1.021
Ignoring the negative (FAST)	-0.019	0.044	0.183	1	.669	0.981
Ignoring the positive (FAST)	-0.112	0.046	5.991	1	<b>.014</b>	0.894
<b>Constant</b>	1.911	2.174	0.773	1	.379	6.761

*CRT- Cognitive reflection test – version2; GDMS – General decision-making styles questionnaire;*

*FAST – Following affective states test*

*Source: Authors, based on their own calculations*

A multinomial logistic regression analysis was performed (Tables 2 and 3) to verify the predictive importance of individual factors on the cognitive characteristics, with the reference group in the first case with the SMER-SD voter group (Table 2) as a conservative political entity compared to voters of other political entities. In the second case, we elected the SaS party as a reference group (Table 3) as a representative of a liberal political entity compared to voters of other political parties. Through a multinomial logistic regression analysis, different levels of predictive significance of cognitive styles, decision-making styles and emotional characteristics for the likelihood of sympathy with different political subjects were verified.

**Table 2:** *Predictive importance of voter cognitive characteristics for the preference of Slovak political subjects: The Multinomial Logistic Regression (Reference Category – Voters of SMER-SD) (N=308)*

SMER-SD	Variable	B	S.E.	p	Lower	Upper
OLaNO	Cognitive reflection (CRT)	.503	.259	.052	0.995	2.745
	Following the negative (FAST)	.120	.047	.011	1.028	1.237
	Ignoring the positive (FAST)	-.140	.055	.011	0.781	0.968
SaS	Cognitive reflection (CRT)	.643	.286	.026	1.077	3.300
	Rational style (GDMS)	.188	.091	.039	1.010	1.441
	Dependent style (GDMS)	-.137	.072	.059	0.757	1.005
	Following the negative (FAST)	.102	.051	.046	1.002	1.224
SME	Dependent style (GDMS)	-.151	.075	.044	0.742	0.996
RODINA	Following the positive (FAST)	.226	.084	.007	1.063	1.477
PS- SPOLU	Cognitive reflection (CRT)	.505	.252	.045	1.011	2.716
	Intuitive style (GDMS)	-.158	.075	.034	0.737	0.988
	Ignoring the positive (FAST)	-.106	.053	.047	0.810	0.998
ZA ĽUDÍ	Ignoring the positive (FAST)	-.167	.059	.005	0.754	0.950

*CRT- Cognitive reflection test – version 2; GDMS – General decision-making styles questionnaire; FAST – Following affective states test*

*Source: Authors, based on their own calculations*

In the first multinomial logistic regression analysis model with a reference group from voters of the SMER-SD party, the predicted values

do not differ significantly from the values of the analyzed model ( $p > 0.05$ ), so the model is proved suitable and it significantly reduces the percentage of unexplained variance ( $X^2 = 177.466$ ,  $df = 88$ ,  $p = 0.000$ ). Based on the determined coefficients, the identified predictors can explain the variance from 37.9% (Cox and Snell) to 38.4% (Nagelkerke). Furthermore, lower scores in the dimensions of emotion preferences in information processing following the negative are shown as predictive for inclusion in the SMER-SD party voter reference group compared to OĽANO and SaS party voter groups. Following the positive is predictive compared to SME RODINA party voters, as well as lower scores in cognitive reflection task success and the use of rational decision-making style compared to the voters of the SaS and PS-SPOLU parties. Predictive significance for including the participant into group of SMER-SD voters gets also higher scores of the variables, such as ignoring the positive, compared to voters of the parties OĽANO, PS-SPOLU and ZA ĽUDÍ; use of dependent style compared to voters of the SME RODINA party; and use of intuitive style compared to voters of PS- SPOLU.

**Table 3:** *Predictive importance of voter cognitive characteristics for the preference of Slovak political subjects: Multinomial logistic regression (reference category - SaS voters) (N = 308)*

SaS	Variable	B	S.E.	p	Lower	Upper
OĽANO	Rational style (GDMS)	-.223	.081	.006	0.683	0.937
	Cognitive reflection (CRT)	-.668	.288	.020	0.292	0.901
ĽSNS	Rational style (GDMS)	-.184	.089	.040	0.698	0.991
	Spontaneous style (GDMS)	.160	.075	.033	1.013	1.359
	Following the negative (FAST)	-.129	.053	.014	0.793	0.974
ZA ĽUDÍ	Rational style (GDMS)	-.165	.084	.048	0.720	0.999

*CRT- Cognitive reflection test – version 2; GDMS – General decision-making styles questionnaire; FAST – Following affective states test*

*Source: Authors, based on their own calculations*

In the second multinomial logistic regression analysis model, the predicted values do not differ significantly from the values of the analysed model (Pearson = 3124.936,  $p = 0.069$ ), so the model is suitable and also significantly reduces the percentage of unexplained variance ( $X^2 = 177.466$ ,  $df = 88$ ,  $p = 0.000$ ). The identified predictors explain variance from 37.9%

(Cox and Snell) to 38.4% (Nagelkerke). In the case of the election of the reference group of the SaS party voters, the higher success in solving cognitive reflection tasks compared to ĽSNS voters and the group that expressed interest in politics, the higher use of rational decision-making style compared to OĽaNO, ĽSNS and ZA ĽUDÍ. On the contrary, the lower rate of use of the spontaneous style compared to the voters of ĽSNS party.

#### **4 DISCUSSION**

In the analysis of predictors for choosing a party with a conservative or liberal orientation, the cognitive style and attitude to information with an emotional component proved to be important (namely the tendency to follow the negative and to ignore the positive). In our research sample, voters of liberal political subjects profile themselves as individuals with greater reflexivity in solving cognitive tasks, predicting their correct solution. On the contrary, conservative voters appear to use intuitive, impulsive, heuristic cognitive system more often, which are strongly linked to distorted judgments. These results are consistent with the conclusions by Bernabel and Oliveira (2017) that liberal individuals are more experienced and open to deal with new information and issues compared to conservatives. At the same time, the above authors validated that conservatives and liberals had different cognitive abilities and that they applied these abilities in both non-political and political areas. Such a setting for liberals may indicate their tendency to solve problems by slow thought-out analysis, which is typical for higher cognitive reflexivity scores. For conservatives, a tendency for quick and clear, perhaps even rigid, incorrect answers was identified. Above-mentioned findings correspond to previous research in this area (Salvi, Cristofori, Grafman, 2016). The use of an impulsive, intuitive cognitive style is also associated with creating prejudices in various areas (Evans, 2008; Kahneman, 2019) and a higher rate of scientific information rejection (Jurkovič, Čavojová, Brezina, 2019). It corresponds to the environment of the Slovak political scene, where conservative political subjects have mostly strong attitudes towards for example sexual minorities, issues of the traditional family or immigrants. Conservative voters often prefer order, firm boundaries, instinct, efficiency, and clarity, especially in critical life situations when they can clearly identify whom to fear, whom to blame. However, a priori rejection limits the discussion, does not allow some facts, prevents a complex perception of various problems, and, as a result, inevitably produces distortions. On the contrary, liberal voters are less

focused on potential threats than conservative voters and are more likely to deal with ambiguity and uncertainty (Young et al., 2019).

Foreign research made among liberal and conservative voters also pointed to the relationship between political ideology and asymmetry in processing emotions and the subsequent memorization of emotionally saturated information (Carraro, Castelli, Negri, 2016; Mills et al., 2016). In this respect, conservative voters - compared to liberals - were more likely to judge and remember negative information more seriously than positive ones. In terms of emotions followed while processing information, the results of the analysis suggest that conservative voters in our research group appear to be individuals with a lower tendency to attach importance to positive content messages; this type of content may even be ignored. At the same time, Slovak liberal voters did not declare a tendency to avoid negative feelings and information in comparison with conservatives. Instead, they followed these feelings and information, probably to assess them more seriously. Although these results are not identical to previous research findings abroad, they may not be contradictory, as other independent dimensions of ignoring the negative and following the positive were tested. In the research introduced in this paper, the mentioned variables have not manifested themselves as predictive, but their combinations may significantly affect information processing as a whole (Gasper, Bramesfeld, 2006). The different results may also be caused by different political situations in other countries. It needs to be mentioned that political situation in Slovakia - a country whose citizens significantly prefer conservative values in recent decades - has started to change slightly as it recently adapts to the increase in the number of liberal voters.

However, the results in relation to emotional preferences appear to be related to the cognitive style used. The heuristic cognitive style, mostly used by conservative voters, may illustrate the results of their setting to ignore positive information that may be perceived as risky rewards at first glance. Research (Cheng, Janssen, 2019) shows that using this style in intertemporal choice leads to excessive risk aversion, and thus to preferring secure solutions. Furthermore, participants with a heuristic cognitive style prefer an immediate lower reward to a later higher reward. For liberal voters, their tendency to solve problems using rather slow, thoughtful analysis may relate to a more serious assessment of the negative, as they focus more on the longer-term consequences. However, the unanswered question remains: Which of the consequences does conservative vs. liberal voter consider positive and which negative? At the same time, how specifically do their

views and attitudes reflect their personalities in decisions they take and their behaviour? An attempt to identify the predictive significance of cognitive styles for choosing a particular political party illustrates the previous results in more detail. Authors of this paper compared groups of voters of Slovak political parties. The reference groups were represented by the voters of the conservative political party SMER-SD (with the greatest voter support at the time) and the group of voters of the strongest party with the liberal ideology (SaS, at the time). The findings point to the predictive importance of using the impulsive cognitive style for the election of ĽSNS compared to SaS voters, as well as the importance of using the rational cognitive style that predicts the vote for liberal SaS and PS-SPOLU parties compared to voters of SMER-SD. Based on voter composition statistics in the 2016 parliamentary elections (Gyárgfášová, Slosiarik, 2016) and the 2020 elections (Gyárgfášová, Slosiarik, 2020), a strong support of university-educated citizens for parties with a liberal and centrist ideology was identified. Specifically, SaS and OĽANO parties had the largest representation of these voters in 2016. In 2020 it was PS-SPOLU party, SaS, and ZA ĽUDÍ. At the same time, voters of the last-mentioned subjects tend to profile themselves as individuals with a higher tendency to use a rational cognitive style. Foreign research clarified (Frederick, 2005; Thomson, Oppenheimer, 2016) that the use of this style was significantly related to academic performance and higher income, which corresponds to the composition of the Slovak electorates of parliamentary parties in the last two election periods (Gyárgfášová, Slosiarik, 2016; Gyárgfášová, Slosiarik, 2020). A further exploration of their thinking processes and strategies required the authors of this research to describe also the voters based on decision-making styles, which was perceived here as a more complex subcomponent of cognitive styles based on the five-factor model by Scott and Bruce (1995). The findings make it apparent that the decision-making styles are not predictive for the choice of political entities with a conservative or liberal ideology, but further analysis of predictors has highlighted their importance for choosing a particular political party. Looking at the results, the rational style is identified as typically used in situations of critical decision-making and characterized by the tendency to seek and logically evaluate alternatives. The sample analysed here proved that such decision – making is used especially by voters of liberal political entities in our sample. This fact corresponds to the equally strong tendency to use a rational cognitive style. The use of an intuitive style, which is characterized by a tendency to focus on detail in decision-making situations, and a spontaneous style used to complete the decision-making

process as soon as possible, appears most typical for conservative political party voters.

Apart from OĽaNO and ĽSNS political parties, specific decision-making styles are more or less similar for political subjects with the same ideological orientation. Unexpected similarity of ĽSNS party and OĽaNO party voters in this respect could also be explained by the personality of a strong and expressive party leader evident in these parties. Although these leaders are not compatible in identifying problems in Slovak society, both the leaders draw attention to themselves in a similarly prominent way. Unlike liberal party voters, characterized by preferring rational analysis and consciously attributing more rational decision-making style, conservative voters seem to use a more spontaneous decision-making style, perhaps corresponding to how their leaders communicate and offer fast and easy solutions to societal problems. For liberal voters, such a profile can be further illustrated by their tendency to conduct a critical analysis of people and content, which is in the case of voting behaviour presented by the electoral program of the political parties. On the contrary, in the case of conservative voters, to whom OĽaNO is ideologically closer, our research proved a tendency to spontaneously follow the views of politicians with whom the voters can easily identify, whether in terms of problems, corruption, migration, or unpleasant situation in society in general (Jurkovič, Čavojová, Brezina, 2019).

In the context of further results on emotional information preferences, the highest score is pointed to “following the negative” among voters of OĽaNO party, which is associated with negative and threatening emotional experiences. The above mentioned style of politics is embodied in the party leader (who gained popularity mainly by pointing out the sins of politics and society). Such a set of party leader voters and their focus on the presence of potential threats that must be avoided appears logical. At the same time, this dimension proved to be indirectly connected with the negative situation in the state and society (Gasper, Bramesfeld, 2006). We found the highest tendency to ignore the positive (emotions or information) among voters of ĽSNS party, whose style of politics is driven by pointing to supposed threats and the related search for “enemies”. Of course, if voters focus on a decadent society and a state of threat, it is naturally more difficult for them to consider positive signals. In our research, conservative voters generally scored significantly higher in the dimensions of ignoring the information (regardless of whether it is positive or negative). This may also relate to their heuristic style, which predicts the creation of prejudices and the selection of information that is incompatible with the concepts of existing

systems. The combination of the highest positive observed and ignoring the negative was found in the group from voters of SME RODINA. This political party initially gained popularity mainly due to promises to solve social problems and provide related benefits. The tendency of voters to react, assess positive information more seriously, and rather ignore the negative ones can illustrate their tendency to sympathize with solving the problems via executing criminal amnesties and opening a state housing schemes.

## **5 SUGGESTIONS FOR FUTURE RESEARCH**

The issue of political psychology has not been an area under a sufficient research in Slovak academia so far. A further research could be the categorization of participants not only based on their sympathy expressed for a political party pursuing a certain ideology but also on the basis of a real ideology measured. Furthermore, it would also be appropriate to distinguish extreme conservative, mild conservative voters, etc. It would be appropriate to use an experimental research design (in an optimal form as a choice of natural experiment, or a connection with a qualitative approach). Such a “real-world” survey would ensure a clearer applicability to the environment of politics, electoral decision-making, and behaviour.

A more detailed examination of the interface between cognitive and non-cognitive processes would also be beneficial. In the matters of voter cognition, it would be beneficial to monitor other processes such as memory and information processing issues, problem solving, judgment, and decision-making with regard to emotionality and a comprehensive view of a voter altogether with other characteristics of such voter. The research introduced in this paper observed the issues of emotionality and its influence on electoral decision making in a rather simplified manner with a questionnaire method applied. For future research, as a more suitable research plan the authors suggest using the already mentioned experimental method with monitoring a wider range of emotions, not only the basal division of emotions into positive and negative, as applied in this research. In addition to aspect of emotionality, study of a motivation would be beneficial in the issues of electoral behavior and would complete a more comprehensive view of the processes taking place on the part of a voter. In general, a qualitative approach, such as conducting an in-depth interview with participants, could be enriching along with an experimental method.

## CONCLUSION

Based on our findings compared with other research conducted in the matter, it is apparent that the research introduced in this paper correctly classifies the voters of individual parties to a liberal or conservative orientation, despite a certain fragmentation of the Slovak ideological spectrum. A psychological characteristics of conservatively and liberally oriented voters are well monitored in foreign research, but it is still rather unexplored area within Slovak political scene. The results show that the observed variables of cognition and emotionality are of predictive significance for voter decision-making, i.e. the role of cognition and preference of emotions in information processing is undeniable.

However, findings presented here are significantly limited by the size of the research population and the use of self-assessment and general methods applied to the political environment. These limits could be alleviated by a natural experiment, where the decision-making process would take place in real time using a subsequent in-depth interview, i.e. in combination with qualitative research. However, the fact remains that information about the use of cognitive and decision-making styles of voters can provide us with important knowledge about the voter and voter's strategies in the information processing in a world full of unsubstantiated information and hoaxes. The research appears to be justified and, due to its exploratory nature, may be a suitable basis for further examination of psychologically relevant characteristics related to making the choice in the political environment. The way how the information is processed and the voters' general attitudes toward positive or negative information can provide information on ways of effective communication of political parties with their eventual voters. These findings are relevant not only to academia but also to politicians seeking to influence public opinion, and especially to citizens seeking to decode the challenges of politics.

## REFERENCES

- BABOŠ, P., VILÁGI, A. and SOLÁRIKOVÁ, P. (2019). Role of anxiety in radicalizing political attitudes: experimental evidence from Slovakia. In: *Studia Psychologica*. Vol. 61, No. 1, pp. 42-55. DOI: 10.21909/sp.2019.01.771.

- BERNABEL, R.T. and OLIVEIRA, A. (2017). Conservatism and liberalism predict performance in two non-ideological cognitive tasks. In: *Politics Life Sci.* Vol. 36, No. 2, pp. 49-59. DOI: 10.1017/pls.2017.17.
- BIALEK, M. and SAWICKI, P. (2018). Cognitive reflection effects on time discounting. In: *Journal of Individual Differences*, Vol. 39, No. 2, pp. 99-106. DOI: 10.1027/1614-0001/a000254
- BONANSINGA, D. (2020). Who Thinks, Feels. The Relationship Between Emotions, Politics and Populism. In: *Partecipazione e conflitto*. Vol. 13, No. 1, pp. 83-106, DOI: 10.1285/i20356609v13i1p83.
- BRUIN, W.B., PARKER, A.M. and FISCHHOFF, B. (2007). Individual differences in adult decision-making competence. In: *Journal of Personality and Social Psychology*. Vol. 92, No. 5, pp. 938-956. DOI: 10.1037/0022-3514.92.5.938.
- BULLOCK, A. and STALLYBRASS, O. (1977). *The Harper dictionary of modern thought*. New York: Harper and Row.
- BÜTLER, M. and MARÉCHAL, M. A. (2007). Framing effects in political decision making: Evidence from a natural voting experiment. *University of St.Gallen: CESifo working paper*. No. 1940, pp. 57. DOI: <https://doi.org/10.2139/ssrn.968334>.
- CARRARO, L., CASTELLI, L., and NEGRI, P. (2016). The Hand in Motion of Liberals and Conservatives Reveals the Differential Processing of Positive and Negative Information. In: *Acta Psychologica*. Vol. 168, pp. 78-84. DOI: 10.1016/j.actpsy.2016.04.006.
- CHENG, J. and JANSSEN, C. (2019). The Relationship between an Alternative Form of Cognitive Reflection Test and Intertemporal Choice. In: *Studia Psychologica*. Vol. 61, No. 2, pp. 86-98. DOI: 10.21909/sp.2019.02.774.
- COTTAM, M., DIETZ-UHLER, B., MASTORS, E. and PRESTON, T. (2004). *Introduction to Political Psychology*. New Jersey: Lawrence Erlbaum associates publishers. DOI: <https://doi.org/10.4324/9781410609885>.
- CRIGLER, A. N. and HEVRON, P. R. (2017). Affect and Political Choice. In: Kensi, K. and Jamieson, K. H. eds. *The Oxford Handbook of Political Communication*. New York: Oxford University Press.
- DE WIT, H. (2008). Impulsivity as a determinand and consequence of drug use: A review of underlying processes. In: *Addiction Biology*. Vol. 14, pp. 22-31. DOI: 10.1111/j.1369-1600.2008.00129.x.
- EAGLY, A. H. and CHAIKEN, S. (1998). Attitude structure and function. In: Gilbert, D. T., Fiske, S. T. and Lindzey, G. eds. *The Handbook of social psychology (4th ed.)*. New York: McGraw-Hill, pp. 269-322.

- EVANS, J. ST. B. T. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. In: *Annual Review of Psychology*. Vol. 59, No. 1, pp. 255–278. DOI: 10.1146/annurev.psych.59.103006.093629.
- FREDERICK, S. (2005). Cognitive reflection and decision making. In: *Journal of Economic Perspectives*. Vol. 19, No. 4, pp. 25–42. DOI: 10.1257/089533005775196732.
- GASPER, K. and BRAMESFELD, K. D. (2006). Should I follow my feelings? How individual differences in following feelings influence affective well-being, experience, and responsiveness. In: *Journal of Research in Personality*. Vol. 40, pp. 986–1014. DOI: 10.1016/j.jrp.2005.10.001.
- GYÁRFÁŠOVÁ, O. and SLOSIARIK, M. (2016). *Vol'by do NR SR 2016: Čo charakterizovalo voličov*. Published in November 2016. Available at: [http://www.sociologia.sav.sk/pdf/Working\\_Papers\\_in\\_Sociology\\_012016.pdf](http://www.sociologia.sav.sk/pdf/Working_Papers_in_Sociology_012016.pdf).
- GYÁRFÁŠOVÁ, O. and SLOSIARIK, M. (2020). *Kto a ako volil vo vol'bách 2020 – kde bralo voličov OLaNO a kto volil Smer*. Published on 6 March 2020. Available at: <https://dennikn.sk/1788029/kto-a-ako-volil-vo-volbach-2020-kde-bralo-volicov-olano-a-kto-volil-smer/>.
- HANNIKAINEN, I. R., MILLER, R. M. and CUSHMAN, F. A. (2017). Act Versus Impact: Conservatives and Liberals Exhibit Different Structural Emphases in Moral Judgment. In: *Ratio*. Vol. 30, No. 4, pp. 462–493. DOI: 10.1111/rati.12162.
- HEINISCH, R. and MÜHLBÖCK, M. (2015). *The Euroskeptical Voter: Attitudes and Electoral Behaviour in Central and Eastern Europe*. Paper to be presented at the 4th Annual Meeting of the Midwest Political Science Association held in Chicago. Available at: <https://www.plus.ac.at/wp-content/uploads/2021/02>.
- HORVÁTH, P. and ŠEBÍK, K. (2015). Voting behaviour and municipal elections 2014 in Slovakia. In: *Slovak Journal of Political Sciences*. Vol. 15, No. 2, pp. 93–113. DOI: 10.1515/sjps-2015-0005.
- JULIUSSON, E.A., KARLSSON, N. and GARLING, T. (2005). Weighing the past and the future in decision making. In: *European Journal of Cognitive Psychology*. Vol. 17, No. 4, pp. 561–575. DOI: 10.1080/09541440440000159.
- JURKOVIČ, M., ČAVOJOVÁ, V., and BREZINA, I. (2019). *Prečo ľudia veria nezmyslom*. Bratislava: Premedia.
- KAGAN, J. (1966). The Generality and Dynamics of conceptual tempo. In: *Journal of Abnormal Psychology*. Vol. 71, No. 1, pp. 17–24. DOI: <https://doi.org/10.1037/h0022886>.
- KAHNEMAN, D. (2019). *Myslenie rýchle a pomalé*. Bratislava: Aktuell.

- KLAŠNJA, M., TUCKER, J. and DEEGAN-KRAUSE, K. (2016). Pocketbook vs. Sociotropic Corruption Voting. In: *British Journal of Political Science*. Vol. 46, No. 1, pp. 67-94. DOI: 10.1017/S0007123414000088.
- KNUTSEN, O. (2012). Social structure and party choice in Norway and Slovakia: a loosening of ties? In: Baldersheim, H. and Båtora, J. eds. *The Governance of Small States in Turbulent Times: The Exemplary Cases of Norway and Slovakia*, Leverkusen, Barbara Budrich Publishing, pp. 123-156. DOI: 10.2307/j.ctvdf01dj.
- LAU, R. and REDLAWSK, D. (2006). *How Voters Decide: Information Processing in Election Campaigns (Cambridge Studies in Public Opinion and Political Psychology)*. Cambridge: Cambridge University Press, pp. 366. DOI: 10.1017/CBO9780511791048.
- LYSEK, J., ZVADA, L. and ŠKOP, M. (2020). Mapping the 2020 Slovak Parliamentary Election. Analysis of Spatial Support and voter Transition. In: *Politologický časopis – Czech Journal of Political Science*. Vol. 27, No. 3, pp. 278-302. DOI: 10.5817/PC2020-3-278.
- MARCUS, G. E., SULLIVAN, J. L., THEISS-MORSE, E. and STEVENS, D. (2005). The Emotional Foundation of Political Cognition: The Impact of Extrinsic Anxiety on the Formation of Political Tolerance Judgments. In: *Political Psychology*. Vol. 26, No. 6, pp. 949-963. DOI: 10.1111/j.1467-9221.2005.00452.
- MILLS, M., GONZALES, F. J., GIUSEFFI, K., SIEVERT, B, SMITH, K. B., HIBBING J. R. and DODD, M. D. (2016). Political conservatism predicts asymmetries in emotional scene memory. In: *Behavioural Brain Research*. Vol. 306, pp. 84-90. DOI: 10.1016/j.bbr.2016.03.025.
- NOSEK, B. A., GRAHAM, J. and HAWKINS, C. B. (2010). Implicit political cognition. In: Gawronski, B. and Payne, B. K. eds. *Handbook of implicit social cognition: Measurement, theory, and applications*. New York: The Guilford Press, pp. 548-564.
- NOSEK, B. A., HAWKINS, C. B. and FRAZIER, R. S. (2010). *Implicit Social Cognition*. University of Virginia, pp. 53. DOI: 10.1016/j.tics.2011.01.005.
- READ, D., MCDONALD, R. and HE, L. (2018). Intertemporal Choice. In: Lewis A. eds. *The Cambridge Handbook of Psychology and Economic Behaviour*. Cambridge: Cambridge University Press. pp. 167-197. DOI: 10.1017/9781316676349.006.
- REDLAWSK, D. (2006). *Feeling politics: Emotion in political information / processing*. New York: Palgrave Macmillan. DOI: 10.1057/9781403983114.
- REIMERS, S., MAYLOR, E. A., STEWART, N. and CHATER, N. (2009). Associations between a one-shot delay discounting measure and age,

- income education and real-world impulsive behavior. In: *Personality and Individual Differences*. Vol. 47, pp. 973–978. DOI: 10.1016/j.paid.2009.07.026.
- REMIŠOVÁ, M. (2015). *Psychometrické vlastnosti slovenskej verzie Dotazníka všeobecných rozhodovacích štýlov – GDMS*. Published on 17 June 2015. Available at: <https://www.i-psychologia.sk/view-3145.php>.
- SALVI, C., CRISTOFORI, I. and GRAFMAN, J. (2016). The Politics of Insight. In: *Quarterly journal of experimental psychology*. Vol. 69, No. 6, pp. 1-19. DOI: 10.1080/17470218.2015.1136338.
- SCHIFF, S., AMODIO, P., TESTA, G., NARDI, M., MONTAGNESE, S., CAREGARO, L., DI PELLEGRINO, G. and SELLITTO, M. (2016). Impulsivity toward food reward is related to BMI: Evidence from intertemporal choice in obese and normal-weight individuals. In: *Brain and Cognition*. Vol. 110, pp. 112–119. DOI: 10.1016/j.bandc.2015.10.001.
- SCOTT, S. G. and BRUCE, A. R. (1995). Decision-Making Style: The Development and Assessment of a New Measure. In: *Educational and Psychological Measurement*. Vol. 55, pp. 818–31. DOI: <https://doi.org/10.1177/0013164495055005017>.
- SINAYEV, A. and PETERS, E. (2015). Cognitive reaction vs. calculation in decision making. In: *Frontiers in Psychology*. Vol. 6, pp. 532. DOI: 10.1111/cogs.12104.
- STANOVICH, K.E. and WEST, R.F. (2008). On the relative independence of thinking biases and cognitive ability. In: *Journal of Personality and Social Psychology*. Vol. 94, No. 4, pp. 672-695. DOI: 10.1037/0022-3514.94.4.672.
- STRACK, F. and DEUTCH, R. (2004). Reflective and impulsive determinants of social behaviour. In: *Personality and Social Psychology Review*. Vol. 8, pp. 220-247. DOI: 10.1207/s15327957pspr08031.
- THOMSON, K. S. and OPPENHEIMER, D. M. (2016). Investigating an alternate form of the Cognitive Reflection Test. In: *Judgment and Decision Making*. Vol. 11, No. 1, pp. 99–113. DOI: 10.1037/t49856-000.
- WEISS, H. (2003). A cross-national Comparison of Nationalism in Austria, the Czech and Slovak Republics, Hungary, and Poland. In: *Political Psychology*. Vol. 24, No. 2., pp. 377-401. DOI: 10.1111/0162-895X.00332.
- YOUNG, D. G., BAGOZZI, B. E., GOLDRING, A., POULSEN, S. and DROUIN, E. (2019). Psychology, political ideology, and humor appreciation: Why is satire so liberal? In: *Psychology of Popular Media Culture*. Vol. 8, No. 2, pp. 134–147. DOI: 10.1037/ppm0000157.