# HOW TO VOTE CORRECTLY: AN EXPERIMENTAL STUDY ON THE IMPACT OF POLITICAL SOPHISTICATION, COGNITIVE LOAD, AND DECISION-MAKING STRATEGIES

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**Abstract** The concept of correct voting, which refers to a vote that is the same one that would have been made under conditions of full information, has been used to evaluate citizens' voting decisions in various settings. Most studies either focus on determining individual and situational predictors of correct voting or determining the correctness of voting via heuristics. Since heuristics can lead to better decision outcomes than systematic processes, the goal of this study was to analyze how different modes of decision-making strategies, as well as individual and situational characteristics, contribute to correct voting. To answer this question, an experiment was conducted in Croatia, a previously unstudied context for correct voting, in which participants gathered information on four parties in a mock election campaign. Results showed that higher political motivation and usage of compensatory decision-making strategies had a positive impact on the probability of casting a correct vote. However, direct effect of cognitive load was found for participants with low levels of political motivation, for which an increase in cognitive load resulted in 25% less probability of voting correctly.

**Keywords** correct voting, political sophistication, cognitive load, decision-making, experiment, moderated mediation

## Introduction[1]

When voting in elections, citizens are faced with a variety of parties or candidates that differ among themselves. After voting, as with all choices, we can ask ourselves: Was that a good choice? Did citizens choose the "right" candidate? To answer those questions, we must have clear criteria for evaluating voting decisions. One such criterion was put forward by Lau and Redlawsk (Lau and Redlawsk, 1997, 2006). They present the concept of correct voting which refers to a "vote decision as one that is

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[1]   The data used in this article was obtained within the author's PhD research. The author would like to thank three anonymous reviewers for their valuable insights that improved the final version of the manuscript.

the same as the choice which would have been made under conditions of full information" (Lau and Redlawsk, 1997: 586).

If citizens vote correctly, they will choose representatives that "share their own values and priorities", while voting incorrectly leads to weaker democratic representation (Lau, Patel, Fahmy and Kaufman, 2013: 240). Correct voting has been studied in various settings – in USA primaries (Lau, 2013), USA presidential elections (Dusso, 2015; Lau, Andersen, and Redlawsk, 2008; Pierce and Lau, 2019), parliamentary elections across 33 countries (Lau et al., 2013), Canadian federal elections (McGregor, 2013), Swiss federal elections and direct legislation decisions (Milic, 2012; Nai, 2009) etc. Because correct voting is directly tied to the quality of representative democracy it is important to understand how citizens decide for whom to vote, and literature on correct voting can be roughly divided into two strands.

The first one analyzes the impact of individual and/or situational characteristics on vote correctness (such as political knowledge, SES, political interest, type of political campaign etc.; e.g. Christian, 2017; Lau, 2013; Lau et al., 2008; Rosema and Vries, 2011). The second strand follows dual-processing models of voting, such as the Heuristic-Systematic model (Chen and Chaiken, 1999) or the Elaboration likelihood model (Petty and Cacioppo, 1986). According to these models, citizens can decide for whom to vote via two modes (systems) of thinking and deciding; they can use fast, automatic, nonconscious, and effortless processes (heuristic, peripheral, system 1) or they can use controlled, conscious, and effortful processes (systematic, central, system 2) (Evans, 2008). It is usually (implicitly) assumed that citizens that use systematic processes vote more correctly, which can be seen in studies on political heuristics that try to show that heuristic decision-making can mimic informed decision-making processes and as such can lead to "good-enough" voting decisions (Huckfeldt, Mondak, Craw and Morehouse Mendez, 2005; Lupia, 1994) and studies that analyse the correctness of voting by heuristics (e.g. Lau and Redlawsk, 2001; Nai, 2009; Pierce and Lau, 2019).

There seems to be a lack of studies that evaluate systematic processes in the voting environment. This is important since some studies point out that in certain situations heuristics can lead to better decision outcomes than systematic, rational processes (Gigerenzer and Gaissmaier, 2011), which means that there could be instances in which systematic processing could lead to incorrect voting. Since this topic is understudied, the goal of this study is to analyze how different modes of decision-making processes, as well as individual and situational characteristics, contribute to correct voting.

To answer that goal, I conducted a mock-election experiment within a previously unexplored setting of Croatian parliamentary elections. Croatia is a relatively young democracy whose democratic transition and consolidation were characterized by (resulted in) low levels of democratic support (Čular and Šalaj, 2019), low levels of political knowledge and sophistication among the youth (Kovačić and Horvat, 2016; Šalaj and Bagić, 2011), low institutional trust (Bovan and Baketa, 2022), and relatively low election turnout (ElectionGuide, 2022). It is predominantly divided by a socio-cultural cleavage, but lacking adequate socio-economic distinction among political parties (Dolenec, 2012; Henjak, 2007; Raos, 2020). Furthermore, compared to the US setting, within which most of the studies on correct voting were done, since 2000, Croatia has a proportional multi-party system with over 22 parties currently present in the parliament (croatia.eu, 2022). Croatia offers an interesting post-socialist context for studying correct voting both in the sense of examining the

quality of its democracy and the capabilities of its citizens to successfully navigate election campaigns while deciding for whom to vote.

The rest of this paper is organized in the following way. First, I present an overview of correct voting, followed by argumentation for the study's hypotheses. Second, I present details on operationalization, study design, procedure, and sample. Third, results of the experiment are presented. Finally, in the discussion I focus on the implications and shortcomings of the study, as well as offer directions for future studies on correct voting.

## Correct voting

Lau and Redlawsk (2006) start with the assumption that a democracy functions well if political representatives follow the will of the people, and one way to accomplish this is via elections, in which citizens should choose representatives that share their political priorities and preferences (Lau et al., 2013). Regardless of the content of citizens' preferences, we should be able to discern the quality of their vote. Following the work of Robert Dahl, Lau and Redlawsk (1997) argue that a high-quality, or correct vote, is the one given in a full-information situation, i.e. when a citizen is fully informed about all alternatives and is aware of all consequences of his choice. However, there are two distinct operationalizations of correct voting and they are closely tied to the methodology used in the research. The first one is used exclusively in experimental research in which researchers can manipulate the amount of information to which participants are exposed (e.g., Ditonto, 2020; Lau and Redlawsk, 1997, 2006). Participants are exposed to a limited amount of information about a political campaign at the end of which they cast their vote. Next, participants are shown the rest of the information from the campaign and are asked if they would change their vote. If they would, they are categorized as having voted incorrectly, and if they stick with their original vote, categorized as voted correctly.

Since it is hard to control the amount of information to which citizens are exposed during actual political campaigns, Lau and Redlawsk (1997) offer another operationalization of a correct vote, which they dub naive-normative. The naive aspect of the concept implies that it is determined on an individual level, based on values and preferences of each voter, not on some external, arbitrary, or ideal criteria (Lau and Redlawsk, 2006). The normative aspect refers to using expert evaluation of representatives' objective political preferences and using the same criteria of information evaluation for all candidates (e.g., Lau et al., 2008, 2013). Thus, using data from questionnaires, they assess the proximity of voter's and representatives' preferences and can determine who an individual "should have voted for, given their own political preferences and the differential candidate information to which they were exposed" (Lau and Redlawsk, 2006: 78).

Like all other decision-making processes, voting is under the influence of both individual and situational characteristics, i.e., by the structure of the task's environment and by the capabilities of the decision-maker (Simon, 1990). Correct voting offers us a norm, an ideal outcome of voting that can be used to evaluate actual voting decisions. In this study I focus on several individual and situational characteristics that impact the probability of casting a correct vote.

And what are the main effects of correct voting? Let us start with the most proximate causal factor of a decision outcome – decision-making processes. Following the usual distinction between systematic and heuristic decision-making processes,

I focus on information search strategies and integration that voters use while deciding for whom to vote. Since candidates or parties differ in a range of political issues, voters can use two comparison strategies – compensatory and non-compensatory (Redlawsk, 2004). By using the former strategy, a decision-maker incorporates conflicting information about all alternatives and decides; by using the latter, the decision-maker neglects information conflicts, and for example removes from the decision certain alternatives or picks the first alternative that has satisfying values for attributes (Einhorn and Hogarth, 1981; Lau, 2003). Regardless of the way we understand correct voting (either through the amount of information voters are exposed to or through their ideological proximity to candidates) by using non-compensatory strategies citizens are disregarding potentially relevant information for the correct voting calculus. On the other hand, compensatory strategies are *par excellence* systematic, rational, decision-making processes that consider all important information and include them into the correct voting calculus (Lau, 2019). Thus, I assume that using a compensatory strategy will *ceteris paribus* increase the probability of casting a correct vote (H1).

More distal causal factors for correct voting are (relatively) stable individual characteristics, out of which political sophistication should be particularly important. At its core, political sophistication is the number, depth, scope, and organization of a person's network of political cognitions (Luskin, 1990). In practice, this form of political expertise usually entails political knowledge and the level of constraint among attitudes (Fiske, Lau and Smith, 1990; Goren, 2013), but there are authors that expand political sophistication to include interest for politics (MacDonald, Rabinowitz and Listhaug, 1995), political awareness (Zaller, 1992), political efficacy (Yan, 2009) etc. There are numerous positive outcomes related to political sophistication, such as greater learning from news sources and discerning information credibility (Rhee and Cappella, 1997; Vegetti and Mancosu, 2020; Weitz-Shapiro and Winters, 2017), greater reliance on political issues and abstract concepts when voting (Coffé and von Schoultz, 2021; Goren, 1997; MacDonald et al., 1995; Weisberg and Nawara, 2010), greater systemic thought about politics (Judd and Downing, 1990), and greater voter-party congruence (Boonen, Pedersen and Hooghe, 2014). This means that all aspects of voting should be enhanced for political experts, and in turn should results in better decisions. Indeed, studies show that political sophisticates, e.g. those with higher knowledge or political interest, show greater levels of correct voting (Dusso, 2015; Hines, 2006; Lau, 2013; Nai, 2015; Pierce and Lau, 2019), which is the second hypothesis that I will test in this research (H2).

Since decision-makers have limited cognitive capacity, the amount of cognitive load to which they are exposed impacts the outcome of their decisions (Sweller, 2011). Studies show that the increase in cognitive load has a negative impact on performance in various tasks – simple cognitive tasks, such as math problems and number memorization (Deck, Jahedi and Sheremeta, 2021); complex cognitive tasks, such as problem solving or learning (Schrader and Bastiaens, 2012; van Gog, Paas and Sweller, 2010); economic tasks, leading to less risk-taking, stronger anchoring effects and more impulsive decisions (Deck and Jahedi, 2015; Hauge, Brekke, Johansson, Johansson-Stenman and Svedsäter, 2016); as well as voting, such as reducing the impact of politicians' controversies on candidate evaluations or increasing the effects of stereotypes, such as gender or physical appearance (Hart, Ottati and Krumdick, 2011; Nawara and Bailey, 2021). Both full information and naive-normative approach to voting assume that correct voting uses a (relatively) large chunk

of an individual's cognitive abilities. Thereby, I assume that higher cognitive load, that puts additional strain on voter's cognitive capacities, will lead to lower levels of correct voting (H3).

Finally, the question arises about the relationship among predictors and correct voting. I expect that the relationship among predictors, i.e., decision-making strategies, political sophistication, and cognitive load, and correct voting, will be in the form of a moderated mediation (H4). In the conceptual diagram below (*Picture 1*), the impact of cognitive load on correct voting is mediated by decision-making strategies. I assume that under high cognitive load participants will be more prone to using non-compensatory strategies which will lead to less correct voting, and vice versa. This assumption is in line with studies that show that high cognitive load influences strategies (Ordóñez and Benson, 1997) and results in faster information processing (Kersholt, 1994), collecting less information, neglecting alternatives, as well as using non-compensatory strategies (overview in Edland and Svenson, 1993). Furthermore, this assumptions is in line with literature on adaptive decision making (Einhorn, 1971; Payne, 1976; Payne and Bettman, 2002; Todd and Benbasat, 1994) by which individuals adapt their decision-making strategies to fit situational constraints.

However, I expect that political sophistication will moderate this mediation.
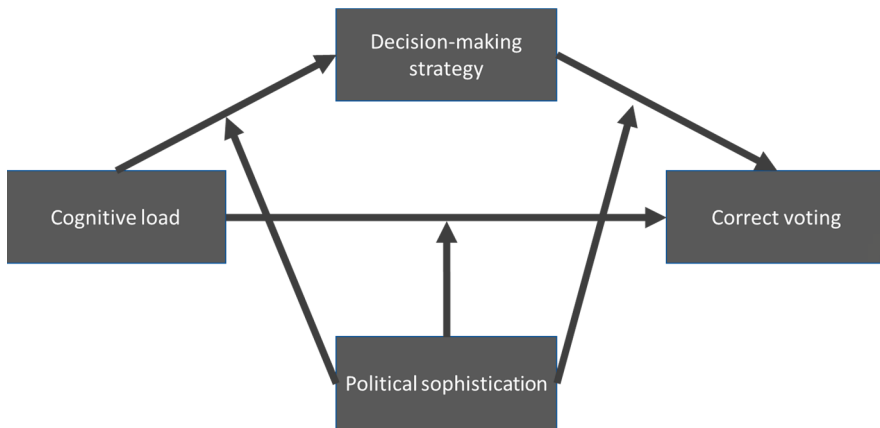


**Picture 1.** Conceptual diagram of the expected relationship
among predictors and correct voting

First, I expect that political sophisticates will be better in adapting their decision-making strategy to situational constraints, which is in line with studies showing that this type of cognitive flexibility is particularly common among experts (Bröder, 2003; Canas, Quesada, Antoli and Fajardo, 2003; Ionescu, 2012; Mintz, Geva, Redd and Carnes, 1997). Second, I expect that political sophisticates use their expertise via better choice of decision-making strategies which in turn lead to better decision outcomes, usually via greater systemic thought and reliance on political issues (Chen, Duckworth and Chaiken, 1999; Coffé and von Schoultz, 2021; Goren, 1997; Judd and Downing, 1990; Weisberg and Nawara, 2010), but this difference is also found for the use of heuristics (Dane, Rockmann and Pratt, 2012; Lau and Redlawsk,

2001; McGraw, Lodge and Stroh, 1990; Sniderman, Brody and Tetlock, 1991; for different results see Nai, 2009). Thus, I expect that under low cognitive load political sophisticates will be more prone to using, situationally appropriate, compensatory strategies and while using them will vote more correctly than non-sophisticates. On the other hand, in high cognitive load situation political sophisticates will be more prone to using non-compensatory strategies, and while using them will vote more correctly than non-sophisticates.

### Study design, procedure, and sample

To verify this paper's hypotheses, I carried out a quasi-experimental study in which I varied cognitive load (low-high) to which participants are exposed.[2] Procedure was as follows. Using a computer, participants filled out questionnaires (in Google Forms) in which their positions on various political issues were assessed as well as their political knowledge, motivation, and socio-demographics (the questionnaire can be found in the Methodological Appendix). Next, they were randomly assigned to an experimental situation (via a link provided on their computer) within which they first participated in a practice vote to get acquainted with the procedure; collected information about a mock campaign; voted for one of four parties; and were debriefed. In order to reduce the probability of strategic voting (if participants believed that a certain party has no chance of winning and for that reason neglected it) and for participants to be motivated to be accurate, they were told that all parties had the same chance of winning the election and that they should vote for the party closest to them. All phases of the study were done via computer.

Participation in the experiment was voluntary; participants were briefed concerning all ethical issues and consent was obtained orally. The variability in individual characteristics comes from participant selection. There were six versions of the mock election campaign which differed in cognitive load (and the ratio of easy to hard issues in the campaign) and participants were randomly assigned to one of the procedures. The experiment was conducted using a convenient (snowball), non-representative sample of citizens in the period of January-May 2016 at various locations in the Zagreb area. The sample included 210 participants (79 males and 131 females). Most of them had finished high school (51.9%), followed by college (35.7%), and post-graduate level (11.9%). Little over half of participants were students (52.9%), 35.2% participants were employed full-time, 6.2% were either self or part-time employed, and 5.7% were either retired or unemployed.

### *Measuring correct voting*

Correct voting has been measured in two dominant ways – using the fully-informed criteria or the naive-normative criteria. However, several shortcomings can be identified for both measures. Regarding the former criteria, it is not clear why should citizens in a fully informed situation vote for representatives that fit their interest the most, i.e., why is the main criteria the level of information that citizens are exposed to? This question is bypassed in the naive-normative conceptualization, in the sense that it is focused on the outcome of political decision-making by which

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[2]  Due to the lack of space, but keeping in mind scientific transparency, I also experimentally varied types of political issues that were present in the mock election campaign (Carmines & Stimson, 1980). However, the ratio of easy to hard issues had no effect on the probability of casting a correct vote, and that analysis is not included in this paper.

we can estimate the quality of that decision. If we know the political preferences of voters and parties, we can estimate the best-fitting one and see if the voter chose that party. However, Lau and Redlawsk (e.g. Lau, 2013; Lau et al., 2008; but see Dassonneville, Nugent, Hooghe and Lau, 2020) use a mix of processes and outcomes in determining the criteria for correct voting as well as descriptive findings from political cognition. They determine the voter-candidate congruence using preferences for public policies, ideology, party identification, retrospective evaluation of the candidate, estimation of candidates' personality and the relationship between the candidate and relevant social groups (such as racial, religious, union-based etc.). The problem is that the last four "dimensions" of congruence are cues that citizens use when evaluating political candidates or that they use when they rely on mental shortcuts to come to a decision (e.g. Baldassarri and Schadee, 2006; Cutler, 2002; Sniderman et al., 1991). Even more, since those aspects of congruence point to the way voters behave, it is possible that they make mistakes; for example, by voting based on a candidate's personality, a voter can vote for a preferentially incongruent candidate (for a similar critique see McGregor, 2013). Since the focus of this study is the evaluation of both the correctness of strategic and heuristic decision-making processes, I wanted to remove the potential bias in the conceptualization as much as possible.

Thus, for correct voting I use the metaphor or political space (Benoit and Laver, 2012) and the issue voting approach (Downs, 1957). I assume that there are *true* party issue positions, and that it is a mistake to include voters' perceptions of those position into a normative measure of voting (similarly see Lefevere, Walgrave, Nuytemans and Peprmans, 2016). Previous studies on correct voting dominantly used the directional voting approach to calculate the distance between party's and voter's political preferences (Lau, 2013; Lau et al., 2008, 2013; Lau and Redlawsk, 1997; exception is McGregor (2013) who used the city-block distance). In this paper I use the proximity voting approach and Euclidian distance (e.g. Davis, Hinich and Ordeshook, 1970; Enelow and Hinich, 1981; Shepsle, 1972), and I add the importance that a voter adds to each political issue into the calculus (Baum and Jamison, 2006; Garzia and Marschall, 2014). However, because of this addition I needed to distinguish between the situation when a participant thinks an issue is not important at all[3] (0) and when his/hers and party's position are the same (distance=0). This issue was overcome by focusing on party congruence instead of distance – the distance between each party's and participant's issue positions was recoded into party congruence in a way that the distance was subtracted from 5.[4] Total congruence is calculated as a sum of squared voter-party congruence for each political issue, multiplied by the importance of that issue to the voter. The correct vote is the one given to the party for which total congruence is highest[5].

## Cognitive load and mock election campaign content

To elicit different levels of cognitive load I use two ways of presenting information during the mock election campaign (screenshots from both procedures can be seen

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[3]  The importance that participants gave for each issue was recoded from a 1-5 scale to a 0-1 scale (in 0.25 intervals).

[4]  Issue positions for parties and participants were measured on a 1-5 scale.

[5]  One participant was removed from further analysis because his vote correctness could not be identified.

in the Methodological appendix). The procedure with low cognitive load was operationalized as a static information board[6] (e.g. Herstein, 1981; Riggle and Johnson, 1996) – participants were presented with a table in which rows were political issues, and columns were parties. All fields were closed, and participants could open them whenever they wished (they stayed open once they did); they had unlimited time to collect information. The procedure which elicited high cognitive load was the *Dynamic Process Tracing Environment* (DPTE; Lau and Redlawsk, 1997), which is used in laboratory studies on correct voting. It simulates an internet news website in which participants can see headlines of articles (maximum of six at any point; all headlines were formed neutrally, e.g. "Party A comments on Labor law"), and if they click on the headline they can see the whole text of the article (all articles were from one to three sentences, presented as statements from party leaders).

However, headlines were disappearing from the screen as time went on (every eleven seconds three headlines would change), and the procedure was formed in a way that participants were not physically able to gather all information (which was checked in a pilot study). This way DPTE mimics the information environment of modern (online) election campaigns (e.g., access to a limited amount of information, the dynamics of disappearance of information from one day to the next, possible information overload), while simultaneously allowing the researcher to study decision strategies, which is not the case when studying real-life election campaigns. This procedure is juxtaposed to the static information board which is a "nearly ideal-world environment" (Redlawsk, 2004: 599), as well as "far too "manageable", too controllable, too easy" (Redlawsk and Lau, 2009: 11). Even so, it would be wrong to simply assume that participants would vote correctly in that setting; it is a hypothesis that needs empirical support.

In order to increase internal validity of the experiment I used mock political parties. This way I could be sure that participants did not have a pre-existing relation to the parties involved (Lau and Redlawsk, 2006). To mitigate the consequential loss in external validity I focused on the content of the political campaign which refers to positions of four parties on an array of political questions; positions were operationalized as public statement made by a party leader. To gain insight into relevant political issues in Croatia, I examined the *presscut* from 6 biggest newspapers and news websites from 2007, 2011, and 2015 parliamentary elections, and 2009 and 2014 presidential elections; if available, political programs were examined as well. Beside identifying relevant issues, I wanted to extract four different statements on each issue; if statements were not available, they were made up with the goal of having four different parties that are as different as possible, while still realistic enough to be present in Croatian politics. Initially, 41 political issues with four statements for each issue were created, and for each issue the underlying dimension was assessed. These statements were given to 6 experts in Croatian politics who had to place each statement on the given dimension. The criteria for selecting issues were high dispersion of positions within each issue, and low dispersion (high agreement) of evaluations for each position. Finally, 26 political issues were selected from which four parties (A, B, C, & D) were formed. All issues and statements in Croatian can be found in Methodological Appendix.

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[6]  This procedure was programmed and created ad-hoc for this study by a programmer under author's supervision.

*Decision-making strategy*

I assessed the order in which participants assessed information about parties and issues, i.e. their sequences of information search (Ford, Schmitt, Schechtman, Hults and Doherty, 1989). There were seven types of strategies (Riggle and Johnson, 1996) – vertical (compensatory by parties; 1.44%), horizontal (compensatory by issues; 22.97%), vertical-horizontal (compensatory, dominantly by parties, 3.34%), horizontal-vertical (compensatory, dominantly by issues; 1.44%), satisficing (vertical search, ending with the "good enough" party; 22.49%), elimination-by-aspects (neglecting one or more parties based on their issue positions, after which a compensatory search is used; 33.49%), and other (all other non-compensatory strategies; 14.83%). Examples can be seen in Methodological Appendix.

*Political sophistication*

Political sophistication was measured via political knowledge and political motivation. Political knowledge was operationalized as a simple linear combination of 16 question on political knowledge (0-wrong answer; 1-correct answer) with questions regarding general politics, Croatian parliament, history of Croatian politics, the constitution, names of various ministers etc. (see Šalaj and Bagić, 2011). Political motivation was operationalized as a simple linear combination of general interest in politics (1-no interest at all; 5-high interest) and six binary variables (0-No; 1-Yes) related to political participation, which include voting in Presidential election 2014, voting in Parliamentary election 2015, membership in a party, in the last year participated in a protest, signed a petition, donated money to a party or initiative, tried to convince people to vote for a party, supported a party by going to a meeting or put up a poster.

## Results

Analysis was done in R 4.1.2. (R Core Team, 2021). Summary of participants' characteristics can be seen in Table 1.

Participants in the high cognitive load situation were older, and they had higher levels of education[7] ($\chi^2$=25.576; df=1; p<0.001). Age and education have been con-

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[7]   This is expected since some younger participants were students, and their highest educational

**Table 1.** Participants' age and political characteristics

|  | N | Minimum | Maximum | Median | M | SD | Kruskal-Wallis | Diff |
|---|---|---|---|---|---|---|---|---|
| Age | 209 | 18 | 65 | 24 | 26.8 | 9.75 | 42.305*** | (1)<(2) |
| Political motivation | 209 | 1 | 10 | 6 | 5.99 | 2.02 | 2.585 | / |
| Political knowledge | 209 | 2 | 18 | 14 | 13.34 | 3.05 | 2.237 | / |

** p<0.01; *** p<0.001; (1) – Low cognitive load (N=105); (2) – High cognitive load (N=104);

**Table 2.** Descriptive data for predictors based on their vote correctness

| Correct voting | N | Cognitive load (N) | | Decision-making strategy (N) | | Political motivation (Mean) | Political knowledge (Mean) |
|---|---|---|---|---|---|---|---|
| | | Low | High | Non-compensatory | Compensatory | | |
| No | 109 | 48 | 61 | 84 | 25 | 5.67 | 13.13 |
| Yes | 100 | 57 | 43 | 64 | 36 | 6.33 | 13.58 |
| Total | 209 | 105 | 104 | 148 | 61 | 5.99 | 13.34 |

nected to correct voting in previous studies (Dusso, 2015; Ha and Lau, 2015; Lau, 2013; Lau et al., 2008, 2013; Lau and Redlawsk, 2008; Sokhey and McClurg, 2008). Furthermore, some studies have shown that gender has an impact on correct voting (Dusso, 2015; Hines, 2006; Lau, 2013; Lau et al., 2008; Richey, 2013). Thus, I added age, gender, and education as control variables in all further analyses (following Ha and Lau, 2015; Lau and Redlawsk, 2006; Milic, 2012; Richey, 2013).

*Main effects*

Summary data for predictors based on their vote correctness can be seen in Table 2. Almost half (47.85%) of participants voted correctly and most of participants (70.8%) used a non-compensatory strategy.

To test the hypothesized main effects on correct voting, I conducted three separate binary logistic regressions with correct voting being the outcome, and age, gender, and education control variables. The results can be seen in Table 3.

Results from the first logistic regression indicate that usage of compensatory strategies increased the probability of casting a correct vote 1.86 times. Regarding political sophistication, only political motivation significantly predicted correct voting – an increase in one point increased the probability of casting a correct vote 1.18 times. Cognitive load was not a statistically significant predictor of correct voting.

*Moderated mediation*

Based on the moderated mediation hypothesis, I conducted an analysis to test whether the effect of cognitive load (predictor) on correct voting (outcome) is mediated by decision-making strategies (mediator), and whether these relationships are moderated by political sophistication (moderator).

Since all variables in the model, besides the moderator, are binary variables, I could not use traditional mediation analysis (see Baron and Kenny, 1986; Fairchild and MacKinnon, 2009; Muller, Judd and Yzerbyt, 2005) because it has serious biases when using nonlinear regressions and/or binary/ordinal predictors, mediators or outcomes (Albert and Nelson, 2011; Imai, Keele and Tingley, 2010; Pearl, 2012; Rijnhart, Valente, Smyth and MacKinnon, 2021). Thus, I turn to a relatively new alternative approach to mediation – causal mediation analysis.

This analysis is based on the potential outcomes framework, i.e. on the difference in the average outcomes between groups that are based on the treatment (pre-

degree is a high-school diploma.

**Table 3.** Logistic regressions for main effects on correct voting

| Predictors | Search strategies | | | Political sophistication | | | Cognitive load | | |
|---|---|---|---|---|---|---|---|---|---|
| | Odds Ratios | Conf. Int (95%) | p | Odds Ratios | Conf. Int (95%) | p | Odds Ratios | Conf. Int (95%) | p |
| Intercept | 0.49 | 0.18 – 1.25 | 0.139 | 0.23 | 0.05 – 1.06 | 0.064 | 0.90 | 0.30 – 2.68 | 0.849 |
| Search strategy (0-Non-compensatory) | 1.86 | 1.02 – 3.45 | **0.046** | | | | | | |
| Age | 1.01 | 0.98 – 1.05 | 0.438 | 1.01 | 0.98 – 1.04 | 0.486 | 1.01 | 0.98 – 1.04 | 0.669 |
| Gender (0-Male) | 1.18 | 0.66 – 2.11 | 0.570 | 1.15 | 0.64 – 2.08 | 0.646 | 1.19 | 0.67 – 2.13 | 0.550 |
| Education (0-High school and below) | 1.04 | 0.57 – 1.89 | 0.908 | 1.09 | 0.59 – 1.99 | 0.789 | 0.95 | 0.51 – 1.76 | 0.873 |
| Political motivation | | | | 1.18 | 1.01 – 1.38 | **0.041** | | | |
| Political knowledge | | | | 1.00 | 0.90 – 1.11 | 0.991 | | | |
| Cognitive load (0-Low) | | | | | | | 0.60 | 0.33 – 1.10 | 0.099 |
| N | 209 | | | 209 | | | 209 | | |
| Tjur's pseudo $R^2$ | 0.025 | | | 0.031 | | | 0.019 | | |

dictor) and mediator levels (Imai, Keele, Tingley and Yamamoto, 2011; Pearl, 2012). This allows us, in addition to estimating the average total effect (the difference in the outcome between the treatment and control groups), to estimate four causal effects. First, the total natural indirect effect (TNIE) is the effect of the treatment on outcome via the mediator, when the direct effect of the treatment is held constant at the treatment level. In this analysis this refers to the effect of cognitive load via decision-making strategies on correct voting by setting each subject's cognitive load to high (1). Second, the pure natural indirect effect (PNIE) is the same as TNIE but with the treatment held constant at the control level. Here, this means the effect of cognitive load via decision-making strategies on correct voting by setting each subject's cognitive load to low (0). Third, total natural direct effect (TNDE) is the direct effect of treatment on the outcome while holding the mediator constant at its potential level in the treatment group. This refers to the direct effect of cognitive load on correct voting while holding the probability of using compensatory strategies at the 0.163 level[8]. Finally, pure natural direct effect (PNDE) is same as TNDE but with the mediator being held constant at its potential level in the control group. Here, this refers to the direct effect of cognitive load on correct voting while holding the probability of using compensatory strategies at the 0.419 level[9] (for a more detailed and technical account of causal mediation analysis see Albert and Nelson, 2011; Imai et al., 2010; Pearl, 2012; Rijnhart et al., 2021; Valente, Rijnhart, Smyth, Muniz and MacKinnon, 2020).

The R package *mediation* was used to test mediation with bootstrap-based confidence intervals based on 10000 simulations that were bias-corrected (see Tingley,

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[8] Out of 104 participants in the high cognitive load situation 17 used compensatory strategies so the probability is 17/104 = 0.163.

[9] Out of 105 participants in the low cognitive load situation 44 used compensatory strategies so the probability is 44/104 = 0.419.

**Table 4.** Causal effect estimates with 95% bootstrap confidence intervals for different levels of political motivation

| | Low political motivation | | | High political motivation | | |
|---|---|---|---|---|---|---|
| | Estimate | Conf. Int (95%) | p | Estimate | Conf. Int (95%) | p |
| PNIE | -0.038 | -0.135 – 0 | 0.14 | -0.064 | -0.174 – 0.02 | 0.18 |
| TNIE | 0 | -0.122 – 0.04 | 0.968 | 0.003 | -0.077 – 0.15 | 0.95 |
| PNDE | -0.255 | -0.443 – -0.05 | **0.014** | -0.057 | -0.322 – 0.16 | 0.61 |
| TNDE | -0.217 | -0.412 – -0.02 | **0.034** | 0.009 | -0.234 – 0.25 | 0.99 |
| Total effect | -0.255 | -0.445 – -0.06 | **0.010** | -0.054 | -0.264 – 0.17 | 0.61 |

Yamamoto, Hirose, Keele and Imai, 2014). Regarding moderation, I tested two models, one with political motivation and one with political knowledge. For each model, causal mediation analysis was done twice, with moderator levels being held at one standard deviation below the mean and one above. Age, gender, and education were included in all models as control variables. Results of the mediation analysis with political motivation as the moderator can be seen in Table 4.

First, they show that for participants with high political motivation neither the total effect nor individual causal effects are significant, which means that cognitive load neither directly nor indirectly via decision-making strategies impacts the probability of casting a correct vote. On the other hand, total effect is significant for participants with low political motivation, and it is driven by the direct effect of cognitive load regardless of the used decision-making strategy. For these participants an increase in cognitive load lowers the probability of casting a correct vote – 25.5% less for participants with the higher probability of using compensatory strategies and 21.7% for participants with lower probability of using non-compensatory strategies.

Causal effects for different levels of political knowledge were not significant (Table 5). Regardless of political knowledge, cognitive load does not impact correct voting neither directly nor through decision-making processes.

**Table 5.** Causal effect estimates with 95% bootstrap confidence intervals for different levels of political knowledge

| | Low political knowledge | | | High political knowledge | | |
|---|---|---|---|---|---|---|
| | Estimate | Conf. Int (95%) | p | Estimate | Conf. Int (95%) | p |
| PNIE | -0.056 | -0.169 – 0 | 0.056 | -0.037 | -0.151 – 0.04 | 0.39 |
| TNIE | -0.015 | -0.145 – 0.05 | 0.719 | 0.021 | -0.060 – 0.16 | 0.66 |
| PNDE | -0.16 | -0.380 – 0.06 | 0.139 | -0.136 | -0.386 – 0.1 | 0.28 |
| TNDE | -0.119 | -0.331 – 0.09 | 0.266 | -0.078 | -0.311 – 0.16 | 0.53 |
| Total effect | -0.176 | -0.387 – 0.02 | 0.076 | -0.012 | -0.329 – 0.12 | 0.33 |

## Discussion

The goal of this paper was to explore how individual and situational characteristics impact the probability of voting correctly. Following the logic of the dual-processing approaches, I hypothesized that participants that used compensatory search strategies, had higher levels of political motivation or knowledge, and were exposed to lower cognitive load would vote more correctly. To answer these hypotheses, I conducted a mock-election experiment within the Croatian political space which was not studied so far.

Almost half of participants (47.85%) voted correctly, which points to the conclusion that correct voting, albeit in an experimental study, in Croatia is at similar levels to correct voting in the US. For example, in a study done by Ryan (2011) 46% participants that did not have any social cues about candidates in the election voted correctly. That situation is closest to my experimental setting in which all potential heuristic cues were unavailable. Somewhat similarly, Lau and Redlawsk (2006) report that 31% of participants in their experiments with four election candidates voted correctly. However, these studies, as well as Ryan's (2011) used actual parties/candidates that could potentially increase or decrease the probability of voting correctly comparated to a "no-cues" setting which was used in this experiment. Some data for real-life election show that these numbers are higher, and vary from 60% to 80% (Lau and Redlawsk, 2006; Nai, 2015; Richey, 2013). Adding cues in future experimental studies is discussed in the last section.

Regarding main effects, the first hypothesis was confirmed – using a compensatory strategy increases the probability of casting a correct vote. Since I conceptualize and operationalize correct voting as a *par excellence* example of a compensatory strategy, if participants used that type of strategy their decision should be closer to the norm. This finding is important since studies of political decision-making usually do not analyze its efficacy, but instead implicitly assume that using compensatory strategies is preferable and necessarily leads to a better outcome (e.g. Cutler, 2002; Herstein, 1981; Huang, 2000).

Regarding political sophistication, only political motivation was positively related to correct voting, which is in concordance with previous studies (Christian, 2017; Lau, 2013; Lau et al., 2008; Milic, 2012; Nai, 2009). It seems that general motivation for politics helps participants identify the party that best represents their interests and issue positions, even in a mock election. Further analyses showed that level of motivation was not related to decision-making strategies (Kruskal-Wallis =0.263; df=1; p=0.608) nor time spent in the experiment (r=0.13; p=0.054) but was positively related to the percentage of accessed information (r=0.26; p<0.001). This difference could be due to greater exposure to political information in everyday lives which is the result of higher political interest and participation. In other words, it is possible that participants with higher levels of political motivation familiarize themselves faster with political information from election campaigns and thus can use a greater number of those information while deciding for whom to vote.

Regarding political knowledge, the results showed a lack of a positive knowledge effect on vote correctness, which a smaller number of studies also found (see Hines, 2006; Nai, 2009; Sokhey and McClurg, 2008; Stiers and Dassonneville, 2018). As with political motivation, further analyses showed that political knowledge was only positively connected to the percentage of accessed information (r=0.31; p<0.001). Thus, it is not clear why political knowledge was not directly related to

correct voting, whereas motivation was.[10] One possibility is that factual knowledge about politics simply does not help participants navigate the political environment of a mock election, but helps in real world setting, in which their knowledge about political issues and general politics is connected to actual parties, which in turns facilitates correct voting. Furthermore, for both low and high political knowledge levels, the tested mediational model was not significant. Additional empirical studies are needed to confirm these assumptions.

Next, hypothesis for the main effect of cognitive load was not confirmed – even though cognitive load had a significant direct effect in the moderated mediation, correct voting could not be predicted solely by cognitive load. Delving deeper into the differences between two experimental situations show that participants in the high cognitive load situation spent more time informing themselves during the campaign ($M_{low}$=204.72; $M_{high}$=293.08; Kruskal-Wallis =37.773; df=1; p<0.001). This is in line with expectations, due to the different way that the experimental procedures functioned (see Andersen and Ditonto, 2018). However, no differences were found in the percentage of items that participants accessed ($M_{low}$=51.75%; $M_{high}$=51.24%; Kruskal-Wallis =16.435; df=1; p<0.001). This lack of difference could indicate that participants in both experimental situations were under similar levels of cognitive load and because of this no main effect of cognitive load was found. Due to the sheer number of political issues and parties involved in the study, it is possible that the effect of experimental manipulation on cognitive load was suppressed. Another possibility is that due to experimental situations both being high-information settings that cognitive load effect was not found simply because significant treatment effects are less commonly identified in those settings (Andersen and Ditonto, 2018).

Results of moderated mediation show that political motivation was an important moderator of the direct effect of cognitive load on correct voting. Increase in cognitive load only affected participants with low levels of political motivation, decreasing their probability of casting a correct vote by approximately 25%. This effect was present regardless of the decision-making strategies participants employed, which means, that even if participants adapted their decision-making strategies to mitigate situational pressures, they were not successful in using them correctly. These results also show that individuals with high political motivation are not impacted by cognitive load; at least not in a way that would decrease their vote correctness. Since real-life election campaigns are "often chaotic environments where information flows at an overwhelming pace" (Redlawsk, 2004: 596), they do not help reduce the representation gap for citizens not motivated in politics in the first place. By increasing interest in politics and/or political participation, citizens can at least partially overcome the high cognitive load of modern political campaigns.

Finally, the hypothesized mediation of cognitive load impact via decision-making strategies was not confirmed. The assumption was based on the idea that high cognitive load amplifies our cognitive limitations and in turn affects all phases of the decision-making processes (Eisenhardt and Zbaracki, 1992; Lau, 2003; March, 1994). In line with this assumption is the result that participants under low cognitive load used compensatory strategies to a greater extent ($M_{low}$=41.90%; $M_{high}$=16.35%; Kruskal-Wallis =37.773; df=1; p<0.001). Furthermore, under low cognitive load

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[10]  Since there was a possibility of collinearity (corelation between political knowledge and motivation was moderately high (r = 0.43; p<0.001)), a separate logistic analysis was done solely with political knowledge and control variables. Even in that case, political knowledge was not a significant predictor of correct voting.

participants that used compensatory strategies had higher levels of correct voting ($M_{non-comp}$=45.90%; $M_{comp}$=65.90%; Kruskal-Wallis=4.084 df=1; p=0.043), while there is no difference in high cognitive load situation ($M_{non-comp}$=41.4%; $M_{comp}$=41.2%; Kruskal-Wallis<0.001; df=1; p=0.988). However, it seems that this difference is not key in understanding the causal mechanisms by which cognitive load impacts correct voting. It is possible that regardless of search strategy, it impacts perceptions of party positions (such as amplification of certain biases, primacy or recency effects etc.) or the process of estimating voter-party distances, which in turn lead to lower levels of correct voting. More nuanced experimental designs are needed to test these hypotheses.

There are several limitations of this study. Although I used experimental methodology to discern causal relations and capture the impact of decision-making processes on correct voting, I was forced to "remove" participants from their everyday thinking and deciding about politics. Thus, it is possible that in everyday life citizens can use political heuristics, such as the party or likeability heuristic, adequately to cast a correct vote. Since external validity is relatively low for a mock election laboratory experiment, this study can be thought of as baseline research, done in a controlled environment and "ideal" conditions. Further studies should be made to make the procedure even more realistic; for example, by using existing parties or by extending the experiment over a longer period to mimic to a greater extent a real-life political campaign. Studies could also go in the opposite direction and use a low information environment (decrease the number of parties in the election or the number of issues in the campaign) to see if the non-significant effects are really due to the information presentation manipulation. Secondly, since the mean age of participants was relatively low, and education level relatively high, further studies should extend the sample to include a larger share of older and lower-educated individuals. Thirdly, future studies could use different operationalization of variables, such as using filler tasks to elicit higher cognitive load, and of campaign contents, such as using manifestos or party questionnaires to pinpoint parties' political preferences. Additionally, strategies could be differently measured, using verbal protocols which can be used as additional insights into the decision-making processes. A more nuanced measure of correct voting could be used, since it is safe to assume that there are various degrees of being incorrect. This is especially important in multi-party political systems. Finally, since a correct vote was operationalized through "clear" proximity voting, future studies should include additional independent variables that could have an impact on voting strategies and correct voting. This includes candidate appearance or their previous experience in government, pre-election polls, decision styles of voters, etc. Further improvement would be to check the relationship between voter-party distance and the probability of participating in the election, i.e., offer participants the option to not cast their vote.

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# Kako točno glasovati: eksperimentalna provjera utjecaja političke sofisticiranosti, kognitivnog opterećenja i strategija donošenja odluka

**Sažetak** Točno glasovanje definira se kao glasovanje koje je identično onome danom u uvjetima potpune informiranosti. Taj koncept je korišten za evaluaciju glasačkih odluka u nizu konteksta. Većina istraživanja usmjerava se na utvrđivanje individualnih i situacijskih prediktora točnog glasovanja ili na evaluaciju točnosti glasovanja putem mentalnih heuristika. S obzirom da heuristike mogu rezultirati kvalitetnijim odlukama od sustavnog procesa odlučivanja, cilj ovog istraživanja jest analizirati kako različiti procesi donošenja odluka, te različite individualne i situacijske karakteristike, doprinose točnom glasovanju. Kako bi se odgovorilo na taj cilj, proveden je eksperiment u hrvatskom kontekstu u kojem se do sada nije istraživalo točno glasovanje. Sudionici u eksperimentu prikupljali su informacije o četiri stranke tijekom lažne kampanje za parlamentarne izbore i glasovali. Rezultati pokazuju kako su veća politička motivacija i korištenje kompenzacijskih strategija odlučivanja imali pozitivni utjecaj na vjerojatnost točnog glasovanja. Međutim, kognitivno opterećenje imalo je utjecaja na sudionike s niskom motivacijom za politiku – za njih je povećanje kognitivnog opterećenja smanjilo vjerojatnost točnog glasovanja za 25%.

**Ključne riječi** točno glasovanje, politička sofisticiranost, kognitivno opterećenje, donošenje odluka, eksperiment, moderirana medijacija

# How To Vote Correctly: Methodological Appendix

The methodological appendix consists of the questionnaire that was administered to participants (translated into English), followed by all statements that "made up" mock parties (Table 6, in Croatian). Screenshots from low and high cognitive load procedures can be found after that (Figures 1-3, in Croatian). There are two examples of strategies, one compensatory and one non-compensatory (Tables 7-8).

## Questionnaire

Some people are more interested in politics, while some are less. How interested are you in politics?

    a. Not interested at all
    b. Mostly not interested
    c. Neither interested neither not interested
    d. Mostly interested
    e. Highly interested

2. Did you vote in the November 2015 parliamentary election?

    a. Yes
    b. No
    c. Didn't have a right to vote

3. Did you vote in the December 2014 presidential election?

    a. Yes
    b. No
    c. Didn't have a right to vote

4. Are you a member of a political party?

    a. Yes
    b. No

5. Please indicate each of the following activities that you did in the last year:

    a. Participated in a protest
    b. Signed a petition
    c. Donated money to a party of an initiative
    d. Talked and persuaded people to vote for a certain party
    e. Supported a certain party through going to a party meeting, putting up a party poster etc.

In the following section there are questions regarding knowledge about politics and political happenings in Croatia. For each question there is only one correct answer.

1. What term is used to denote the right of government to decide because it was elected via generally accepted rules?

    a. Authority
    b. Legality
    c. Legitimacy
    d. Mandate

2. Who makes up the political opposition?

    a. Parties and organizations working against the state's interest
    b. Parties that are not part of the parliamentary majority
    c. Parties that have their representatives in the government
    d. Non-governmental organizations

3. What is not the main characteristic of democracies?
   a. Citizens and media can freely criticize the government
   b. Government is elected via free multiparty elections
   c. There is a separation of power into legislature, executive and judiciary branch
   d. The government is successful in its economic policies
4. What is the constitution?
   a. A legal act that summarizes the main laws
   b. The foundational legal and political act of the state
   c. Rule book for the Constitutional court
   d. Act that denotes the President's plan
5. Which of the following parties supports minimal state intervention in economic activities?
   a. Social-democratic
   b. Christian-democratic
   c. Green
   d. Liberal
6. Which of the following parties supports certain limitations of personal freedoms in order to ensure moral and traditional values?
   a. Social-democratic
   b. Christian-democratic
   c. Green
   d. Liberal
7. How many years does a presidential mandate last?
   a. Three
   b. Four
   c. Five
   d. Six
8. Who was the latest (just before the 2015 election) minister of finance?
   a. Boris Lalovac
   b. Arsen Bauk
   c. Ranko Ostojić
   d. Siniša Hajdaš Dončić
9. Who was the latest (just before the 2015 election) minister of social policy and youth?
   a. Mirando Mrsić
   b. Milanka Opačić
   c. Anka Mrak-Taritaš
   d. Jadranka Kosor
10. Who was the latest (just before the 2015 election) president of Croatian parliament?
    a. Vladimir Šeks
    b. Vesna Pusić
    c. Branko Grgić
    d. Josip Leko
11. In which year did Croatia enter the European Union?
    a. 2011.
    b. 2012.
    c. 2013.
    d. 2014.
12. In which year were the first multi-party elections held in Croatia?
    a. 1989.
    b. 1990.
    c. 1992.
    d. 2000.

13. What Is the maximum number of members of the Croatian parliament?
    a. 150
    b. 160
    c. 170
    d. 180
14. What is the political system in Croatia?
    a. Presidential
    b. Semi-presidential
    c. Parliamentary
    d. Bicameral
15. Who is the commander of Croatian military forces?
    a. Generals
    b. Prime minister
    c. President
    d. Minister of defence
16. How are ministers chosen in Croatia?
    a. Prime minister suggests them to the parliament which gives a confidence vote
    b. President and prime minister choose them together
    c. Parliament chooses them based on the parties' suggestions
    d. Citizens choose them via general elections
17. Who are the two actors that can change the Croatian constitution?
    a. Government and Constitutional court
    b. Government and citizens via referendum
    c. President and the Parliament
    d. Parliament and citizens via referendum
18. What is not the task of the Croatian parliament?
    a. Passing laws
    b. Passing the budget
    c. Deciding on war and peace
    d. Deciding on calling the parliamentary elections

1. Gender: Male Female
2. Age: _____
3. What is your work status?
    a. Employed full-time
    b. Employed part-time
    c. Self-employed
    d. Traineeship
    e. Student
    f. Unemployed
    g. Retired
4. What is your highest level of education?
    a. Without elementary school
    b. Elementary school
    c. Three-year professional high school
    d. Four-year high school
    e. BA/MA
    f. Master of science, PhD

## Party statements (in Croatian)

**Table 6.** Party statements for Parties A, B, C and D

| | Stranka A | Stranka B | Stranka C | Stranka D |
|---|---|---|---|---|
| **Hrvatska u Europskoj uniji** | Skeptični smo prema Europskoj uniji i smatramo kako je upitno koliko je Hrvatska profitirala od ulaska u EU. | Hrvatska je mala zemlja i možda nemamo veliki utjecaj u Europskoj uniji, ali smo u velikoj mjeri profitirali od nje. | Europska unija donijela je nešto dobroga Hrvatskoj, ali naušrtb njene suverenosti. | Europska unija jedini je put budućnosti za Hrvatsku, jedini način da se dobro pozicionira na karti svijeta. |
| **Branitelji Domovinskog rata** | Branitelji su jedna važna društvena skupina koju treba čuvati. | S obzirom na ekonomsko stanje u državi trebalo bi razmisliti o smanjivanju prava koja branitelji imaju i napraviti reviziju braniteljskih statusa. | Branitelji su okosnica hrvatskog društva i, ako je moguće, trebalo bi se raditi na poboljšanju njihovog stanja. | Zasigurno je potrebno napraviti reviziju broja i statusa branitelja. |
| **Jugoslavija** | Period Jugoslavije je jedan od najgorih perioda hrvatske povijesti. Jugoslavija je bila pod dominacijom Srbije. | Period Jugoslavije većinom predstavlja jedno pozitivno iskustvo, iako je bilo i kršenja prava Hrvata. | Većinom negativno iskustvo, međutim bilo je i pozitivnih stvari u periodu Jugoslavije. | Jugoslavija je bila jedno pozitivno iskustvo, Hrvatska je imala svoj suverenitet i prava. |
| **Franjo Tuđman** | Najveći Hrvat svih vremena, ostvario je višestoljetni hrvatski san. | Veliki političar, zaslužan za samostalnost Hrvatske koji je na žalost iskazao autokratske i diktatorske tendencije. | Veliki političar, državotvorac, definitivno osoba koja je obilježila hrvatsku povijest. | Koliko god da je zaslužan za samostalnost Hrvatske okružio se s krivim ljudima te posljedično imao i negativnih utjecaja na Hrvatsku 1990ih. |
| **Josip Broz Tito** | Jednom riječju – zločinac, koji je doveo Hrvatsku na put za Jugoslaviju unutar koje je provodio diktaturu. | Veliki političar, definitivno osoba koja je obilježila hrvatsku povijest. | Iako je zaslužan za antifašistički pokret u Hrvatskoj ,ujedno je zaslužan i za zločine koje je partizanski pokret proveo. | Najveći Hrvat svih vremena, na krilima antifašizma usmjerio Hrvatsku prema strani pobjede u Drugom svjetskom ratu. |
| **Uloga države u ekonomiji** | Država ne može uspješno poslovati i bilo bi bolje da prepusti privatnom sektoru što više područja ekonomskog djelovanja. | Država je tu da pokreće investicije i ekonomiju te korigira nedostatke tržišnih mehanizama. | Država treba pokretati ekonomiju, ali i prepoznati prednosti tržišnih mehanizama. | Tržišni mehanizmi prednjače pred državom u ekonomiji, međutim, država treba imati određenu usmjerivačku ulogu. |
| **Ustaše** | Ustaše su htjeli dobro Hrvatskoj, no nažalost u tim pokušajima su zastranili. | Rasprava o ustašama ničemu ne koristi, Hrvatska se treba okrenuti budućnosti, a ne zapeti u prošlosti. | Ustaše su zapravo izdajice hrvatskog naroda. | Ustaški pokret je bio fašistički pokret zla. |

| | Stranka A | Stranka B | Stranka C | Stranka D |
|---|---|---|---|---|
| **Partizani** | Partizanski pokret je bio zločinački pokret koji je rezultirao diktatorskim režimom. | Rasprava o partizanima ničemu ne koristi, Hrvatska se treba okrenuti budućnosti, a ne zapeti u prošlosti. | Partizani su bili vođeni dobrom idejom, ali su zastranili u realizaciji. | Partizani predstavljaju antifašizam i to je jedina prošlost koju Hrvatska treba podržati. |
| **Nacionalizam** | Nacionalizam, domoljublje, je vrlina, ali ne treba ju apsolutizirati. | Nacionalizam, u srži domoljublje, ne nosi sa sobom ništa loše, naprotiv, može samo donijeti dobro. | Nacionalizam može donijeti dobro društvu, ali povijest nas uči kako u načelu donosi više zla nego dobra. | Nacionalizam trebamo nadići jer od njega samo mogu izrasti dijeljenja i mržnja. |
| **Pozicija Hrvatske o ulasku Srbije u Europsku uniju** | Zahtijevamo prekid sve suradnje i stopirat ćemo ulazak u EU dok Srbija ne procesuira sve ratne zločince. | Otvoreni smo za suradnju sa Srbijom, ali zahtijevamo da Srbija ispuni sve uvjete. | Ohladit ćemo odnose sa Srbijom dok ne porade na svom odnosu prema vlastitim radikalima. | U potpunosti smo otvoreni za suradnju na svim poljima, pružit ćemo podršku ulasku Srbije u EU. |
| **Socijalna prava (zdravstvo, školstvo, javni prijevoz itd.)** | Država ne može više brinuti za svoje građane kao prije, potrebno je uvesti određenu razinu participacije građana. | Država bi trebala brinuti za svoje građane na način da svima osigura pristup temeljnim životnim potrebama – zdravstvu i obrazovanju. | Država bi se trebala u što većoj mjeri brinuti za svoje građane i osigurati im što veća prava – besplatno zdravstvo, školstvo, javni prijevoz itd. | S obzirom na loše poslovanje državnih službi potrebno je u što većoj mjeri osigurati da građani svoj novac mogu iskoristiti kod tvrtki koje će im osigurati zdravstvo, mirovinsko osiguranje, obrazovanje itd. |
| **Zakon o radu** | Zakon o radu treba liberalizirati, nismo više u socijalizmu, a to je način da povećamo konkurentnost i privučemo investitore. | Cilj Zakona o radu je da osigura prava radnicima, ali imajući na umu i uvjete u kojima poslodavci djeluju. | Zakon o radu treba postrožiti tako da se što više prava daje radnicima poput mogućnosti/obaveze kolektivnih ugovora | Zakon o radu treba zaštiti kako radnike tako i poslodavce. |
| **Fiskalna politika (državna potrošnja)** | Država treba zatvoriti pipu i nastaviti provoditi mjere izrazite štednje i u isto vrijeme ublažiti porezne namete. | Mjere štednje očito nisu dovele do željenih rezultata, potrebno se usmjeriti na ulaganja od strane države. | Mjere štednje uništavaju ekonomiju, očito je da su ulaganja u nova radna mjesta jedini način izlaska iz krize. | Država treba nastaviti sa štednjom, međutim u nešto blažoj formi. |
| **Ovrhe** | Ovrhe su nužne, potrebno je dugove vratiti, a ako nema drugog načina onda dolazi do ovrhe. | Ovrhe nisu način rješavanja problema, potrebno je bolje regulirati koncept osobnog bankrota. | Ovrhe su nezakonite i služe samo profitu banaka. | Ovrhe su nužne, međutim valja preispitati Zakon o ovrhama i način provođenja. |
| **Tajne službe** | Tajne službe treba ukinuti, one su ostatak iz komunizma i koriste se isključivo za političke progone. | Tajne službe su nam potrebne, ali ih treba više kontrolirati i ograničiti djelovanje. | Tajne službe su nam potrebne, pogotovo u današnje doba terorističkih napada. | Tajne službe su normalni dio demokratskih država, služe kako bi se zaštitili građani. |

|  | **Stranka A** | **Stranka B** | **Stranka C** | **Stranka D** |
|---|---|---|---|---|
| **Preferencijalno glasovanje (mogućnost da se na izborima osim odabira liste može odabrati i određeni kandidat s liste)** | Preferencijalno glasovanje (biranje po imenu i prezimenu) treba uvesti, ali uz ograničenja koja postoje u drugim EU zemljama. | Izborni zakon treba biti takav da kandidate biramo po imenu i prezimenu. | Preferencijalno glasanje se nije pokazalo dobrom praksom u ostatku svijeta. | Preferencijalno glasanje nije u skladu s demokratskim načelima. Moderne parlamentarne demokracije nose stranke. |
| **Pravo glasovanja dijaspore** | Glasovanje Hrvata izvan Hrvatske je stečeno pravo tih ljudi i to pravo ne bi trebali dirati, eventualno raspravljati koliko će njihovi glasovi vrijediti. | Borili smo se kako bi svi Hrvati u svijetu imali demokratsko pravo glasa i nema govora da bi nekome to pravo ukidali. | Trebalo bi revidirati zakon o glasovanju dijaspore i to na način da glasovi dijaspore ne mogu promijeniti političku volju izraženu u Hrvatskoj. | Stvar je vrlo jednostavna, punoljetne osobe koje plaćaju porez i imaju prebivalište u nekoj stranoj državi ne bi smjele imati pravo glasa. |
| **Status istospolnih zajednica** | Brak je muškarac i žena. U skladu s kršćanstvom država ne bi trebala priznati ništa drugo. | Brak je muškarac i žena, a istospolni odnosi se mogu regulirati drugim zakonskim okvirom poput istospolnih zajednica. | Brak bi trebali biti zajednice istospolnih i raznospolnih parova, međutim javnost još nije spremna za takvo nešto. | U okviru braka treba zakonski izjednačiti sve parove. |
| **Lustracija (provjera i uklanjanje iz javnog političkog života osoba koje su bile aktivne u službi totalitarnih režima)** | Bivši sustav Hrvatskoj je ostavio velike naslage komunističkog totalitarnog mentaliteta te je lustracija nužna da bi se izdvojili oni koji su odgovorni. | Vrijeme je da prestanemo gledati u prošlost i okrenemo se budućnosti. Lustracija je besmislica. | Lustracija je instrument za demokratizaciju društva i nikada nije kasno za nju. Ona je tu za ozdravljenje hrvatskog društva. | Lustracija u Hrvatskoj nije nužna, a pogotovo ne danas. |
| **Vlasništvo autocesta** | Država se nije pokazala dobrim upraviteljem autocesta, potrebno je provesti proces davanja koncesije. | Autoceste će ostati u hrvatskim rukama. Jedno od mogućih rješenja je da se u priču s autocestama uključe mirovinski fondovi, koji drže ogroman dio hrvatskog javnog duga. Država bi te obveznice uzela natrag, a fondovi bi od autocesta zarađivali novac za vašu mirovinu. | Autoceste se neće rasprodati, ali je potrebno na neki način urediti priljev novca i način upravljanja. | Očito je da država ne može gospodariti autocestama na održivi način. Nema druge nego privatizirati autoceste. |

| | Stranka A | Stranka B | Stranka C | Stranka D |
|---|---|---|---|---|
| **Prosvjed branitelja u Savskoj** | U potpunosti podržavamo branitelje u njihovom nastojanju da obrane vlastiti dignitet i dignitet Domovinskog rata. | Branitelji imaju čitav niz privilegija te ovim prosvjedom iskazuju manjak socijalne osjetljivosti i poštovanja prema institucijama države za koju su se borili. | Podržavamo braniteljske prosvjede i njihove želje, međutim vrijeme je da prestanu kršiti zakon i napuste Savsku. | Smatramo kako nema razloga da branitelji prosvjeduju, pogotovo ne na ovakav nezakoniti način. |
| **Poslodavci u Hrvatskoj** | Privatni, realni sektor, ključan je dio kapitalizma, ali ne treba zaboraviti i prava radnika. | Poslodavci se vrlo često vode idejom zarade, a zaboravljaju socijalna prava i radnike. | Poslodavci pokreću gospodarstvo, istina, ali ih na tom putu treba ograničiti kako ne bi radnici ispaštali. | Poslodavci su ključni za gospodarski prosperitet države i potrebno je u što većoj mjeri olakšati poslovanje u Hrvatskoj kako bi se pokrenula ekonomija. |
| **Mirovinski sustav** | Međugeneracijska solidarnost imala je smisla kada je tri radnika radilo na jednog umirovljenika, a danas se treba ozbiljno razmišljati o štednji ili osiguranjima jer će mirovine, ako nastavimo ovim tempom, biti državni transfer ovisan o kapacitetima proračuna. | Za umirovljenike tražimo pravedne mirovine i održiv mirovinski sustav. Povlaštene mirovine želimo ukinuti te ih izdvojiti iz redovnog mirovinskog sustava kako ne bi opterećivale ostale umirovljenike. | Ključ mirovinskog sustava je međugeneracijska solidarnost i treba raditi što više da se poveća broj radnika, poboljša demografska slika Hrvatske, i čak produži radni vijek kako bi se taj sustav održao. | Mirovinski sustav treba što prije privatizirati i omogućiti da se pojedinci sami brinu za svoju budućnost. |
| **Ćirilica u Vukovaru** | Ćirilici ni u kojem slučaju nije mjesto u Vukovaru. | Naš stav je tu nebitan, radi se jednostavno o provođenju Zakona o uporabi jezika i pisma nacionalnih manjina. | Iako Zakon o uporabi jezika i pisma nacionalnih manjina nalaže uvođenje ćirilice trebalo bi razmisliti o izmjeni tog zakona budući da je to preosjetljiva tema za lokalno stanovništvo. | Radi se o pravima manjina i Hrvatska bi trebala u što većoj mjeri ta prava i osigurati. Oko uvođenja ćirilice ne vidimo ništa sporno. |
| **Eksploatacija nafte u Jadranu** | Eksploataciju nafte potrebno je uvesti, ali u nešto manjem obimu, vodeći računa o svim ekološkim standardima. | Mi smo protiv eksploatacije nafte u Jadranu jer bi to bilo iznimno rizično za iznimno osjetljiv ekosustav Jadranskog mora, koje je plitko i zatvoreno more. | Eksploataciju nafte moguće je uvesti, ali u izrazito ograničenom obimu jer bi to moglo naštetiti turizmu. | Eksploataciju nafte u Jadranu u potpunosti podržavamo jer to znači energetsku stabilnost i manji uvoz energije. |
| **Izbjeglice u Hrvatskoj** | Potrebno je biti iskren i reći kako su većina tzv. izbjeglica zapravo ekonomski migranti, a Hrvatska bi se trebala ugledati u većoj mjeri na Mađarsku. | Većina izbjeglica dolazi iz ratom pogođenih područja i potrebna im je pomoć. Ipak, u velikim grupama se uvijek mogu javiti problemi i Hrvatska treba biti spremna za to. | Potrebno je pomoći ljudima koji su zaista pogođeni ratom, ali Hrvatska mora reći dosta kako ne bismo postali prihvatni centar Europe. | Kriza s izbjeglicama zapravo je humanitarna kriza i trebali bismo u što većoj mjeri pomoći svim izbjeglicama, osigurati im smještaj i sl. |

| TEMA | Stranka A | Stranka B | Stranka C | Stranka D |
|---|---|---|---|---|
| Hrvatska u Europskoj uniji | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Uloga države u ekonomiji | Država ne može uspješno poslovati i bilo bi bolje da prepusti privatnom sektoru što više područja ekonomskog djelovanja. PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Pozicija Hrvatske o ulasku Srbije u Europsku uniju | PRIKAZI | Otvoreni smo za suradnju sa Srbijom, ali zahtjevamo da Srbija ispuni sve uvjete. PRIKAZI | PRIKAZI | PRIKAZI |
| Socijalna prava (zdravstvo, školstvo, javni prijevoz itd.) | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Zakon o radu | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Fiskalna politika (državna potrošnja) | PRIKAZI | PRIKAZI | Mjere štednje uništavaju ekonomiju, očito je da su ulaganja u nova radna mjesta jedini način izlaska iz krize. | PRIKAZI |
| Ovrhe | Ovrhe su nužne, potrebno je dugove vratiti, a ako nema drugog načina onda dolazi do ovrhe. | PRIKAZI | PRIKAZI | PRIKAZI |
| Tajne službe | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Preferencijalno glasovanje (mogućnost da se na izborima osim odabira liste može odabrati i određeni kandidat s liste) | PRIKAZI | Izborni zakon treba biti takav da kandidate biramo po imenu i prezimenu. | PRIKAZI | PRIKAZI |
| Status istospolnih zajednica | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Vlasništvo autocesta | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Poslodavci u Hrvatskoj | PRIKAZI | Poslodavci se vrlo često vode idejom zarade, a zaboravljaju socijalna prava i radnike. | PRIKAZI | PRIKAZI |
| Mirovinski sustav | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Eksploatacija nafte u Jadranu | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |
| Izbjeglice u Hrvatskoj | PRIKAZI | PRIKAZI | PRIKAZI | PRIKAZI |

Spreman sam za glasanje

**Figure 1.** Screenshot from the low-cognitive load situation

FazaGlavni dio eksperimenta
Pod-fazaKampanja
Preostalo vrijeme:19:47
19:47

Stranka A o ovrhama

Stranka C o vlasništvu autocesta

Stranka C o mirovinskom sustavu

Stranka D o izbjeglicama u Hrvatskoj

Stranka C o socijalnim pravima
Socijalna prava su zdravstvo, školstvo, javni prijevoz itd.

Stranka B o preferencijalnom glasovanju
Preferencijalno glasovanje je mogućnost da se na izborima osim odabira liste može odabrati i određeni kandidat s liste.

**Figure 2.** Screenshot from the high-cognitive load situation ("main" page)

**Figure 3.** Screenshot from the high-cognitive
load situation (opened article)

## Strategy examples

**Table 7.** Order of information selection for participant no. 87 who used elimination by aspects strategy

| Issue | Party A | Party B | Party C | Party D |
|-------|---------|---------|---------|---------|
| 1 | 1 | 2 | 3 | 4 |
| 2 | 5 | 6 | 7 | 8 |
| 3 | 9 | 10 | 11 | 12 |
| 4 | 13 | 14 | 15 | 16 |
| 5 | 17 | 18 | 19 | 20 |
| 6 | 22 | 21 | 23 | 24 |
| 7 | 25 | 26 | 27 | 28 |
| 8 | 32 | 31 | 30 | 29 |
| 9 | 33 | 34 | 35 | 36 |
| 10 | 37 | 38 | 39 | 40 |
| 11 | | 42 | | 41 |
| 12 | | 43 | | 44 |
| 13 | | 45 | | 46 |
| 14 | | 47 | | 48 |
| 15 | | 49 | | 54 |
| 16 | | 50 | | 51 |
| 17 | | 52 | | 53 |
| 18 | | 55 | | 56 |
| 19 | | 57 | | 58 |
| 20 | | 59 | | 60 |
| 21 | | 61 | | 62 |
| 22 | | 63 | | 64 |
| 23 | | 65 | | 66 |
| 24 | | 67 | | 68 |
| 25 | | 69 | | 70 |
| 26 | | 71 | | 72 |

**Table 8.** Order of information selection for participant no. 113 who used a horizontal strategy

| Issue | Party A | Party B | Party C | Party D |
|-------|---------|---------|---------|---------|
| 1 | 1 | 2 | 3 | 4 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | 5 | 6 | 7 | 8 |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | 9 | 10 | 11 | 12 |
| 12 | | | | |
| 13 | | | | |
| 14 | 13 | 14 | 15 | 16 |
| 15 | | | | |
| 16 | | | | |
| 17 | 17 | 18 | 19 | 20 |
| 18 | 21 | 22 | 23 | 24 |
| 19 | | | | |
| 20 | | | | |
| 21 | 25 | 26 | 27 | 28 |
| 22 | | | | |
| 23 | | | | |
| 24 | 29 | 30 | 31 | 32 |
| 25 | | | | |
| 26 | 33 | | 34 | 35 |