

Language Cues and Perceptions of Nationalism

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Abstract

How do people respond to symbols related to nationalism, and does having political context matter? We argue that nationalist symbols influence perceptions when in a political context. Leveraging that the Serbian language can be rendered in Cyrillic and Latin and Cyrillic is associated with nationalism, we examine the use of linguistic symbols in Serbia. Using social media data, we demonstrate that politicians employ Cyrillic to discuss topics traditionally associated with nationalism. Then, based on a pre-registered survey experiment, we show that exposure to Cyrillic absent political context does not alter nationalist attitudes but that respondents exposed to a politician’s message in Cyrillic view that politician as more nationalist. Our findings speak to the power of nationalist symbols, demonstrating that said symbols are powerful even when associated with subtle, language-based manipulations. Moreover, they have broad implications for how politicians signal their political beliefs, including how they work to associate themselves with everyday symbols.

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the paper.

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Nations often adopt specific types of food, common flowers, folk songs, and even fruits as national symbols whose use serves as a cue to remind people — either consciously or unconsciously — about the nation as a part of everyday life (Billig, 1995). The function of a national symbol is to create distinctiveness on the part of a nation.¹ While many nations have adopted the apple or the mango as national fruits, the push for distinctive national symbols can translate into nationalism — a “desire to collectively protect and foster the national identity” (Tamir, 1995, 430).² Brazil’s football jersey is well-recognized as a national symbol of the Brazilian team, but its association with former president Jair Bolsonaro turned it into a nationalist symbol — one that was associated with post-election riots that called for election results to be overturned.³ In this way, while national symbols remind the receiver of their nation, nationalist symbols are associated with messages promoting fighting for, defending, or protecting the nation.

Language stands out as a nationalist symbol because it is so frequently used. While street signs can serve as nationalist reminders every time a person passes them, language can be used as a nationalist symbol every time someone writes or speaks. Language serves as a critically important way to convey messages and meaning to other people. People need to express themselves to productively interact with others and to have their basic needs met as well as to form bonds with one another. Indeed, human development is inextricably intertwined with our ability to use language to communicate (Christiansen and Kirby, 2003) and to facilitate economic exchange (Gal, 1989).

¹See Finell and Liebkind (2010) on how people create distinctiveness.

²This definition of nationalism can be broken into multiple different dimensions (e.g., Blank and Schmidt, 2003; Huddy and Khatib, 2007; Wagner et al., 2012).

³See, for example, <https://www.dw.com/en/why-bolsonaro-supporters-wear-brazils-football-shirt/a-64335033>. Accessed on 06/25/2024.

Extensive literature has shown that exposure to a foreign language tends to increase anti-immigrant attitudes (Hopkins, 2011; Monforti, Michelson, and Franco, 2013; Newman, Hartman, and Taber, 2012) and to reduce support for more inclusive immigration policies (Darr et al., 2020; Hopkins, 2014). These results are but a small subset of prior work linking language use to political attitudes, often with a particular focus on language and ethnicity (Csata, Hlatky, and Liu, 2023; Marquardt, 2011). Yet, these works do not examine language’s power to be perceived as a strategically used nationalist symbol.

This is an important oversight because language is an ideal vehicle to convey subtle cues that signal nationalist identity. Slight turns of phrase, emphasis in accent, or changes to writing style are all manipulations that, if used intentionally and consistently, can convey symbolic meaning. Prior work has demonstrated the power of a variety of more subtle symbols like national anthems or flags and has shown that exposure to them impacts respondents’ resulting national identity (e.g., Ariely, 2019). We build on this idea by identifying language as a symbol without inherent nationalist meaning that can be connected to nationalism by political elites and by members of the public. This connection — providing a symbol political context — is one of the contributions of this study.

We study what we call language-based nationalist symbols as a pervasive and difficult to detect form of nationalist symbol. In this setting, the impact of language on nationalism is reduced to the symbols of language itself.⁴ Language-based nationalist symbols are not altogether uncommon. For example, Japanese Kanji is written in a similar way as Chinese characters (Tamaoka, 2014), German Blackletter fonts are adapted for different languages (Newton, 2003), and the Cyrillic alphabet is used to render many different languages.

We argue that members of the public associate language-based nationalist symbols with nationalism when they are used in a political context. We leverage the case of Serbia to test this hypothesis. Serbia has a large and active far-right nationalist political movement that routinely uses nationalist symbols. The Serbian language is digraphic, meaning that it can be written and

⁴See Peled and Bonotti (2019) looking at accent as a constituent part of language.

is intelligible in two distinct alphabets: Latin and Cyrillic, with Cyrillic as the alphabet associated with nationalism. This feature removes any difficulties with individuals understanding the written text or associating cultural connotations to the text that would be present if we examined language-based nationalist symbols across different countries or languages.

In a prominent example, when Serbian President Aleksandar Vučić ran in 2017, his campaign poster contained his picture and the slogan “Александар Вучић. Брже. Јаче. боље. Србија.” (Aleksandar Vučić. Faster. Stronger. Better. Serbia.).⁵ But displayed on the poster in substantially larger font were the letters “AV,” presumably representing his campaign logo. What is notable is that “AV” are Vučić’s initials in the Serbian Latin alphabet, while the slogan is written in the Serbian Cyrillic alphabet. The Latin alphabet was gone in Vučić’s re-election campaign in 2022, corresponding with his shift further rightward and toward a more nationalistic and ethnic Serbian-centric campaign strategy.

We collect Facebook data on politicians’ alphabet use to verify our observation from Vučić’s campaign posters: that there are substantial differences in the ways that politicians use Cyrillic versus Latin. Since the Cyrillic alphabet is associated with nationalism, political elites’ use of Cyrillic — intentionally or not — helps to construct their nationalist identity. To see whether members of the public pick up on the use of Cyrillic and Latin in a political context, we conduct a survey experiment on Facebook, manipulating the alphabet of a message while controlling for respondents’ preferred alphabet. Language-based nationalist symbols alone have no effect on respondent nationalism. We then expose respondents to a campaign slogan that manipulates politicians’ alphabet usage. Our results indicate that respondents perceive politicians using Cyrillic as more nationalist than those using Latin, holding the politicians’ messages constant.

Our findings speak to the power of nationalist symbols, demonstrating that said symbols are powerful even when associated with subtle, language-based manipulations. Members of the public understand that politicians have incentives to use language-based nationalist symbols to cultivate

⁵Perhaps interestingly, the “д” in Aleksandar is styled as a “d” and the “и” in Србија is styled as a “u.” See a photo of the poster at <https://www.alamy.com/novi-sad-serbia-march-11-2017posters-of-aleksandar-vucic-for-the-2017-presidential-elections-on-billboard-in-kovacica-aleksandar-vucic-is-the-pr-image417371695.html>. Accessed on 06/07/2024.

political support. This study is the first to examine the power of language-based nationalist symbols in political situations and how the public links politicians to these symbols when interpreting their nationalist beliefs. We contribute to recent work on the linkage of language and political cognition by isolating political messaging as a specific condition under which language use should cue an association with nationalism. Further, the Serbian context offers an excellent opportunity to isolate language symbols from comprehension issues and cultural meaning, providing the conditions for a clean test of the impact of such symbols on political attitudes. Additionally, because language-based nationalist symbols are relatively common, our results potentially generalize to other country contexts and symbol types. Our work has broad implications for how politicians signal their political beliefs to members of the public, including how they use political rhetoric and how they work to associate themselves with political symbols. Language need not simply be a way to convey messages; the ways in which language is used sometimes *is* the message.

Language-Based Symbols and Nationalism

In the gradual process known as “everyday nationalism,” people take a way of describing the nation and use it to convey national superiority (Fox and Miller-Idriss, 2008; Jones and Merriman, 2009).⁶ The development of a collective desire to protect national identity begins as people communicate with one another and use specific word choices, alphabets, spellings, accents, and dialects that become linked to national identity. As these conversations occur, people use language to describe the nation in different ways, and conventions form about the most appropriate descriptions. For example, people in some countries have come to associate “mother” with their homeland, whereas people from other countries use the term “father” (Johnson, 1987).

This process relies on people using language to communicate about nationalist attitudes and beliefs in different ways.⁷ Any form of efficient communication involves a shared understanding of the meaning and symbols behind the language. We call those ways of using language that rise

⁶See Antonsich (2016) for a discussion comparing banal and everyday nationalism.

⁷See Fox and Miller-Idriss (2008) on how these pathways develop.

in prominence and gain a shared meaning associated with nationalism language-based nationalist symbols. As these symbols are repeatedly used, they become ingrained in individuals' collective memories and associated with nationalism.⁸

Politicians often play a critical role in developing language-based nationalist symbols.⁹ At a baseline level, politicians in multilingual countries recognize the power of language and choose to speak in different languages to appeal to different audiences (e.g., Laitin, 1988; Monforti, Michelson, and Franco, 2013). Here, politicians take a more active role in shaping the meaning of the nation and the symbols associated with it.¹⁰ Speaking the national language or employing a nationalist symbol is meant to show members of the public a politicians' commitment to the nation.¹¹ Indeed, Billig (1995) himself focused on linguistic features of nationalism, finding that language-based nationalist symbols become banal over time when used extensively by political elites. Thus, while politicians' choice of the Serbian Latin versus the Serbian Cyrillic written alphabet could be unintentional, our first empirical test below assesses the extent to which politicians use language as a nationalist symbol.

But how, then, does exposure to a language-based nationalist symbol impact members of the public? Firth (1973, 18) states that symbols have meaning only in context, "their symbolic quality lies in the circumstances to which they refer or of which they are a part." One of the main functions of symbols is to differentiate in- and out-groups (Brewer, 1999). This is reminiscent of social identity theory, where people strive to develop a positive self-image, part of which they derive from membership in a group (Tajfel and Turner, 1986). Positively differentiating a person's in-group can involve negatively differentiating the out-group as a way to restore the in-group's positive self-image.¹²

These findings imply that symbols only have meaning in contexts where they can differentiate

⁸Ariely (2019) and Goode (2021) both discuss how routine symbolic practice becomes regularized.

⁹Goode (2021) discusses the role of elite actors (p. 683), while Rowland (2019) focuses on one actor, then U.S. President Trump.

¹⁰As described by Billig (1995)'s theory.

¹¹This is exemplified in Goujon (1999)'s description of genocide as a rallying symbol in political texts.

¹²This is Brewer (1999)'s main finding supported by O'Duffy (2008)'s discussion of UK Muslims using problematic interactions with the UK government to develop their self-image.

in- and out-groups effectively. In a political context, politicians are trying to increase turnout among supporters and to win elections. To do so, they seek to convince constituents and potential voters to support their campaign or party, which necessarily means differentiating it from rivals — forming in- and out-groups. Politicians wish to strengthen the in-group identity to maintain support. If they choose to employ a nationalist symbol, the symbol provides a natural out-group consisting of those outside the nation or who are not supportive enough of the nation. Symbol use strengthens in-group identity since it provides a common idea for supporters to latch on to, while it also strengthens nationalist beliefs because such symbols are meant to separate out “true supporters” of the nation from others.

We argue that in- and out-groups are salient in a political context and, therefore, that language-based nationalist symbols impact views toward nationalism only in political contexts. For example, Menga (2015) describes imagery surrounding water and dam construction. Building a dam is a technical endeavor, and water is a necessary biological commodity. However, the government of Tajikistan has used the construction of a new dam to cultivate a national image of strength and success. Here, the dam as a symbol only has meaning when combined with politically-relevant context.

In environments where language-based symbols are so pervasive and where such symbols are not directly associated with other political cleavages, associating a language-based symbol with an ideological position requires political context.¹³ Without it, those who are subjected to a language-based nationalist symbol have no need to differentiate into in- and out-groups (e.g., Bornman, 2006). Ricks (2020, 91) looks at public responses to politician speech and argues that those politicians “can access at least three potential linguistic appeals.” Similarly, Hu (2020) examines public responses to bureaucratic speech. While both studies are focused on responses to speech, Polese et al. (2020) demonstrates that the public adopts nationalizing narratives from politicians, mean-

¹³In political environments where language-based symbols work to reinforce cleavages and these cleavages roughly represent different political views, one could expect that language-based symbols could have an impact even without a political context. For example, the use of Dutch and French without a political context might invoke specific sentiments in Belgian respondents due to the structure of the political environment in that country. Similarly, in Canada, the high association of the French language with Quebec might change separatism sentiments even without the political context. We invite scholars to investigate these and other cases.

ing that we argue that politicians and other government officials are aware of the power that they have to influence public attitudes and speech. Individuals are receptive to these kinds of politician cues, as they provide an informational shortcut about politicians' attitudes and policy priorities (e.g., Adida, 2015; Adida, Davenport, and McClendon, 2016; Moehler and Conroy-Krutz, 2016). Because politicians know that the public is receptive to such cues, we argue that they will use them carefully and strategically.

Our argument leads to two hypotheses. First, because symbols require context to convey meaning, we hypothesize that exposure to language-based nationalist symbols absent political context will not impact nationalist attitudes. However, politicians who use language-based nationalist symbols are perceived as more nationalist because the context of this linguistic cue means that politicians may be using it strategically to signal nationalist sentiment.¹⁴

Hypothesis 1 *Exposure to language-based nationalist symbols will not impact nationalist attitudes.*

Hypothesis 2 *Politicians who use language-based nationalist symbols are perceived as more nationalist than politicians who do not.*

Language and Nationalism in Former Communist States

To test our hypotheses we must find a context where both nationalism and language-based nationalist symbols are pervasive. We focus on the use of language-based nationalist symbols in former Communist states. These states have long debated whether to use Cyrillic or Latin, with the association between Cyrillic and nationalism often being mentioned (in Moldova (Chinn, 1994) and Central Asia (Fierman, 2009)). Other prominent work outside of post-Communist cases examines alphabet shifts in Turkey (Lewis, 1999) and Somalia (Laitin, 1977), among other country contexts.

¹⁴Note that politicians may use nationalist symbols for reasons other than attempting to strategically convey their nationalist beliefs. However, as we demonstrate in our analysis, it is likely that politicians choose to use nationalist symbols when addressing political topics wherein signaling nationalist beliefs is politically advantageous.

Serbian is classified as a digraphic language, meaning that it can be written and understood equally in both Cyrillic and Latin (Jaffe, 2012). The development of both the Serbian Cyrillic and Latin scripts occurred in the 19th century. From an early age, Serbians are taught both alphabets in grade school, leading to proficiency in both scripts among adults (Havelka, Bowers, and Jankovic, 2006, 843).

Cyrillic and Latin are used in many former Communist states, but not in the interchangeable nature that is present in Serbia. Long tied to Bosnian and Croatian as part of Serbo-Croatian, the Cyrillic alphabet has served as a way to distinguish Serbian from other, related languages. Bosnian and Croatian, for example, are both rendered in Latin.¹⁵ Serbian linguists chose to emphasize the Cyrillic alphabet after the fall of Yugoslavia, recognizing it as the true and proper form of Serbo-Croatian (Greenberg, 2008). As a consequence, nationalists in Serbia have appropriated the alphabet as a distinguishing feature compared to Bosnian and Croatian (Saric and Felberg, 2017). This distinguishing characteristic gives nationalists a way to convey the uniqueness of the Serbian nation and turns Cyrillic from an alphabet to a nationalist symbol (Jovanovic, 2018, 614; Ivkovic, 2013).

Serbians commonly employ both the Cyrillic and Latin scripts in their everyday activities, with each holding similar social standing.¹⁶ With the rise of the Internet, the use of the Cyrillic script has become a significant marker of nationalism, as most websites are more easily developed using the Latin script (Dordevic, 2020).¹⁷

While politicians justify the use of Serbian Cyrillic as a return to historical norms, the Cyrillic alphabet was formally adopted by the Serbian government only in 2006. Despite this, politicians rhetorically associate Serbian Cyrillic with a proud and unified past by inventing a tradition that can be used to support the idea of a unified nation.¹⁸ Therefore, in the Serbian context, language-

¹⁵Golubovic and Sokolic (2014) show that Serbs and Croats have negative reactions to the other language and see Saric and Felberg (2017) on its use as a marker in public discourse.

¹⁶Both scripts are used on the Internet, despite initial challenges rendering Cyrillic (Spasov, 2012).

¹⁷While some mentions of the Serbian nation are written in Cyrillic, not all are. Our purpose is to discuss the connection between Serbian nationalist rhetoric and Cyrillic alphabet use. See Cunha Silva and O'Brochta (2024) for a more complete discussion.

¹⁸See Babadzan (2000) on the invention of tradition concept.

based symbols associated with nationalism should prime nationalist attitudes, as nationalism, not populism or traditionalism, is the primary political motivator in Serbia.

Politicians' Use of Different Alphabets

The previous discussion suggests that politicians use both Cyrillic and Latin in Serbia. To the best of our knowledge, no direct evidence demonstrating that politicians use both alphabets has yet been shown. To test our hypotheses about how members of the public respond to politicians using different alphabets and whether they see alphabet use as a nationalist symbol, we must first demonstrate sufficient variation in alphabet use among Serbian politicians when communicating about different subjects.

The analyses that follow are not causal tests. There is no way to show that a politician intentionally and strategically uses the Cyrillic alphabet to convey nationalist sentiment. Showing a causal relationship would necessarily involve experimental work with the politicians themselves. While doing so might be a fruitful avenue for future research, in this section, we are only interested in evaluating whether there is an association between the Cyrillic (Latin) alphabet and the content of politicians' messages. In other words, we aim to assess whether or not Cyrillic (Latin) is *more frequently employed when politicians are addressing some topics or whether the two alphabets are equally used, independently of the topic*.

To evaluate whether politicians use different alphabets, we examine Serbian politicians and political organizations' Facebook pages. Facebook is a particularly important method of political communication both in Serbia and worldwide, and politicians are frequently active on their own and their party's Facebook pages (e.g., Krunić, 2015).

We created a list of Facebook pages of Serbian political leaders, including the President, Prime Minister, cabinet ministers, and party leaders for political parties represented in the national legislature. We also included the pages for political parties represented in the national legislature (see SI B.1 for the complete list). Using the list of Facebook pages, we utilized Crowdtangle (a public

tool from Meta) to retrieve all posts published between January 1st, 2012, and April 27, 2021.¹⁹ In total, our sample includes 48,806 posts. On average, each politician or party published 1,807 posts.²⁰ To identify posts written in Cyrillic and Latin, we used regular expressions to search for Cyrillic characters in each post. Given that some posts contained both Cyrillic and Latin characters, we defined a post as written in Cyrillic if it had more than 10 Cyrillic characters or if all characters were in Cyrillic. After identifying posts written in Cyrillic, we translated all posts into English using computer-assisted software that automatically feeds text to the Google Translate API (Lucas et al., 2015).²¹

We use a structural topic model (STM) (Roberts et al., 2014) to assess whether politicians strategically use Cyrillic and Latin. STM is a mixed-membership model — each document may belong to more than one topic. Critical for our purposes is STM enables us to add document-level metadata in the estimation process. These document-level attributes function as covariates, improving topic discovery and allowing for hypothesis testing. We exploit this feature of STM and include an indicator variable for using Cyrillic in the post, helping us evaluate whether topic prevalence is related to the alphabet used in the document. Apart from this indicator, we also add variables for publication year and legislative and presidential election years. Moreover, a STM is an unsupervised model with two additional advantages. First, it reduces researcher influence in topic classification, as we would otherwise be aware of the alphabet used in the original post when classifying it. Second, contrary to supervised and semi-supervised classification methods, STM does not require a training dataset or dictionary in Serbian. Though one could employ experts in the Serbian language and Serbian politics to create such data and/or dictionary, the ability to produce such data and/or dictionary exceeded our financial means.

We estimate two models. First, we fit a STM using data for all the politicians and political

¹⁹We only analyze posts after January 1st, 2012 because fewer than half of the politicians and political parties in our sample had posts before this date. The end date is shortly before we begin the analysis.

²⁰We removed posts that contained fewer than ten words.

²¹Before translating the text, we used the R package *cld3* (Ooms, 2021) to detect the language used in the post. We removed all posts that were already in English. We also excluded all non-alphanumeric characters from the posts before translating them. Our original text was entirely rendered in Serbian, and our translated text was entirely rendered in English. We thereby avoid challenges associated with multilingual topic modeling.

parties in our sample of Facebook pages. With these data, we conduct a between-subject analysis. Then, we leverage the fact that, since 2019, Serbian President Aleksandar Vučić has had two Facebook pages, one in Cyrillic and one in Latin, to conduct a within-subject analysis. Our sample in this second analysis, which includes data from 2019 to 2021 when he had both pages, contains 1,937 posts (35% of them were written in Cyrillic).²² In both analyses, we removed all words that appeared in less than 1% or in more than 90% of the documents. We also excluded numbers, punctuation marks, and stop words.

To define the number of topics, we calculated diagnostic statistics for models with different numbers of topics. Specifically, we computed semantic coherence and exclusivity for the number of topics ranging from 5 to 60 in intervals of 5.²³ Based on these measures, we set the number of topics equal to 15 for the model using the entire corpus and 20 for the model using posts from President Vučić’s pages (see SI B.2 for more details).

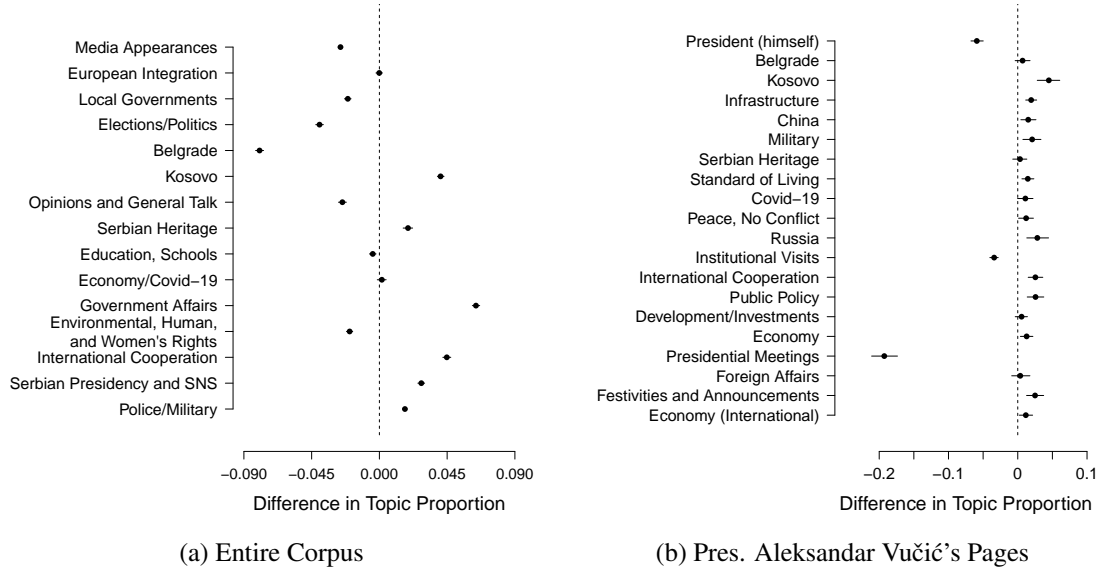
Results

Figure 1 shows the results from our models. Tables with the complete results for the models on the entire corpus are available in SI B.5 and for the model on President Vučić’s pages are in SI B.6. Each panel reports the mean difference in topic proportions when *Cyrillic* is equal to 1 compared to when *Cyrillic* is equal to 0. Keywords and examples of posts for each topic are available in SI B.8.2 and B.4. A glance at the results suggests that politicians systematically use different alphabets to write about different topics.

²²Considering the entire period covered in our sample (2012-2021), President Vučić posted 66% of his content in Cyrillic.

²³Exclusivity refers to words that have high probability in one topic, but low probabilities in all other topics (Roberts et al., 2014). The semantic coherence statistic is based on the idea that the co-occurrence of words within a document can be used to evaluate the semantic coherence of a topic (Mimno et al., 2011).

Figure 1: Difference in Topic Proportion with Cyrillic as a Predictor



Note: Point estimates are the average differences in topic proportions varying *Cyrillic*. Positive values indicate that the topic proportion is larger when the text is in Cyrillic. Panel (a) shows the results for topics estimated using the entire corpus, and panel (b) displays the results when using only President Aleksandar Vučić's pages. 95% confidence intervals. Complete results are available in SI B.5 and SI B.6.

Starting with panel (a), where we use the entire corpus, the results show that the use of the Cyrillic alphabet is related to the topic in thirteen out of the fifteen topics. The estimates indicate positive associations between Cyrillic use and issues of importance to Serbian nationalists. International cooperation is at the center of the nationalist agenda. Issues like Kosovo represent challenges to the integrity of the Serbian state. Subjects such as the police/military and heritage are often seen as key for nationalist individuals. Moreover, posts that related to President Aleksandar Vučić and his party, a nationalist individual and party, contain more Cyrillic. Cyrillic use is negatively associated with posts that address Media Appearances, Local Government, Elections, Belgrade, Opinion and General Talk, Education, and Environmental, Human, and Women's Rights. For example, posts written in Cyrillic are two percentage points less likely to discuss the topic of Local Governments than posts written in Latin. The fact that these topics are discussed in Latin conveys to members of the public that politicians use an alphabet that matches their target audience.

Media Appearances contain information about events in which politicians participated. Education is a public good that interests both nationalist and non-nationalist voters. Finally, Environmental, Human, and Women’s Rights are subjects often more important for non-nationalist individuals.

Panel (b) of Figure 1 presents our analysis for the two Facebook pages of President Vučić and tells a similar story. The estimates indicate that the use of the Cyrillic alphabet is systematically associated with sixteen out of twenty topics. Here, Facebook posts in Cyrillic are less likely to contain discussions about the President, Institutional Visits, and Presidential Meetings. These topics mostly contain announcements about the president’s agenda and official events. Many topics are more likely to be discussed in Cyrillic, including posts referencing Kosovo, Infrastructure, China, Military, Standard of Living, COVID-19, Peace, Russia, International Cooperation, Public Policy, Economy, Festivities and Announcements, and Economy (International).²⁴

A qualitative look at the two pages conveys the impression — intentional or not — that the pages have distinct purposes.²⁵ The Latin page has half the followers of the Cyrillic page, and the former identifies Vučić as a “government official” while the latter identifies him as a “politician.” Consider a recent post on both pages about a train order from a Chinese company. The two posts in Latin contained both factual and emotion-based statements about the order, and they received about 700 likes, at most one comment, and several dozen shares each. Posted at the same time, the post in Cyrillic is shorter and provides only emotion-based statements claiming to have “revived our railways...[by] importing the highest quality and most beautiful high-speed trains.” The Cyrillic post received more than 2000 likes, 200 comments, and 125 shares. So, while the Latin posts tend to describe more about where Vučić was and what he did, the Cyrillic posts are more campaign-oriented and tend to garner more engagement. Vučić may be differentiating his Latin and Cyrillic pages unintentionally. Still, members of the public are taking notice of and responding to the Cyrillic posts substantially more than those in Latin.

²⁴In SI B.8, we estimate a STM for the entire corpus in which we include fixed effects by Facebook page to account for time-invariant covariates and the fixed effects by year. The results from the two-way fixed effects (TWFE) model are consistent with those presented in the body of the paper.

²⁵Observations about the pages made on June 7, 2024. See <https://www.facebook.com/buducnostsrbijevucic> June 7, 4:45AM and 5:25AM posts and <https://www.facebook.com/vucicaleksandar> June 7, 5:27AM post.

In SI B.7, we provide an additional analysis of how other Serbian politicians use Cyrillic and Latin. This investigation descriptively examines the percentage of posts written in Cyrillic and compares this to the percentage of posts written in Latin for a given politician. It indicates that while nationalist politicians, such as Ivica Dačić (current minister of foreign affairs) and Nebojša Stefanović (current deputy prime minister), almost exclusively use Cyrillic in their communications, parties (such as the Democratic Party) who oppose nationalist ideas mostly use Latin. Together, the findings in this section and in SI B.7 indicate a robust link between nationalist subjects, nationalist politicians, and the Cyrillic alphabet.

Nationalism and Alphabet Use

We have demonstrated that some political topics are more likely to be conveyed in Cyrillic, whereas others are more likely to be expressed in Latin. The previous test, however, does not allow us to evaluate whether the use of Cyrillic (or Latin) affects individuals' attitudes and perceptions of the politicians who use it. Such an analysis is important because even though the use of Cyrillic and Latin on social media may be a strategy to mobilize specific segments of the population, we do not know if these symbols indeed affect members of the public. Given that a condition for this strategy to pay off is that these symbols should affect people when used in a political context, such as a campaign ad, it is essential to analyze their potential effects.²⁶ Our experiment allows us to evaluate this condition.

To test our hypotheses and to discern whether members of the public pick up on politicians' associations between the Cyrillic alphabet and nationalism, we use a pre-registered survey experiment in which we randomly vary the alphabet used in the survey and the alphabet used by political candidates while keeping their campaign message constant.²⁷ As discussed previously,

²⁶Note that we are not saying that changes in how people perceive politicians will yield more support for politicians who employ nationalist symbols. It is possible that by perceiving politicians as more (or less) nationalist, people will remove their support. However, in order for the strategic use of alphabets to work, some change in people's perceptions must occur.

²⁷See the SI D for more information.

although Cyrillic and Latin are widely used in Serbia, Cyrillic is the script commonly associated with nationalism (e.g., Ivkovic, 2013; Jovanovic, 2018).

We use Facebook to recruit a wide variety of Serbian respondents. Facebook is an ideal platform to recruit survey participants and to conduct a survey about nationalism and alphabets for several reasons. First, as shown above, politicians frequently use Facebook to communicate with their constituents, making it integral to political communication strategies. Second, Facebook dominates social networking in Serbia, with 42.2% of the Serbian population using Facebook (DataReportal, 2021). This means that Facebook has the potential to reach a much larger share of the Serbian population compared to traditional online survey platforms. Third, Facebook allows us to structure the survey in several stages, providing us with a way to account for important respondent characteristics that could plausibly influence respondents' attitudes toward politicians using the Cyrillic versus the Latin alphabet.

To recruit respondents, we set up two Facebook pages that differed only in the alphabet used on the page. Using these pages, we ran advertisement campaigns in Cyrillic and Latin, inviting individuals to participate in a short academic survey in exchange for the chance to win a gift card.²⁸ We promoted our ads for seven days on Facebook and Facebook Messenger. We ran ads in both Cyrillic and Latin because we wanted to create a control variable consisting of the alphabet of the ad a respondent clicked on. This control variable allows us to account for respondents who prefer to use the Cyrillic alphabet as being more likely to click on an ad in Cyrillic and vice versa. Figure 2 displays the ads used in our campaigns. We received 1,832 complete responses (933 from the Latin and 899 from the Cyrillic ad). As shown in Table A.1 in SI A.1, where we compare our sample to the Serbian population, our sample is similar to the population in terms of gender, marital status, and ethnicity. Unsurprisingly, given the use of an Internet-based survey, our respondents are more educated than the Serbian population.

Upon entering the survey, respondents answered questions in the same alphabet used in the

²⁸Institutional Review Board #202101125. We distributed eight gift cards valued at RSD 5,000.00 (\approx \$50.00) each. At an estimated completion time of 5 minutes, the expected compensation for each participant works out to more than double the minimum wage in Serbia. The survey was administered in 2021.

Figure 2: Facebook Ads Used to Recruit Respondents



(a) Latin Alphabet

(b) Cyrillic Alphabet

Facebook ad that they clicked on. This first block of questions contained socio-demographic information. Then, respondents answered questions on their use of the Cyrillic and Latin scripts at home and work and their ability to speak, read, or write in languages other than Serbian. We also asked respondents about the importance of preserving the Cyrillic alphabet.^{29 30}

At this point in the survey, we implemented our first manipulation to evaluate whether displaying text in Cyrillic is enough to impact respondents' nationalist attitudes (H1) absent any political

²⁹We asked respondents to use a 5-point scale (Strongly Disagree to Strongly Agree) to say how much they agree with the statement, "It is important to preserve the Cyrillic alphabet because it is essential for the Serbian nation" (see, for example, Greenberg, 2008).

³⁰Question ordering is a critical part of any survey. We decided to ask questions about ethnicity and partisanship at the end of the survey to avoid priming effects (Klar, Leeper, and Robison, 2020). Our option for asking about the use of alphabets before the first randomization may appear odd. Our design not only follows the best practices in surveys about language, but we also believe this is the best alternative in a single-wave survey. Specifically, asking these questions post-randomization would likely bias the answers, making them useless for balance checks or their use as control variables (Montgomery, Nyan, and Torres, 2018). Further, we informed respondents about the alphabet change (see next paragraph), making the concerns about deducting our interest in the alphabet based on the questions about alphabet use muted. See SI A.2 for a detailed discussion about these points.

context.³¹ We alerted respondents that a computer algorithm would determine the alphabet used in the rest of the survey. Respondents who entered the survey via the Cyrillic (Latin) ad were either assigned to answer the survey in Cyrillic (Latin) or to move to a survey in Latin (Cyrillic). Respondents had the same probability of being assigned the other alphabet or continuing with the starting alphabet. After this first randomization, we measured respondents' nationalist attitudes, which we use as our dependent variables when testing H1. Respondents answered a series of questions using a 5-point scale (Strongly Disagree to Strongly Agree), saying how much they agreed or disagreed with the following three statements. These questions emphasize Serbia's position in the world — a key characteristic of nationalism discussed earlier.

1. The world would be a better place if people from other countries were more like Serbians.
2. Generally speaking, Serbia is no better than most other countries.
3. Generally, the more influence Serbia has on other nations, the better off they are.

There are many approaches to measuring nationalism or national superiority. We used statements from Carter and Pérez (2016) listed above. The first two of these statements are derived from the 2013 International Society of Political Psychology's national identity question battery questions 3c and 3d (Huddy, Del Ponte, and Davies, 2021).³² As Mußotter (2022) notes, these two questions are standard measures of nationalism used across many country contexts. Our third question was also used in Carter and Pérez (2016) and has been extensively utilized to measure nationalism (e.g., Federico, Golec, and Dial, 2005; Kimmelmeier and Winter, 2008; Zmigrod, Rentfrow, and Robbins, 2018).³³

We then conducted a second randomization, changing the alphabet politicians use to convey a political message. We use this randomization to test H2. The survey described a hypothetical

³¹See Perez and Tavits (2019) for a similar set-up.

³²See <https://www.gesis.org/en/issp/modules/issp-modules-by-topic/national-identity/2013>. Accessed on September 19, 2023.

³³We chose this three-question battery approach instead of directly asking about nationalism to minimize the potential for socially desirable responses and to eliminate the need to provide respondents with a definition of nationalism or an anchoring vignette.

politician planning to run in the 2022 parliamentary election using the slogan “Serbia is not safe; we need to bring the old days back.” We told respondents that the politician was running ads “mostly in [Cyrillic/Latin].” We presented the question-wording in the alphabet selected in the first manipulation. This makes it clear that the alphabet used by the politician in the slogan is not necessarily the survey alphabet, so respondents should view the alphabet politicians use as part of a strategic choice. We constructed the slogan using rhetoric typical of politicians, including nationalist politicians who emphasize strong law and order (“Serbia is not safe”), a return to the past (“bring the old days back”), and a collective responsibility to do so (“we need to”). The wording of this slogan clearly signals nationalism because “the old days” are an example of imagined tradition (Babadzan, 2000) wherein Serbia played a larger role in the world. This positionality of Serbia’s role in global affairs is bolstered by the initial threat against Serbia, “Serbia is not safe.”³⁴ By using rhetoric associated with nationalist politicians, we ensure that the difference between politician evaluations is due to respondents thinking that the politician using Cyrillic is more nationalist, not that the politician using Latin is less nationalist.^{35 36}

Respondents were equally likely to be assigned to either the treatment group (Cyrillic) or to the control condition (Latin).³⁷ For our dependent variables for testing H2, we asked respondents how much they think that the politician would agree with the same three nationalism statements listed earlier.³⁸ Figure 3 shows a flowchart of the survey design.³⁹

³⁴Populism and traditionalism are not commonly employed in this context in Serbia.

³⁵Though we demonstrated in the previous section that there is a link between Cyrillic and nationalist topics and politicians, nationalist parties and politicians also use Latin in their communication. In our Facebook data, the Serbian Patriotic Alliance, a dissolved right-wing and nationalist party, mostly used Latin in its posts (98%). In SI A.3, we present an extended discussion of this issue, including campaign ads from the Party of People and the Socialist Party of Serbia, both nationalist parties, in the 2023 Parliamentary campaign to demonstrate that nationalist parties and politicians utilize both alphabets, increasing the external validity of our slogan.

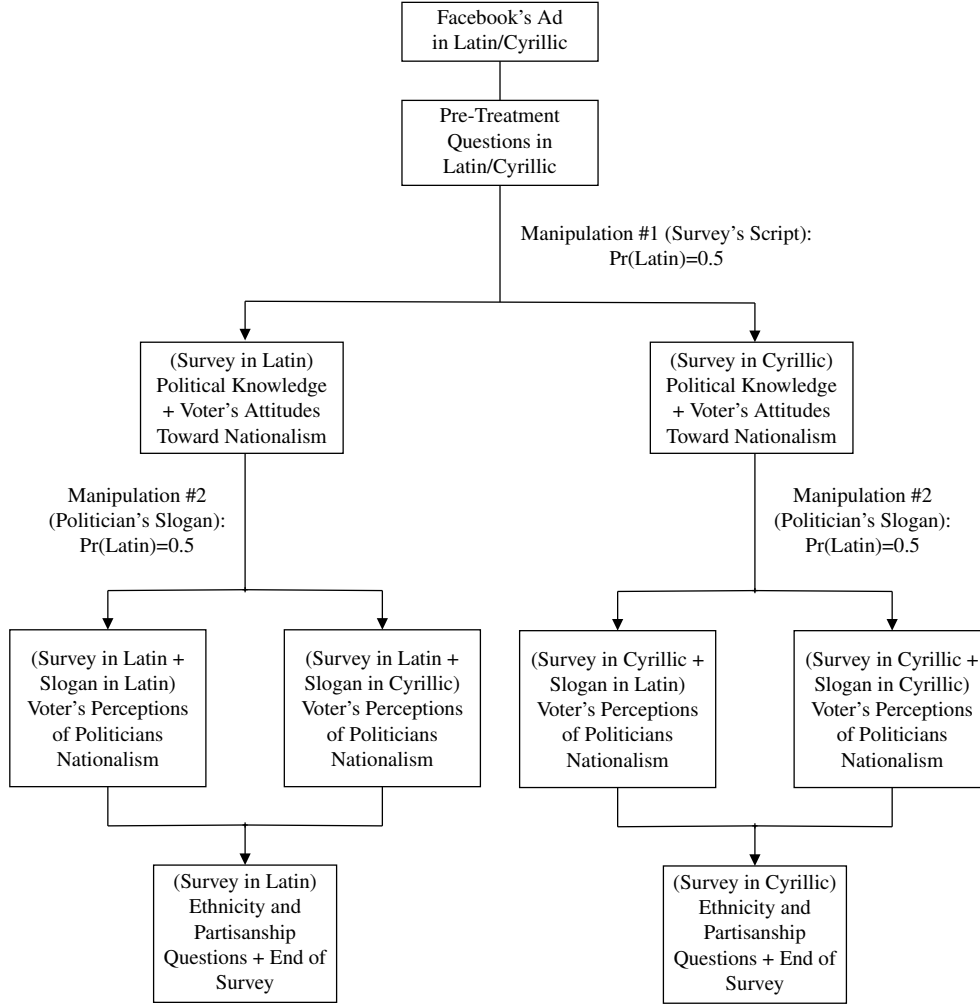
³⁶As mentioned below, this does mean that the results may differ if the slogan were about a topic typically unrelated to nationalism.

³⁷We also varied the candidate’s gender. Our results are robust when we account for this manipulation (SI A.14).

³⁸In using the same questions for both experiments, we are able to provide a direct comparison between the results of each randomization. If we had used different statements to measure nationalism, then any effect could have been because the statements did not carry the same meaning for respondents. By using the same statements, we ruled out this possibility.

³⁹One may wonder whether asking respondents about their attitudes before the final manipulation would reveal our experimental goal (measure nationalistic attitudes and perceptions). This is a frequently raised issue in repeated measure designs, where researchers ask about the dependent variable before the treatment assignment. Then, the treatment is assigned to a portion of the respondents, and the question on the dependent variable is asked again. Though

Figure 3: Flowchart of Survey Experiment



We evaluate our hypotheses using a difference in means estimator. We opted to use this non-parametric estimator because the randomizations in our survey are orthogonal to each other and also because our results are robust to controlling for all of the previous randomizations.⁴⁰ In total, we have four dependent variables, one for each respondent's assessment and one for the average value of the three variables, which we name as *Nationalism Index*. Given that expressed

our design does not follow all the specifications of a repeated design, the problem would be the same: revealing the experimental goal. Recent work on experimental designs shows that repeated measure design does not produce results different from the traditional post-treatment survey experiment (Clifford, Sheagley, and Piston, 2021). Given the similarities between our design and the repeated measure one, this mitigates these concerns.

⁴⁰To assess the robustness of our results, we also estimate linear regression models with HC2 corrected standard errors in which we account for the Facebook ad's alphabet and the alphabet used in the second part of the survey (when testing H2). These results are statistically and substantively the same as those in the body of the paper. See SIs A.8 and A.14.

disagreement to the second statement (“Generally speaking, Serbia is no better than most other countries”) indicates stronger nationalist views, we recoded these answers so that larger values represent stronger nationalist views before creating our index, like as in the assessments of the other two statements.

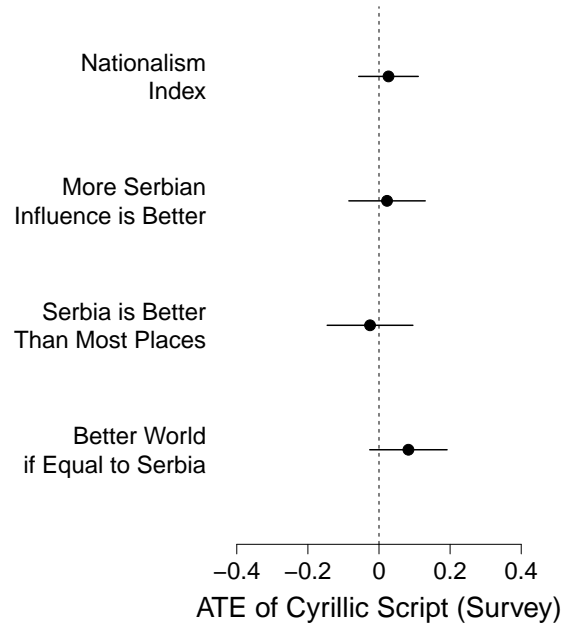
Results - Hypothesis 1

We start our analysis by evaluating H1 — whether the use of a nationalist symbol alone alters respondents’ nationalist beliefs. As previously mentioned, scholars studying inherent features of language have found evidence that language affects respondents’ attitudes toward specific issues, such as gender (Perez and Tavits, 2019). Consequently, the use of a particular alphabet in the survey could also affect respondents’ nationalist beliefs. Because we randomly assigned the alphabet used in the second half of the survey in our first manipulation, we can evaluate whether Cyrillic by itself affects respondents’ nationalist attitudes. Figure 4 shows the average treatment effects (ATEs) calculated using the difference in means estimators. A table with the full results is available in SI A.6.

As expected in H1, because nationalism is not an inherent feature of alphabets, the estimates in Figure 4 reveal no evidence that the use of Cyrillic alone influences nationalist beliefs. For all four dependent variables, the ATEs are statistically insignificant and close to zero.⁴¹ The estimates are still statistically insignificant when we include control variables in the model (see SI A.8) such as the alphabet used in the Facebook ad, respondents’ preferences regarding Cyrillic, socio-demographics, and political interest. Further, in SI A.9, we examine whether our results are sensitive to the alphabet used in the ad to recruit our respondents. We continue to find null results of the survey alphabet on respondents’ attitudes, independently of the ad’s alphabet. Lastly, in SI A.10, we analyze whether political knowledge, interest in politics, or party identification moderate the treatment effect. We continue to find a null effect even after including an interaction between

⁴¹In SI A.7, we analyze the responses in each experimental group. Unsurprisingly, we do not detect any meaningful pattern in the distribution of responses.

Figure 4: Average Treatment Effect of the Use of Cyrillic in the Survey on Respondents' Attitudes Towards Nationalism



Note: Point estimates are the average treatment effects (difference in means) of Cyrillic on voters' attitudes towards nationalism in (b). 95% confidence intervals. Complete results are available in SI A.6.

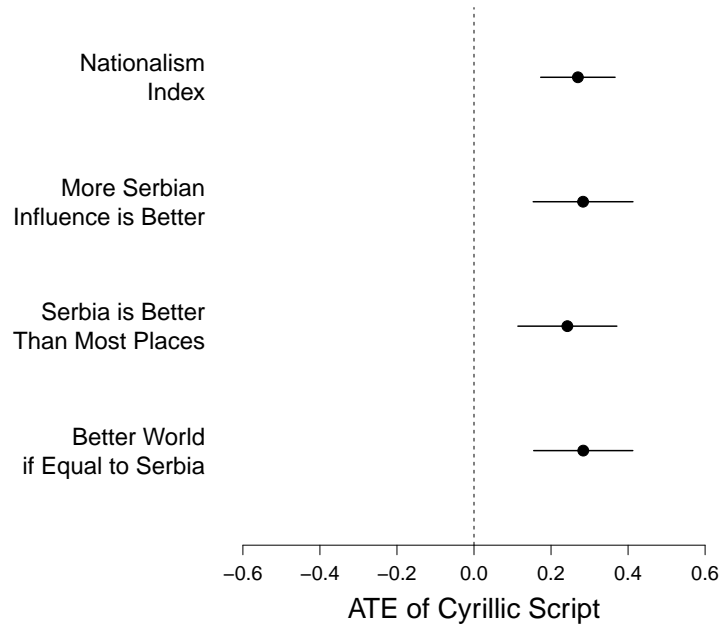
the treatment indicator and these variables.

Results - Hypothesis 2

Now that we have shown that nationalist symbols in and of themselves do not influence nationalist beliefs, we switch our attention to the analysis of Hypothesis 2, whether script choice in a political context effectively sends a signal regarding politicians' nationalist attitudes to members of the public. Figure 5 shows the average treatment effects of politicians' use of Cyrillic on respondents' perceptions of politicians' nationalist attitudes. A table with the complete results is available in SI A.12.

The estimates in Figure 5 support H2. We detect statistically significant average treatment effects of Cyrillic on voters' perceptions of politicians' nationalist views across our four dependent variables. In terms of effect size, ATEs vary from 0.24 (statement #2) to 0.28 (statements #1

Figure 5: Average Treatment Effect of Cyrillic on Respondents' Perceptions of Politicians



Note: Point estimates are the average treatment effect (difference in means) of Cyrillic on respondents' perceptions of politicians' nationalist attitudes. 95% confidence intervals. Complete results are available in SI A.12.

and #3). These treatment effects represent between 17% and 25% of the standard deviation and between 7% and 10% of the average value of each dependent variable.⁴² In SI A.14, we show that these results are robust to the inclusion of control variables in the models, including the ad's alphabet. In SI A.15, we directly test whether the alphabet used in the recruitment ad affects our result. We find that no evidence that the ad's alphabet drives our results. Finally, in SI A.16, we evaluate whether the treatment effect is moderated by political knowledge, interest in politics, or party identification. We find no evidence that the treatment effect increases or decreases depending on the values of these variables, suggesting no moderation effect. Together, these findings provide evidence in favor of our argument that nationalistic symbols only trigger nationalist views and attitudes when they are tied to a political message.

⁴²In SI A.13, we graphically display the responses by experimental group. We show that the percentage of respondents who believe that the politician would strongly agree with the nationalist statements is always larger among those respondents who observed a politician planning to use Cyrillic.

Discussion and Conclusion

This study finds that language-based nationalist symbols have power when used in a political context. Unlike inherent linguistic symbols like gendered words or passive voice, the connection between nationalism and language is political, and politicians choose to use language-based nationalist symbols to signal their nationalist beliefs. While many nationalist politicians frequently use overtly nationalist rhetoric, language-based nationalist symbols represent a more subtle method of political persuasion that is still effective at conveying support for nationalist policies. Both public and scholarly attention tends to focus on politicians with the most visible and extreme political messages, but we suggest that language-based banal nationalism is a powerful tool deserving of additional investigation.

That language-based nationalist symbols convey nationalism only in a political context leads to additional questions about how members of the public access what political context is and how it operates. In linguistic terminology, we have found that the Serbian digraphic language is diglossic when used in a political context (see Alexander and McCargo (2014); Ferguson (1959) on diglossia). Diglossia refers to languages that have a ranked structure usually with a more formal rendering of the language (Cyrillic) as the “high” version and a colloquial version as the “low” (Latin) version. Hu (2020) and Ricks (2020) provide two excellent examples of diglossia occurring in political contexts wherein members of the public detect politicians and bureaucrats using more formal speech to convey government authority. We innovate on these findings in three ways. First, we show that politicians — whether intentionally or not — construct the rank-ordered structure of diglossic language by communicating about nationalist topics using Cyrillic, the script that is associated with nationalism. That Cyrillic is the high version of Serbian also corresponds with nationalist sentiment: Cyrillic is not only a distinguishing feature of Serbian, it is a superior feature of Serbian. Second, we show that the rank-ordered nature of the Serbian script extends only to political communication. This implies that members of the public have picked up on politicians’ strategic use of language and make associations between language and nationalism when consuming political content. Third, we manipulate script, a more subtle language-based symbol

than is changing spoken language accent and dialect. Our results imply that members of the public can identify these subtle manipulations. As the association between language-based symbols and political views becomes more widely publicized, politicians are likely to switch to cues that are increasingly difficult for non-supporters to detect. This is especially true for politicians holding extreme nationalist views who want to communicate their support for nationalism to their supporters while not attracting undue media attention.

We argue that our results have implications beyond the Serbian context to places where other language-based nationalist symbols are used. First, Hindi and Urdu are other prominent examples of languages rendered in two different scripts, Devanagari and Sanskrit, respectively. However, unlike the Serbian case, not all Hindi or Urdu speakers can read the other script, and some words have developed that are meant to be rendered exclusively in one script or the other. This situation is similar to many post-Communist states where many people, but not all, can write in both Latin and Cyrillic. The India case is important not only because India is the world's most populous country, but also because Prime Minister Narendra Modi is actively working to homogenize Hindi as part of his Hindu nationalist objectives. Cyrillic in Serbia is an explicit nationalist signal, so future work would benefit from studying more subtle manifestations of alphabet and script in other country contexts.

Second, other linguistic cues may also send a nationalist signal. Hall-Lew, Friskney, and Scobie (2017) find that Scottish members of the UK Parliament may intentionally emphasize their accent and sometimes use a different dialect to signal their Scottish identity while also being able to be understood by all English speakers (see also Crisp et al., 2018 about the Māori in New Zealand). In addition, American Republicans tend to mispronounce foreign words more frequently, potentially because of their more nationalist views (Jaggers, 2019). These contexts are more or less overtly associated with nationalism compared to the nationalist slogan we used in our study. Future research would benefit from exploring how nationalist symbol use impacts nationalist attitudes when used in a context related to nationalism and when used in a non-nationalist context.

Beyond the use of language-based symbols, our work has implications for the study of language

and politics. As Unseth (2005) notes, the process of choosing and using languages is similar to that of scripts. We show that members of the public only respond to language cues when they are used in a political context and, importantly, that politicians strategically use language to establish political meaning. This finding moves beyond politicians seizing on existing language stereotypes or associations to them playing an active role in creating new political cues using language. As such, our results suggest that as politicians seek to differentiate themselves and to create increasingly loyal supporters they will work to politicize other features of language.

Finally, we contribute to the literature by examining how politicians communicate their political positions to members of the public. Our work highlights the use of symbols to strengthen perceptions of ideological stances. Our particular focus is on nationalism, which politicians often convey overtly. But not all politicians wish to fully identify themselves as nationalists due in part to the need to appeal to different constituencies of potential voters. Therefore, a more subtle signal associated with nationalist beliefs, like a script, may be appropriate for politicians who are attempting to convey different political preferences to different constituencies. Language-based nationalist symbols are an example of a more subtle way to signal nationalist beliefs that may also apply to other political beliefs. Future research may find our approach useful when studying how politicians communicate populist or extreme right or left political positions.

Everyday symbols are overlooked because they are commonplace. We are not suggesting that the connection that members of the public and politicians make between language-based symbols and nationalism is normatively bad, rather that the public and policymakers should be aware of the power of these symbols. What is more, members of the public could benefit from understanding how politicians are using language-based symbols to strategically influence their own public perceptions. Our contribution is to examine the relationship between linguistic symbols and political attitudes *when these symbols have developed, not inherent meaning*. The power of language-based nationalist symbols to alter attitudes toward politicians represents a new avenue for political competition and persuasion.

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Supplemental Information:

Language Cues and Perceptions of Nationalism

A Nationalism and Alphabet Use	3
A.1 Survey Descriptive Statistics	3
A.2 Question Ordering and Survey Design	4
A.3 Politician’s Slogan	7
A.4 Use of Cyrillic and Latin	10
A.5 Hypothesis 1: Randomization Checks	11
A.6 Hypothesis 1: Complete Results	11
A.7 Hypothesis 1: Distribution of Responses by Experimental Group	12
A.8 Hypothesis 1: Models with Covariates	14
A.9 Hypothesis 1: Results by Ad’s Alphabet	15
A.10 Hypothesis 1: Interactions with Political Knowledge, Interest in Politics, and Party Identification	16
A.11 Hypothesis 2: Randomization Checks	20
A.12 Hypothesis 2: Complete Results	21
A.13 Hypothesis 2: Distribution of Responses by Experimental Group	22
A.14 Hypothesis 2: Models with Covariates	24
A.15 Hypothesis 2: Results by Ad’s Alphabet	25
A.16 Hypothesis 2: Interactions with Political Knowledge, Interest in Politics, and Party Identification	27
B The Use of Different Alphabets by Politicians	33
B.1 Facebook Pages Included in the Analysis	33
B.2 Number of Topics	34

B.3	Topics: Entire Corpus	37
B.4	Topics: Pres. Aleksandar Vučić	46
B.5	Complete Results for the Entire Corpus	55
B.6	Complete Results for the Pres. Aleksandar Vučić's Pages	56
B.7	Additional Analysis	58
B.8	STM analysis using Two-Ways Fixed Effects For the Entire Corpus	59
C	Ethics	70
D	Pre-Analysis Plan and Survey Questions	71

A Nationalism and Alphabet Use

A.1 Survey Descriptive Statistics

Table A.1: Survey Characteristics v. Population Characteristics

Variable	Survey (%)	Population (%)
Gender = Women	53.7	51.7
Education = College	57.8	16.00
Age = 18-35	22.1	29.51
Age = 36-49	33.2	23.50
Age = 50-64	36.6	26.70
Age = 65+	8.00	20.29
Marital status = Married	50.8	55.1
Unemployed	17.2	9.08
Urban	68.3	56.7
Ethnicity = Serbian	80.6	83.3

Sources: Gender (2011 Census), Ethnicity (2011 Census), Age (2011 Census), Marital status (2011 Census), Education (2011 Census), Unemployed (The World Bank, 2020), Urban (CIA, The World Factbook, April 2020).

Note: Age categories are slightly different in our survey and those available in the Serbian Statistical Yearbook. Specifically, the entries show the following comparisons: 18-35 (our survey) v. 15-34 (2011 Census), 36-49 (our survey) v. 35-49 (2011 Census), 50-64 (our survey) v. 50-64 (2011 Census), and +65 (our survey) v. +65 (2011 Census).

Table A.2: Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Nationalism Index (Self)	1,832	2.371	0.914	1.000	5.000
More Serbian influence is Better (Self)	1,832	2.373	1.187	1	5
Serbia is Better than Most Places (Self)	1,832	2.578	1.315	1	5
World would be Better if it were Equal to Serbia (Self)	1,832	2.163	1.171	1	5
Nationalism Index (Politician)	1,832	2.904	1.064	1.000	5.000
More Serbian influence is Better (Politician)	1,832	2.758	1.412	1	5
Serbia is Better than Most Places (Politician)	1,832	3.286	1.406	1	5
World would be Better if it were Equal to Serbia (Politician)	1,832	2.667	1.421	1	5
Second Randomization (Cyrillic Slogan)	1,832	0.508	0.500	0	1
First Randomization (Cyrillic)	1,832	0.504	0.500	0	1
Alphabet Ad (Cyrillic)	1,832	0.491	0.500	0	1
Politician = Milena	1,832	0.492	0.500	0	1
Gender = Woman	1,832	0.537	0.499	0	1
Gender = Man	1,832	0.454	0.498	0	1
Gender = Prefer not to share	1,832	0.009	0.093	0	1
Education = College	1,832	0.578	0.494	0	1
Age = 18-35	1,832	0.221	0.415	0	1
Age = 36-49	1,832	0.332	0.471	0	1
Age = 50-64	1,832	0.366	0.482	0	1
Age = 65+	1,832	0.080	0.272	0	1
Marital status = Married	1,832	0.508	0.500	0	1
Unemployed	1,832	0.172	0.377	0	1
Urban	1,832	0.683	0.465	0	1
# of languages spoken = 0	1,832	0.117	0.321	0	1
# of languages spoken = 1	1,832	0.472	0.499	0	1
# of languages spoken = 2	1,832	0.259	0.438	0	1
# of languages spoken > 2	1,832	0.152	0.359	0	1
Δ Use of Cyrillic-Latin (at home)	1,832	-0.596	2.208	-4	4
Δ Use of Cyrillic-Latin (at work)	1,832	-0.551	2.356	-4	4
Importance of Cyrillic	1,832	4.059	1.201	1	5
Serbian	1,832	0.806	0.396	0	1
SNS	1,832	0.110	0.313	0	1
Knows the of MPs	1,832	0.686	0.464	0	1
Knows the presidential term length	1,832	0.407	0.491	0	1
Interest in politics	1,832	3.622	1.334	1	5

A.2 Question Ordering and Survey Design

Prior work has suggested that especially sensitive questions that are likely to introduce serious priming issues (e.g., Klar, Leeper, and Robison, 2020) should be asked post-treatment, while responses to questions conditioned on the experimental conditions should be asked pre-treatment

(e.g., Montgomery, Nyan, and Torres, 2018). This leads to our choice to ask about ethnicity and partisanship post-treatment, as they are sensitive questions whose responses are not as likely to be influenced by the experimental conditions compared to other controls. The most important and difficult decision in our experiment is likely when to ask respondents about their language use. We see four possible alternatives here.

First, we could decide not to ask any questions about language differences. We feel that measuring language differences is important because, while all Serbians learn the Latin and Cyrillic alphabets, we do not have information about those who decided to join Facebook, making it essential to collect this data to conduct balance checks. In other words, had we decided not to ask these questions, we would not be able to evaluate whether our treated and control groups were statistically similar in arguably one of the most important factors for our study.

Second, we could ask these questions post-treatment, but it is possible that respondents would be influenced by the treatment. As a result, these questions would become post-treatment, and we would not be able to use them without biasing our results (e.g., Montgomery, Nyan, and Torres, 2018).

Third, we could employ a two-wave study that asks this language differences question in wave 1 and employs the experiment in wave 2. We did not opt for this alternative for two reasons. First, attrition is very high in Internet-based survey experiments, likely even higher in our case due to our recruitment strategy, which relied on social media. Second, a two-wave study is more expensive than a one-wave study, making it beyond our financial means.

Fourth, we could ask these questions pre-treatment as we did. The main problem with this strategy is that it could potentially reveal that language was our treatment. Though this is arguably a drawback, we note that our choice follows the best practices in studies about languages in political science. For example, Perez and Tavits (2019) explicitly asked respondents about how well they know their native and second languages to identify bilinguals. In their words, “[w]e identified bilinguals via self-rated skill in Estonian and Russian. Respondents who said they ‘can understand, speak, and write or are fluent’ in both tongues were randomly assigned to interview in Estonian or

Russian” (Perez and Tavits, 2019, 83). Similar to our design, Perez and Tavits informed respondents about the randomization. Their text reads,

Based on your answers to some of the previous questions, it appears that you are fluent in both Estonian and Russian. Therefore, we will let the computer program randomly select which language we continue this interview in [SHORT PAUSE].

[Estonian/Russian] was selected. This means that after this point, the rest of the interview will take place in [Estonian/Russian]. This is not a language test. We are simply interested in your opinions as an [Estonian/Russian] speaker.

Our design follows Perez and Tavits’ work by asking questions about the use of Cyrillic and Latin, then informing respondents that a computer algorithm would decide the alphabet in the rest of the survey.¹ More precisely, our (first) randomization reads,

Because the Cyrillic and Latin alphabets are both commonly used in Serbia, we let a computer decide which alphabet will be used for the remainder of this survey.

The [Cyrillic/Latin] alphabet was selected. This means that after this point, the rest of the survey will be written in [Cyrillic/Latin]. This is not a language test.

We note that by following the best practices in the field and informing respondents that a computer algorithm would decide the survey alphabet in the second part of the survey, the potential issue of revealing our interest in the alphabet was inevitable, making the choice of asking or not pre-treatment questions on the use of Cyrillic and Latin muted. More precisely, because our (first) randomization explicitly mentions that a computer algorithm would select the alphabet for the second part of the survey, respondents could become aware that we were interested in the alphabet (the same issue occurs in Perez and Tavits’ study). However, we believe that not informing respondents about this randomization could create additional problems, and would not solve this potential issue. First, by not informing respondents about the alphabet change, respondents could still become aware that the alphabet was an important part of our survey, given that it changed around

¹Perez and Tavits (2019) removed the last sentence in their second study.

the mid-point of the survey. Consequently, it would not solve this potential issue of revealing that we were interested in the alphabet. Second, it is likely that some respondents would drop out of the survey believing that the survey had a technical issue or, worse, that they were manipulated into a survey that used an alphabet different from the one in the ads that they clicked on. Given that respondents who decided to drop out would likely be systematically different from those who chose to stay, it would likely affect our results.

We recognize that the assignment of our (first) randomization and, to a lesser degree, the questions on alphabet use may represent drawbacks of our study. Nevertheless, we believe that they avoid other potential issues and follow best practices. We invite scholars to design follow-up studies and employ alternative designs, such as the multi-wave one.

A.3 Politician’s Slogan

One challenge to our experimental design is to secure the external validity of the slogan presented to respondents. Specifically, one may wonder whether nationalist politicians employ Cyrillic and Latin when deploying ads similar to the one in the experiment.

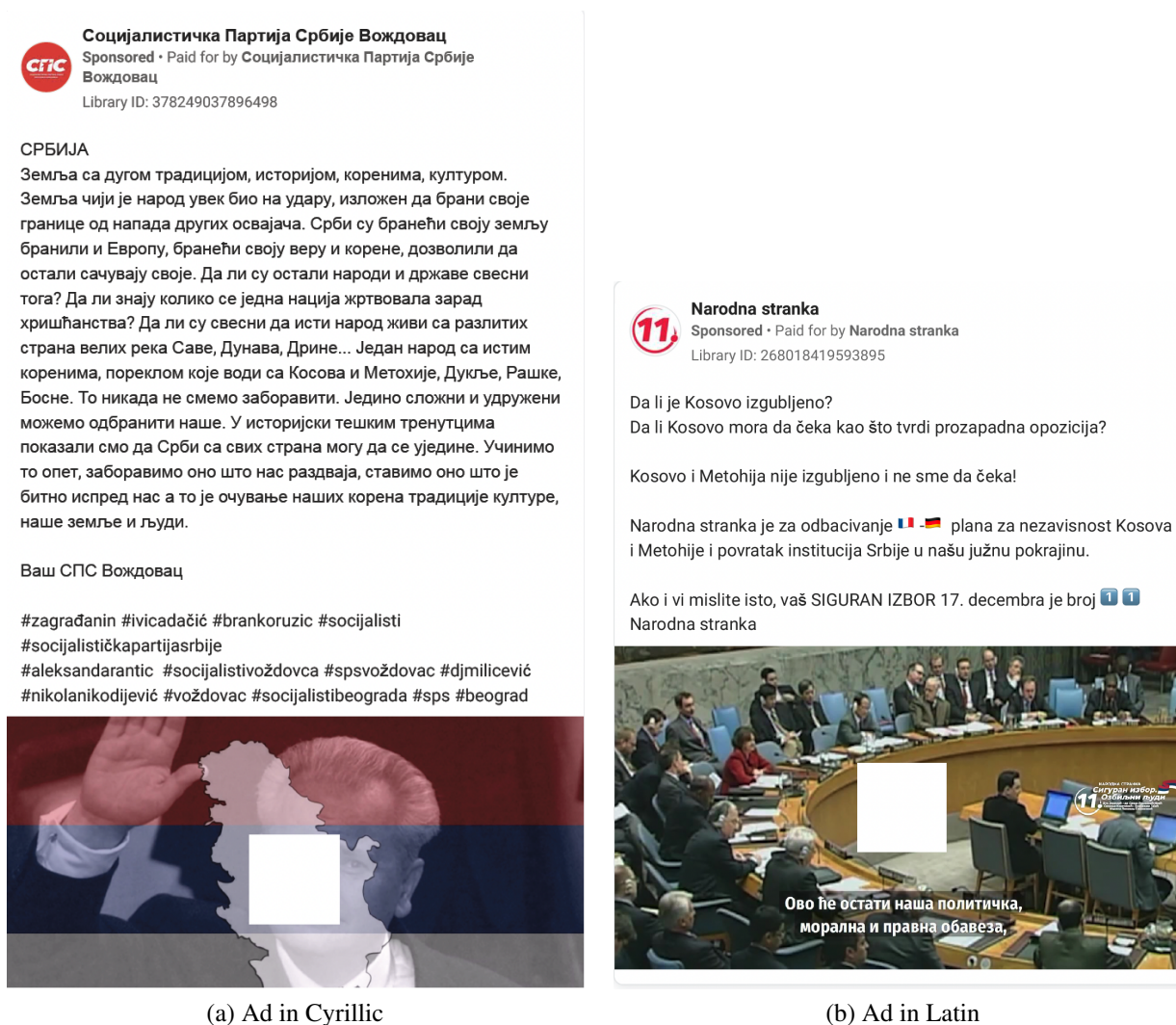
As we mentioned in the body of the paper, nationalist politicians use both alphabets. President Vučić is the exemplary case, given his two Facebook pages, one in Cyrillic and another in Latin. Nevertheless, it is noticeable that some nationalist politicians use (Cyrillic) Latin more frequently when addressing the public. For example, in our Facebook data, the Serbian Patriotic Alliance, a dissolved right-wing and nationalist party, mostly used Latin in its posts (98%). Branko Ružić, who was a member of Vučić’s cabinet at the time when we collected our data, used Cyrillic in only 15% of his posts.

Because our data may not represent what parties and politicians do during a campaign, we also present two examples of campaign ads that ran on Facebook during the 2023 Serbian parliamentary election campaign. These ads were collected from the Facebook Ads library on November 22, 2024. The ads are from nationalist parties: the People’s Party and the Socialist Party of Serbia. Both ads contain arguments favoring a unified Serbia that would have Kosovo as its southern

province (we include translations for both ads below). The People’s Party case is particularly interesting because the party mainly uses Cyrillic on their Facebook page ($\approx 99\%$ of our data). However, the name of its Facebook page has the party’s name in Latin.

These examples mitigate concerns that nationalist politicians and parties will only utilize Cyrillic in their campaigns.

Figure A.1: Facebook Ads Used By Parties in the 2023 Parliamentary Election



(a) Ad in Cyrillic

(b) Ad in Latin

Translation for the ad on panel (a), Socialist Party of Serbia:

A country with a long tradition, history, roots, and culture. A country whose people

have always been under attack, exposed to defending their borders from attacks by other conquerors. By defending their country, the Serbs also defended Europe, by defending their faith and roots, they allowed others to preserve theirs. Are other nations and states aware of this? Do they know how much one nation sacrificed for the sake of Christianity? Are they aware that the same people live on different sides of the great rivers Sava, Danube, Drina... One people with the same roots, originating from Kosovo and Metohija, Duklja, Raška, Bosnia. We must never forget this. Only united and united can we defend ours. In historically difficult moments, we have shown that Serbs from all sides can unite. Let's do it again, let's forget what divides us, let's put what is important before us, which is preserving our roots, our cultural traditions, our land and our people. Yours, SPS Voždovac

Translation for the ad on panel (b), from People's Party:

Is Kosovo lost? Does Kosovo have to wait as the pro-Western opposition claims?

Kosovo and Metohija are not lost and must not wait!

The People's Party is in favor of rejecting the France and Germany plan for the independence of Kosovo and Metohija and the return of Serbian institutions to our southern province.

If you think the same, your SAFE CHOICE on December 17 is number 11

People's Party

A.4 Use of Cyrillic and Latin

Table A.3: When you read and write in Serbian at home, with what frequency do you use the Cyrillic and Latin alphabets?

Latin	Cyrillic				
	Never	2	3	4	Very frequently
Never	0.11	0.00	0.05	0.44	10.21
2	0.05	0.11	0.76	4.20	13.86
3	0.11	0.44	6.50	4.31	8.84
4	0.60	2.29	3.11	5.08	4.75
Very frequently	4.26	6.50	4.86	3.71	14.85

Note: Table's entries represent percentages

Table A.4: When you read and write in Serbian at work, with what frequency do you use the Cyrillic and Latin alphabets?

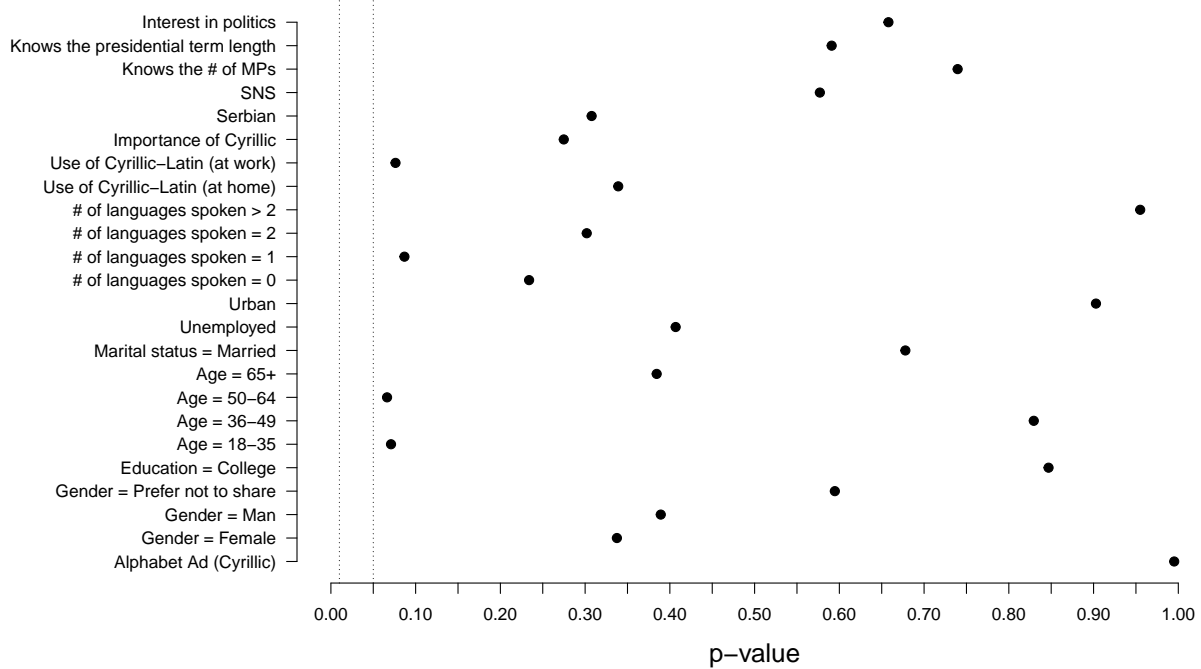
Latin	Cyrillic				
	Never	2	3	4	Very frequently
Never	1.42	0.05	0.33	0.60	11.46
2	0.00	0.55	0.93	4.37	14.03
3	0.22	0.49	5.84	3.82	8.90
4	0.44	2.78	2.89	3.71	3.82
Very frequently	6.06	7.59	4.75	3.28	11.68

Note: Table's entries represent percentages

A.5 Hypothesis 1: Randomization Checks

Figure A.2 shows the p-values for difference in means tests used to evaluate whether our randomization worked for the treatment. As we can observe, all the p-values are larger than $\alpha = 0.05$.

Figure A.2: Randomization Checks, First Manipulation (Survey Alphabet)



Note: Dots represent p-values from difference of means. Vertical dashed lines represent $\alpha = 0.01$ and $\alpha = 0.05$.

A.6 Hypothesis 1: Complete Results

Table A.5: Average Treatment Effect of the use of Cyrillic Alphabet in the Survey on Voters' Attitudes Towards Nationalism

	Nationalism Index	More Serbian Influence is Better	Serbia is Better than Most Places	Better World if Equal to Serbia
	(1)	(2)	(3)	(4)
Treatment (Survey in Cyrillic)	0.027 (0.043)	0.083 (0.055)	-0.025 (0.061)	0.023 (0.055)
N	1,832	1,832	1,832	1,832

Note: Table's entries are estimates from the difference in means estimator. Standard errors in parentheses.
* $p < 0.05$; ** $p < 0.01$.

A.7 Hypothesis 1: Distribution of Responses by Experimental Group

The lack of effect of our treatment is illustrated in Figures A.3, A.4, and A.5, where we graphically display the distribution of responses to each statement. The comparison between panels (a) and (b) indicates almost no difference in the distribution of responses between respondents who were treated with the Cyrillic alphabet and those who answered the question in the Latin alphabet in all three cases. Indeed, as shown in panel (c) of all three figures, although there is a minor decrease in the percentages of respondents who strongly disagree with the statement among those who answered the survey in Latin, there is no consistent pattern.

Figure A.3: How much do you agree with the following statement, “The world would be a better place if people from other countries were more like Serbians”?

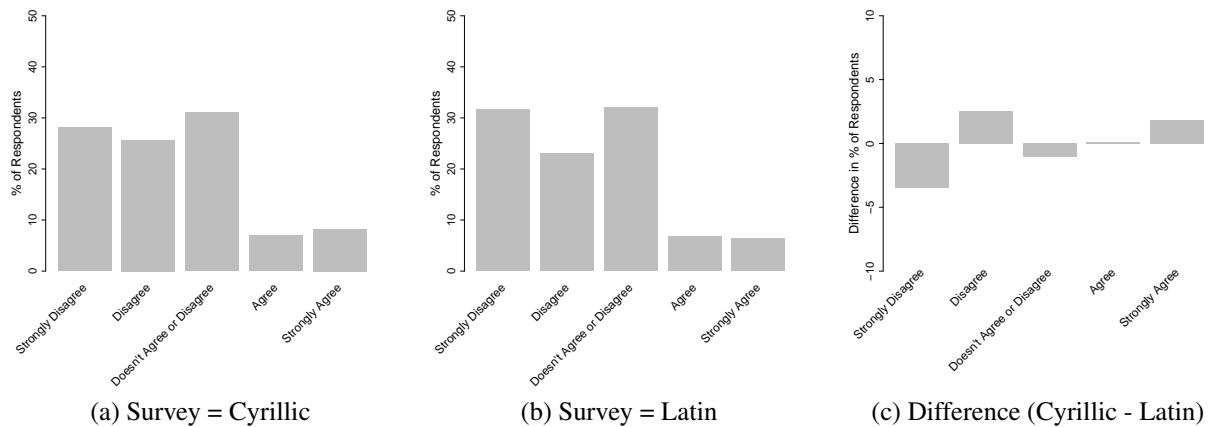
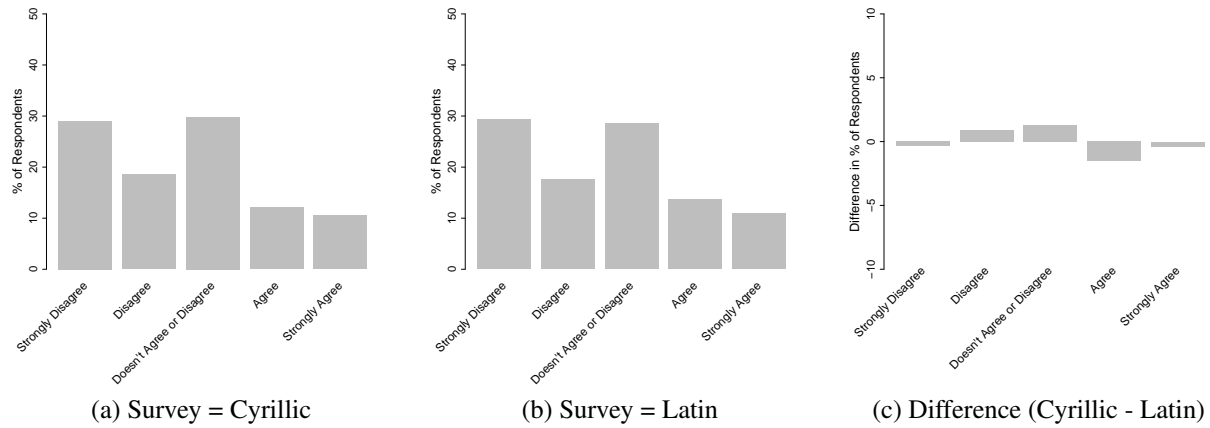
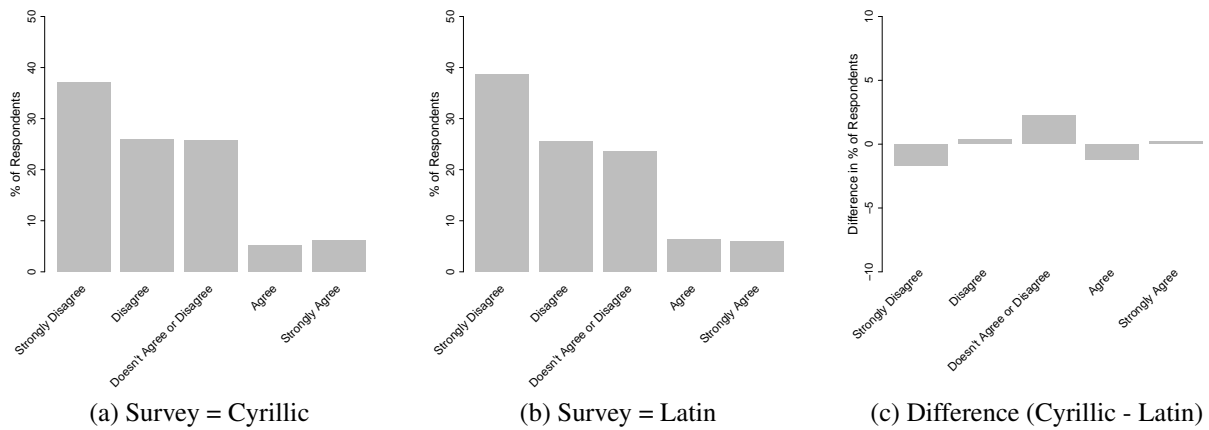


Figure A.4: How much do you agree with the following statement, “Generally speaking, Serbia is no better than most other countries”?



Note: We recoded responses to more agreement with the statement to indicate more nationalist.

Figure A.5: How much do you agree with the following statement, “Generally, the more influence Serbia has on other nations, the better off they are”?



A.8 Hypothesis 1: Models with Covariates

Table A.6 shows the results for models in which we include socio-demographic and political variables and controls for the other manipulations in the survey. In all four models, we observe a statistically insignificant coefficient for the treatment variable (Cyrillic).

Table A.6: Effect of Cyrillic Alphabet on Respondents' Own Attitudes, Including Control Variables

	Nationalism Index (1)	More Serbian Influence is Better (2)	Serbia is Better than Most Places (3)	Better World if Equal to Serbia (4)
Treatment 1 (Survey Cyrillic)	0.006 (0.039)	0.051 (0.050)	-0.034 (0.061)	0.002 (0.051)
Alphabet Ad (Cyrillic)	-0.006 (0.044)	0.017 (0.056)	-0.024 (0.068)	-0.011 (0.059)
Gender = Man	0.072 (0.041)	0.107* (0.053)	0.030 (0.065)	0.080 (0.054)
Gender = Prefer not to share	0.111 (0.197)	0.228 (0.257)	-0.177 (0.352)	0.283 (0.268)
Education = College	-0.070 (0.044)	-0.111 (0.057)	-0.045 (0.068)	-0.053 (0.057)
Age = 36-49	-0.033 (0.060)	-0.072 (0.078)	0.006 (0.088)	-0.033 (0.078)
Age = 50-64	0.014 (0.061)	0.014 (0.081)	0.072 (0.090)	-0.045 (0.080)
Age = 65+	0.150 (0.085)	0.049 (0.114)	0.357* (0.140)	0.045 (0.114)
Marital Status = Married	-0.004 (0.042)	0.046 (0.055)	0.010 (0.065)	-0.068 (0.056)
Unemployed	-0.082 (0.058)	-0.219** (0.071)	0.072 (0.088)	-0.100 (0.076)
Urban	-0.080 (0.043)	-0.066 (0.057)	-0.103 (0.066)	-0.070 (0.058)
# of languages spoken = 1	-0.107 (0.069)	-0.125 (0.092)	-0.223* (0.107)	0.026 (0.092)
# of languages spoken = 2	-0.158* (0.075)	-0.143 (0.099)	-0.286* (0.114)	-0.044 (0.098)
# of languages spoken > 2	-0.136 (0.085)	-0.121 (0.111)	-0.289* (0.131)	0.003 (0.109)
Δ use of Cyrillic to Latin (at home)	0.042** (0.014)	0.049** (0.017)	0.032 (0.020)	0.044* (0.018)
Δ use of Cyrillic to Latin (at work)	0.011 (0.012)	0.013 (0.015)	-0.006 (0.018)	0.025 (0.016)
Importance of Cyrillic	0.227** (0.017)	0.309** (0.023)	0.119** (0.031)	0.253** (0.022)
Ethnicity = Serbian	0.080 (0.052)	0.120 (0.067)	0.041 (0.086)	0.078 (0.070)
Party Identification = SNS	0.409** (0.069)	0.476** (0.091)	0.317** (0.096)	0.434** (0.091)
Knows the # of MPs	-0.036 (0.047)	-0.075 (0.060)	0.016 (0.072)	-0.048 (0.061)
Knows how long is the presidential term	-0.087* (0.043)	-0.078 (0.056)	-0.067 (0.068)	-0.115* (0.056)
Interest in Politics	0.005 (0.016)	0.048* (0.021)	-0.067** (0.025)	0.035 (0.021)
Constant	1.596** (0.128)	1.084** (0.171)	2.565** (0.213)	1.137** (0.162)
N	1,832	1,832	1,832	1,832
R ²	0.197	0.202	0.048	0.151
Adjusted R ²	0.188	0.192	0.037	0.140

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

A.9 Hypothesis 1: Results by Ad's Alphabet

Because we recruited respondents using two different ads on Facebook, before moving to the analysis of Hypothesis 2, we examine whether the treatment effect is a function of the Facebook ad's alphabet. To do so, we create a set of four explanatory variables that indicate the ad's alphabet and the survey's alphabet (treatment). We regress each of our outcome variables on this set of explanatory variables, using those who entered the survey through the Facebook ad in Latin and were exposed to the survey in Latin as our reference category. If our recruitment process does not drive our results, we should continue to observe statistically insignificant coefficients for all variables included in these models. Table A.7 shows the results from these models, demonstrating that this is the case. As in our main analysis, we do not detect any effect of the survey alphabet on respondents' attitudes, independently of the ad alphabet. In SI A.8, we also show that our results are robust to a multivariate analysis in which we include control variables when estimating the treatment effect. Together, the findings in Table A.7 and SI A.8 suggest that our null results are not a function of either the recruitment process or the lack of control variables.

Table A.7: Effect of Alphabet on Respondents' Own Attitudes, Combining Ad's Alphabet and Treatment Status

	Nationalism Index (1)	More Serbian Influence is Better (2)	Serbia is Better than Most Places (3)	Better World if Equal to Serbia (4)
Ad = Latin, Survey Alphabet = Cyrillic	0.046 (0.059)	0.084 (0.078)	-0.037 (0.086)	0.090 (0.075)
Ad = Cyrillic, Survey Alphabet = Latin	-0.016 (0.060)	-0.047 (0.078)	-0.046 (0.088)	0.045 (0.078)
Ad = Cyrillic, Survey Alphabet = Cyrillic	-0.009 (0.061)	0.034 (0.079)	-0.059 (0.088)	-0.002 (0.076)
Constant	2.366** (0.042)	2.354** (0.055)	2.613** (0.062)	2.130** (0.052)
N	1,832	1,832	1,832	1,832
R ²	0.001	0.002	0.0003	0.001
Adjusted R ²	-0.001	-0.00001	-0.001	-0.001

Note: Reference category is Ad = Latin, Survey Alphabet = Latin. Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

A.10 Hypothesis 1: Interactions with Political Knowledge, Interest in Politics, and Party Identification

In this SI, we investigate whether the treatment effect of Cyrillic is moderated by interest in politics, political knowledge, or party identification. To do so, we estimate models in which we include a variable for interest in politics (political knowledge) and an interaction term between these variables and the treatment indicator.²

The results displayed in the tables and figures below are in line with the findings reported in the body of the paper. Cyrillic does not affect respondents' own attitudes. The only instance in which the effect of Cyrillic is positive and statistically significant is in panel (b) of Figure A.9 for those who are highly knowledgeable about politics. Nevertheless, even in this case, we do not observe that the effect of Cyrillic among those highly knowledge is statistically discernible from those among barely knowledgeable at $p < 0.05$ (Difference = 0.236, p-value = 0.092). In sum, the null effect of Cyrillic is not moderated by either interest in politics or political knowledge.

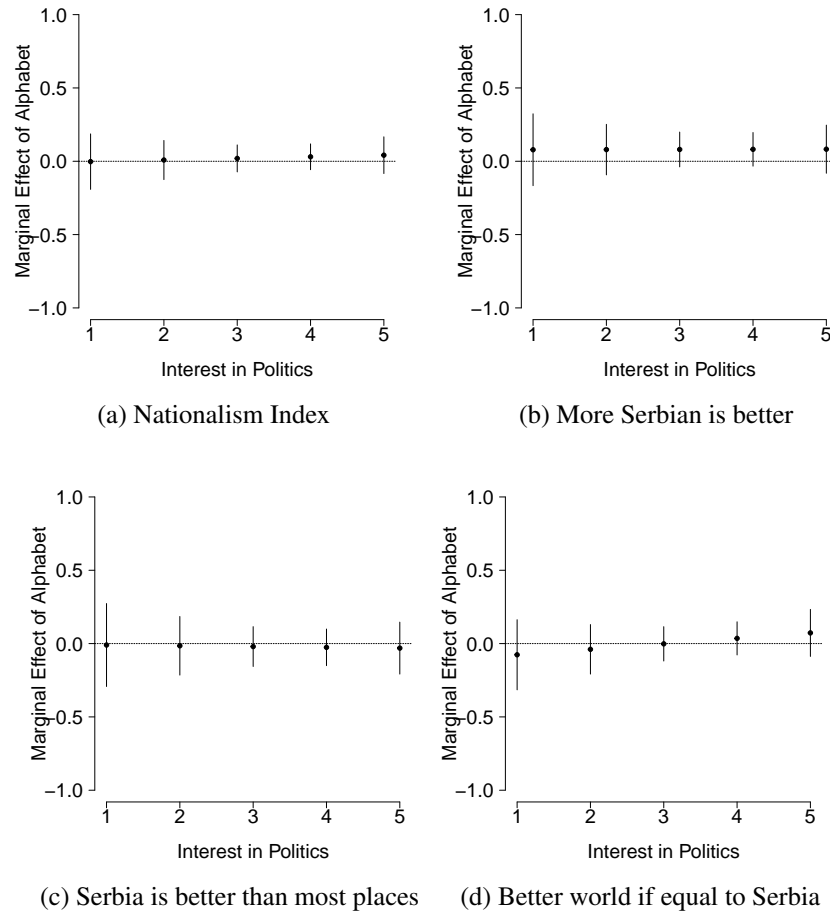
Table A.8: Effect of Alphabet on Respondents' Own Attitudes Conditional upon Interest in Politics

	Nationalism index (1)	More Serbian is better (2)	Serbia is better than most places (3)	Better World if Equal to Serbia (4)
Alphabet = Cyrillic	-0.014 (0.127)	0.078 (0.165)	-0.004 (0.190)	-0.114 (0.161)
Interest in Politics	0.009 (0.023)	0.059* (0.030)	-0.056 (0.034)	0.025 (0.030)
Alphabet = Cyrillic x Interest in Politics	0.011 (0.034)	0.001 (0.044)	-0.005 (0.049)	0.037 (0.042)
Constant	2.324** (0.085)	2.117** (0.112)	2.794** (0.133)	2.063** (0.113)
N	1,832	1,832	1,832	1,832
R ²	0.001	0.006	0.004	0.003
Adjusted R ²	-0.001	0.004	0.002	0.001

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

²We combine the two variables on political knowledge into one variable. As a result, the variable ranges from 0 to 2, where 0 represents a respondent who incorrectly answered both questions and 2 represents a respondent who correctly answered both questions.

Figure A.6: Marginal Effect of Alphabet on Respondents' Own Attitudes Conditional upon Interest in Politics



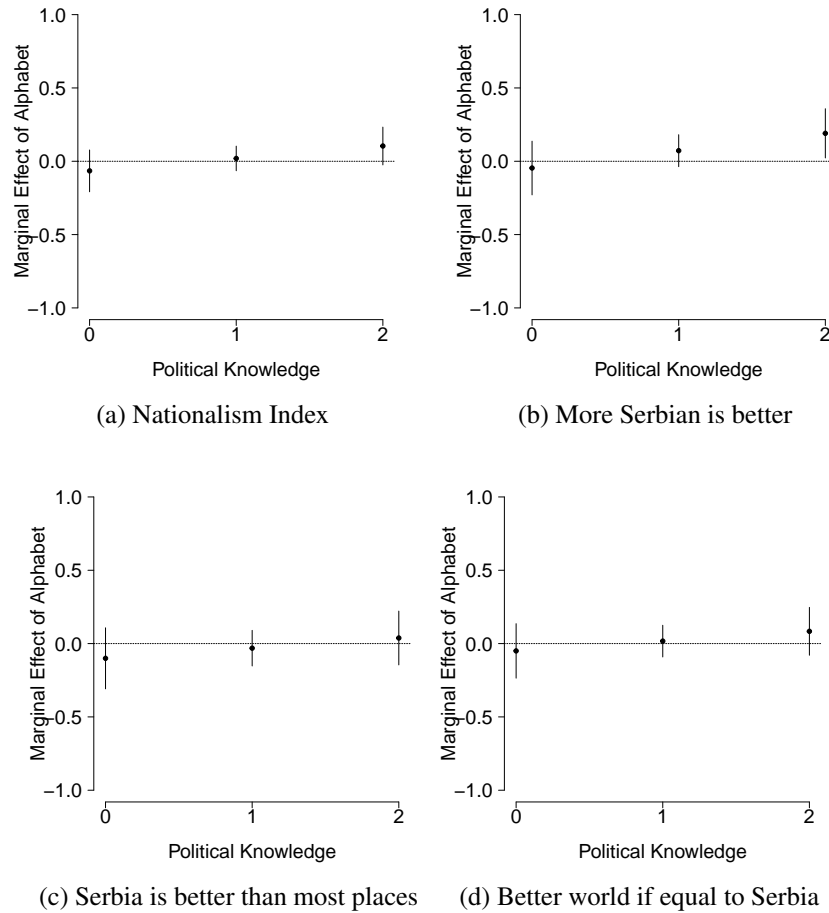
Note: 95% Confidence Intervals.

Table A.9: Effect of Alphabet on Respondents' Own Attitudes Conditional upon Political Knowledge

	Nationalism index	More Serbian is better	Serbia is better than most places	Better World if Equal to Serbia
	(1)	(2)	(3)	(4)
Alphabet = Cyrillic	-0.066 (0.073)	-0.046 (0.093)	-0.101 (0.106)	-0.050 (0.095)
Political Knowledge	-0.125** (0.039)	-0.140** (0.049)	-0.113* (0.056)	-0.122* (0.051)
Alphabet = Cyrillic x Political Knowledge	0.085 (0.054)	0.118 (0.070)	0.069 (0.079)	0.067 (0.070)
Constant	2.495** (0.053)	2.484** (0.067)	2.714** (0.077)	2.285** (0.070)
N	1,832	1,832	1,832	1,832
R ²	0.006	0.005	0.003	0.004
Adjusted R ²	0.005	0.004	0.001	0.002

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

Figure A.7: Marginal Effect of Alphabet on Respondents' Own Attitudes Conditional upon Political Knowledge



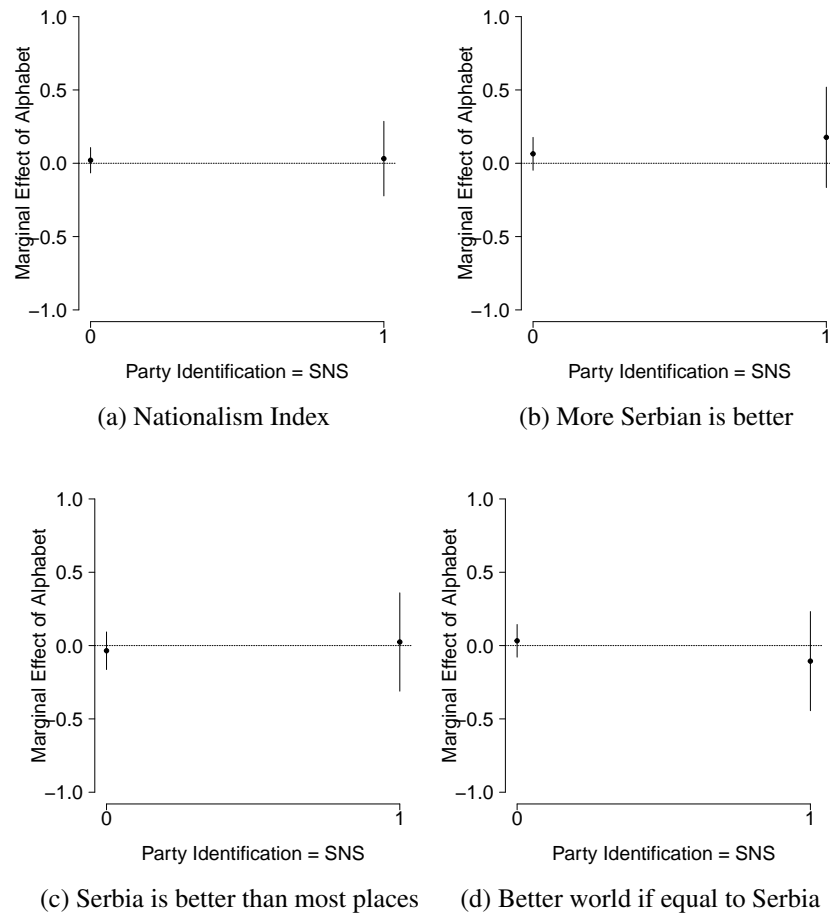
Note: 95% Confidence Intervals.

Table A.10: Effect of Alphabet on Respondents' Own Attitudes Conditional upon Party Identification = SNS

	Nationalism index	More Serbian is better	Serbia is better than most places	Better world if equal to Serbia
	(1)	(2)	(3)	(4)
Alphabet = Cyrillic	0.021 (0.044)	0.064 (0.057)	-0.035 (0.065)	0.033 (0.057)
Party Identification = SNS	0.594** (0.091)	0.678** (0.123)	0.388** (0.128)	0.715** (0.127)
Alphabet = Cyrillic x Party Identification = SNS	0.011 (0.137)	0.112 (0.184)	0.060 (0.183)	-0.138 (0.181)
Constant	2.295** (0.031)	2.260** (0.041)	2.550** (0.047)	2.076** (0.041)
N	1,832	1,832	1,832	1,832
R ²	0.042	0.039	0.010	0.030
Adjusted R ²	0.041	0.037	0.008	0.028

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

Figure A.8: Marginal Effect of Alphabet on Respondents' Own Attitudes Conditional upon Party Identification

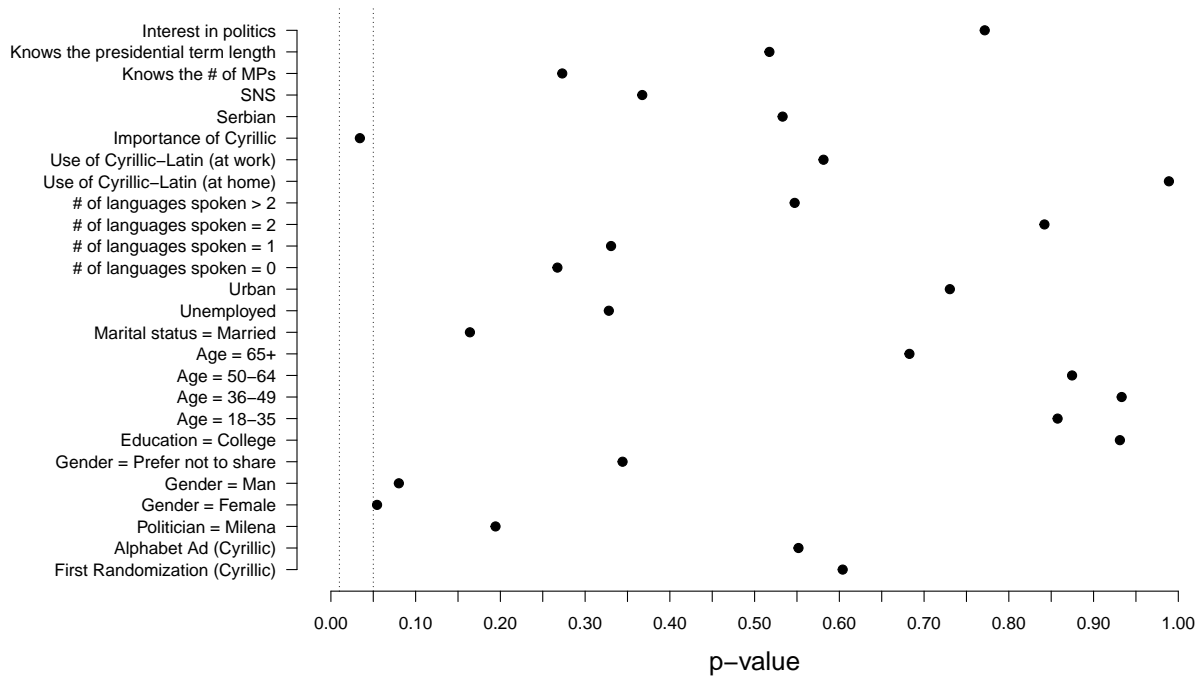


Note: 95% Confidence Intervals.

A.11 Hypothesis 2: Randomization Checks

Figure A.9 shows the p-values for the difference in means tests used to evaluate whether our randomization worked for the treatment. As we can observe, all the p-values are larger than $\alpha = 0.05$, except for the p-value for *Importance of Cyrillic*. Our results are robust to the inclusion of this covariate in the models, as shown in Table A.12.

Figure A.9: Randomization Checks (Second Manipulation, Politician's Slogan)



Note: Dots represent p-values from the difference of means. Vertical dashed lines represent $\alpha = 0.01$ and $\alpha = 0.05$.

A.12 Hypothesis 2: Complete Results

Table A.11: Average Treatment Effect of Cyrillic Alphabet on Respondents' Perceptions of Politicians

	Nationalism Index (1)	More Serbian Influence is Better (2)	Serbia is Better than Most Places (3)	Better World if Equal to Serbia (4)
Treatment (Slogan in Cyrillic)	0.270*** (0.049)	0.284*** (0.066)	0.242*** (0.065)	0.283*** (0.066)
N	1,832	1,832	1,832	1,832

Note: Table's entries are estimates from the difference in means estimator. Standard errors in parentheses.
* $p < 0.05$; ** $p < 0.01$.

A.13 Hypothesis 2: Distribution of Responses by Experimental Group

Once more, we use the distribution of responses to each statement to visually inspect our results. The distribution of responses in Figures A.10, A.11, A.12 indicates a clear pattern. Treated individuals were less likely to indicate that the politician would disagree or have a neutral stance regarding the statement than those respondents who observed a politician using the Latin alphabet. Notably, the percentage of respondents who believe that the politician would strongly agree with the nationalist statements is always larger among those respondents who observed a politician planning to use the Cyrillic alphabet.

Figure A.10: How much do you think that the candidate would agree with the following statement, “The world would be a better place if people from other countries were more like Serbians”?

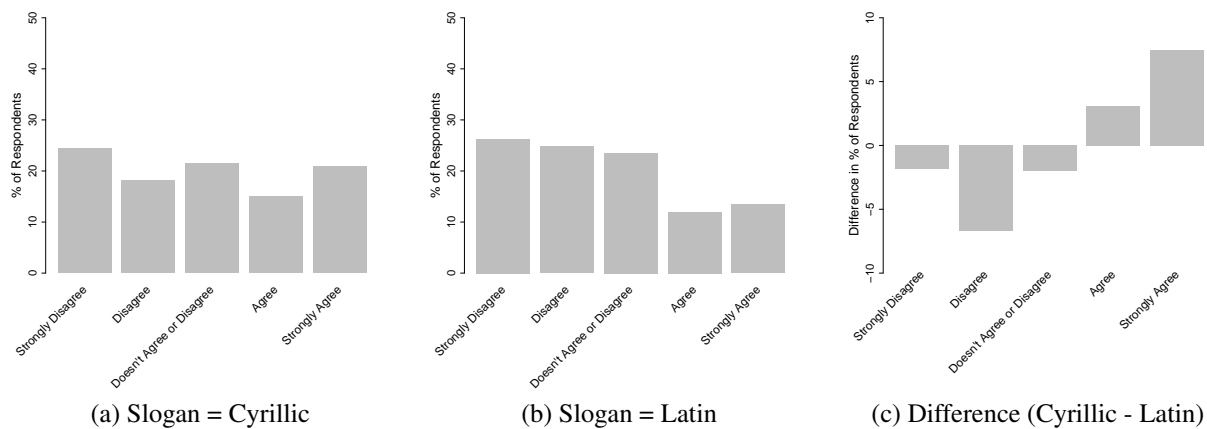
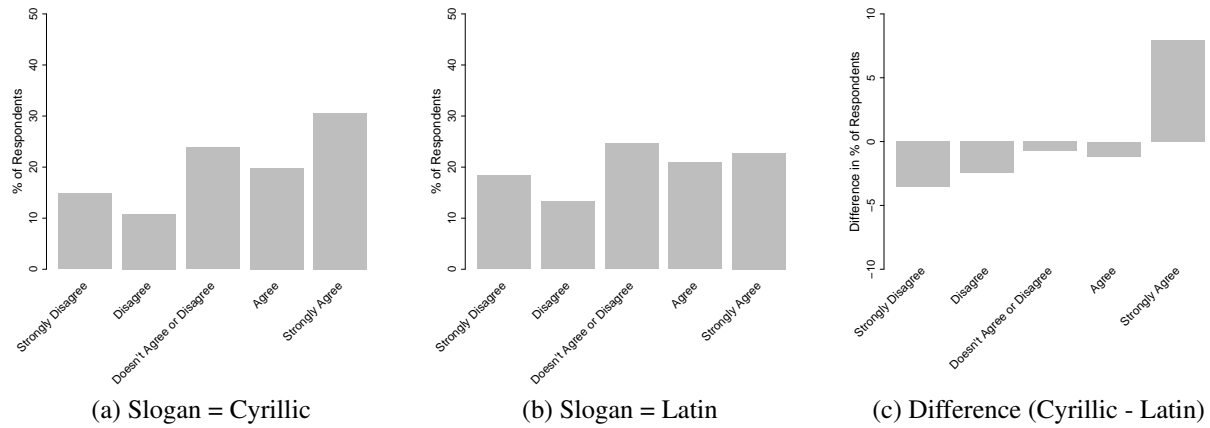
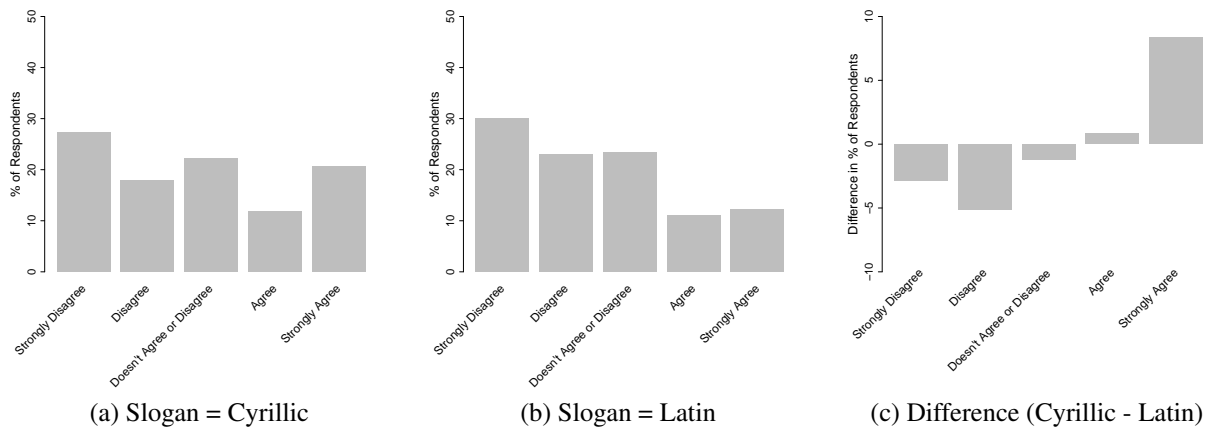


Figure A.11: How much do you agree with the following statement, “Generally speaking, Serbia is no better than most other countries”?



Note: We recoded responses to more agreement with the statement to indicate more nationalist.

Figure A.12: How much do you agree with the following statement, “Generally, the more influence Serbia has on other nations, the better off they are”?



A.14 Hypothesis 2: Models with Covariates

Table A.12 shows the results for models in which we include socio-demographic and political variables and controls for the other manipulations in the survey. These results indicate that our findings are robust to the inclusion of these variables. In all four models, we observe a positive and statistically significant coefficient for the treatment variable (Cyrillic).³

Table A.12: Effect of Cyrillic Alphabet on Respondents' Perceptions of Politicians, Including Control Variables

	Nationalism Index (1)	More Serbian Influence is Better (2)	Serbia is Better than Most Places (3)	Better World if Equal to Serbia (4)
Treatment 2 (Slogan in Cyrillic)	0.279** (0.048)	0.292** (0.065)	0.254** (0.065)	0.292** (0.065)
Treatment 1 (Survey in Cyrillic)	0.004 (0.048)	0.023 (0.065)	-0.076 (0.065)	0.065 (0.066)
Alphabet Ad (Cyrillic)	0.025 (0.054)	0.046 (0.073)	0.016 (0.073)	0.012 (0.074)
Politician = Milena	-0.096* (0.049)	-0.069 (0.065)	-0.077 (0.065)	-0.143* (0.066)
Gender = Man	-0.115* (0.051)	-0.027 (0.069)	-0.206** (0.070)	-0.111 (0.069)
Gender = Prefer not to share	-0.186 (0.274)	0.166 (0.399)	-0.638 (0.437)	-0.087 (0.423)
Education = College	0.091 (0.054)	0.085 (0.072)	0.101 (0.072)	0.086 (0.072)
Age = 36-49	-0.133 (0.075)	-0.172 (0.099)	-0.098 (0.096)	-0.129 (0.100)
Age = 50-64	-0.236** (0.077)	-0.285** (0.101)	-0.146 (0.099)	-0.276** (0.101)
Age = 65+	-0.332** (0.098)	-0.403** (0.141)	-0.138 (0.145)	-0.455** (0.142)
Marital Status = Married	-0.220** (0.051)	-0.160* (0.070)	-0.311** (0.070)	-0.190** (0.071)
Unemployed	-0.030 (0.072)	-0.099 (0.095)	0.071 (0.095)	-0.063 (0.097)
Urban	0.078 (0.052)	0.091 (0.071)	-0.005 (0.072)	0.148* (0.071)
# of languages spoken = 1	0.016 (0.078)	-0.056 (0.109)	0.017 (0.116)	0.088 (0.110)
# of languages spoken = 2	0.012 (0.083)	0.028 (0.118)	-0.083 (0.123)	0.091 (0.118)
# of languages spoken > 2	0.256* (0.100)	0.284* (0.137)	0.217 (0.137)	0.267 (0.137)
Δ use of Cyrillic to Latin (at home)	0.021 (0.017)	0.030 (0.022)	0.016 (0.022)	0.018 (0.023)
Δ use of Cyrillic to Latin (at work)	-0.006 (0.015)	-0.007 (0.020)	-0.007 (0.020)	-0.004 (0.020)
Importance of Cyrillic	0.0003 (0.025)	0.030 (0.033)	-0.044 (0.033)	0.015 (0.033)
Ethnicity = Serbian	-0.007 (0.069)	-0.003 (0.092)	0.030 (0.093)	-0.047 (0.094)
Party Identification = SNS	0.161* (0.071)	0.159 (0.104)	0.100 (0.099)	0.224* (0.101)
Knows the # of MPs	0.162** (0.056)	0.180* (0.076)	0.198* (0.078)	0.109 (0.075)
Knows how long is the presidential term	-0.052 (0.054)	-0.132 (0.072)	0.061 (0.072)	-0.086 (0.073)
Interest in Politics	0.065** (0.019)	0.092** (0.026)	0.011 (0.027)	0.091** (0.026)
Constant	2.639** (0.157)	2.251** (0.222)	3.442** (0.231)	2.224** (0.218)
N	1,832	1,832	1,832	1,832
R ²	0.076	0.053	0.047	0.051
Adjusted R ²	0.064	0.040	0.034	0.039

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

³We note one change to our study design compared to the pre-registered design. We initially planned to randomize the alphabet that the politicians' slogan was rendered in, but we felt that the earlier alphabet randomization would result in respondents being confused about whether the randomized alphabet in the slogan was meant to represent the politician or if it was just another computer randomization.

A.15 Hypothesis 2: Results by Ad's Alphabet

The results support the hypothesis that nationalist symbols matter when used by politicians. However, given the recruitment strategy, it is possible that the treatment effect is different depending on the sample. Specifically, respondents from the sample recruited using the ad in Cyrillic may differ from those recruited using the ad in Latin. In SI A.14, we report models in which we add control variables to our models. Among other control variables, these models include an indicator variable for the recruitment ad's alphabet. The results continue to show that a politician who uses Cyrillic is perceived as more nationalist than one who uses Latin. In addition to these models with controls, we also estimate models in which we include a set of four explanatory variables that account for the ad's alphabet and the slogan's alphabet (we use $Ad = Latin$, $Slogan = Latin$ as the reference category). If the recruitment strategy does not matter for our results, we should observe that the coefficients for $Ad = Latin$, $Slogan = Cyrillic$ and $Ad = Cyrillic$, $Slogan = Cyrillic$ are positive and statistically significant, and the coefficients for $Ad = Cyrillic$, $Slogan = Latin$ are statistically insignificant.

Table A.13: Effect of Alphabet on Respondents' Perceptions of Politicians

	Nationalism Index (1)	More Serbian Influence is Better (2)	Serbia is Better than Most Places (3)	Better World if Equal to Serbia (4)
Ad = Latin, Slogan = Cyrillic	0.177** (0.066)	0.141 (0.090)	0.188* (0.091)	0.201* (0.089)
Ad = Cyrillic, Slogan = Latin	-0.003 (0.065)	-0.039 (0.090)	0.052 (0.093)	-0.022 (0.090)
Ad = Cyrillic, Slogan = Cyrillic	0.366** (0.070)	0.395** (0.093)	0.354** (0.093)	0.348** (0.094)
Constant	2.768** (0.044)	2.634** (0.062)	3.137** (0.065)	2.534** (0.061)
N	1,832	1,832	1,832	1,832
R ²	0.020	0.014	0.009	0.011
Adjusted R ²	0.018	0.013	0.008	0.010

Note: Reference category is $Ad = Latin$, $Slogan = Latin$. Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

The results in Table A.13 align with our expectations. All four coefficients for $Ad = Cyrillic$, $Slogan = Latin$ are statistically insignificant, indicating that respondents recruited through the ad in Cyrillic who observed a politician employing Latin do not perceive the politician differently from those recruited through an ad in Latin and who observed a politician also using Latin. Regarding

respondents who were treated with a politician using Cyrillic, also as expected, we find that all eight coefficients are positive. Moreover, seven are statistically significant. Combined with the models reported in SI A.12, these results suggest that our findings are not driven by the recruitment strategy or by respondents' characteristics.

A.16 Hypothesis 2: Interactions with Political Knowledge, Interest in Politics, and Party Identification

Our results in SI A.14 indicate that interest in politics, political knowledge, and party identification are associated with our dependent variables. Given these results and that our sample is not representative of the Serbian population, one may wonder whether individuals with more (less) interest in politics or political knowledge may drive our findings. Moreover, it is also possible that those who are identified with SNS are more aware of the use of Cyrillic as a nationalist symbol. In this SI, we address this concern by presenting models in which we interact the treatment variable with variables for interest in politics, political knowledge, and party identification.⁴ Table A.14 and Figure A.13 display the results for the models in which our treatment is moderated by interest in politics.

Table A.14: Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Interest in Politics

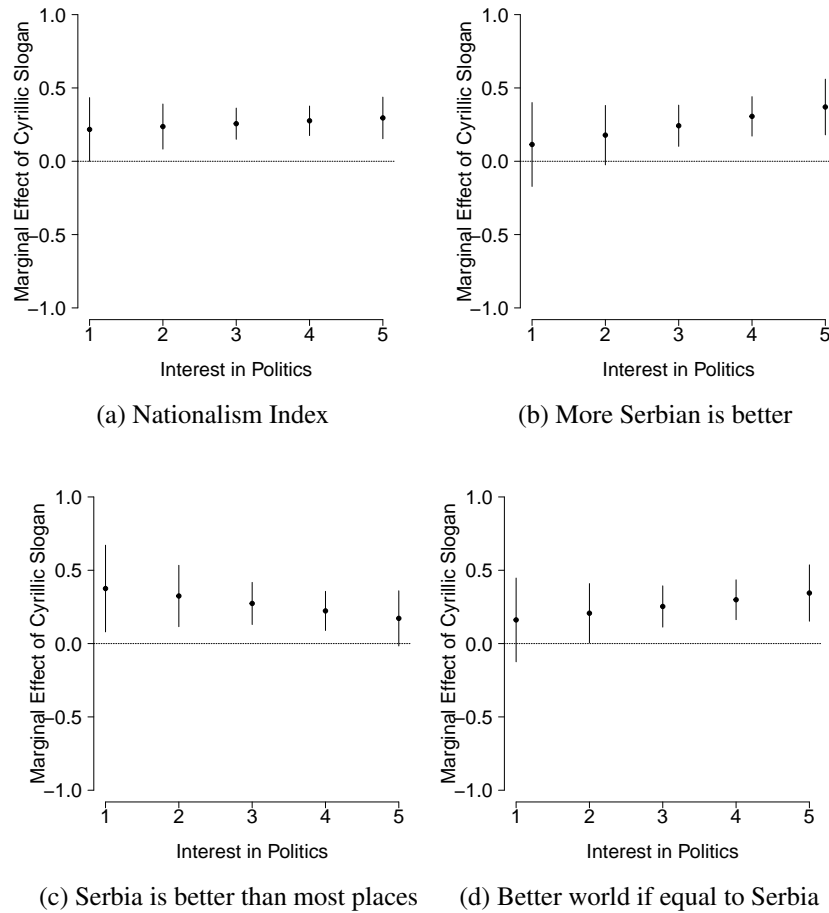
	Nationalism index (1)	More Serbian is better (2)	Serbia is better than most places (3)	Better World if Equal to Serbia (4)
Slogan = Cyrillic	0.197 (0.146)	0.050 (0.192)	0.426* (0.198)	0.115 (0.192)
Interest in Politics	0.058* (0.026)	0.061 (0.035)	0.045 (0.037)	0.066 (0.035)
Slogan = Cyrillic x Interest in Politics	0.020 (0.038)	0.064 (0.050)	-0.051 (0.051)	0.046 (0.051)
Constant	2.559** (0.099)	2.395** (0.134)	2.999** (0.141)	2.283** (0.134)
N	1,832	1,832	1,832	1,832
R ²	0.023	0.019	0.008	0.017
Adjusted R ²	0.022	0.017	0.007	0.016

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

The estimates in Table A.14 indicate that the coefficient for the interaction term is statistically insignificant in all four models, and the coefficient for our treatment also loses statistical significance. Although the coefficient for the treatment also loses statistical significance, the findings in Figure A.13 indicate that the treatment is still statistically significant at different values of interest in politics. Furthermore, we do not detect a statistical difference between the effect of our treatment among those barely interested in politics compared to those highly interested in politics.

⁴As in SI A.10, we combine the two variables on political knowledge into one variable.

Figure A.13: Marginal Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Interest in Politics



Note: 95% Confidence Intervals.

Moving to the analysis where political knowledge is the moderator, we observe in Table A.15 that, once more, the coefficient for the interaction is statistically insignificant. Nevertheless, the coefficient for the treatment is statistically significant in all four models. Once more, we use graphs to evaluate whether there is a difference in the effect of our treatment across different levels of political knowledge. Figure A.14 shows the results.

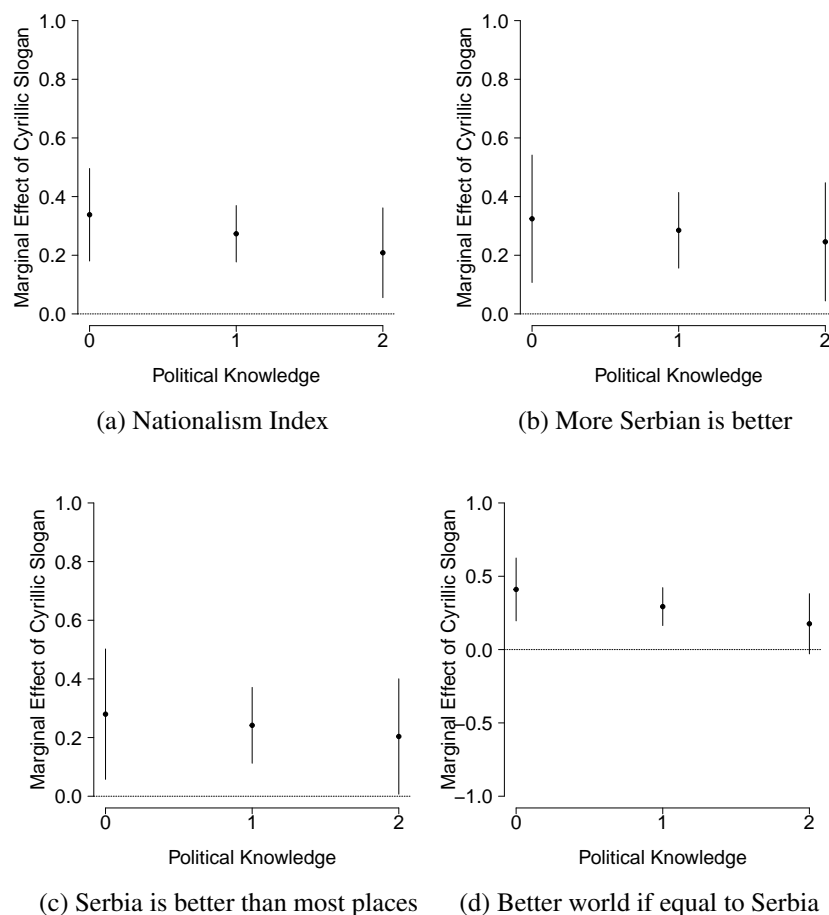
Table A.15: Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Political Knowledge

	Nationalism index (1)	More Serbian is better (2)	Serbia is better than most places (3)	Better World if Equal to Serbia (4)
Slogan = Cyrillic	0.338** (0.080)	0.324** (0.111)	0.280* (0.113)	0.410** (0.109)
Political Knowledge	0.096* (0.041)	0.078 (0.057)	0.127* (0.059)	0.083 (0.057)
Slogan = Cyrillic x Political Knowledge	−0.065 (0.062)	−0.039 (0.084)	−0.038 (0.084)	−0.117 (0.084)
Constant	2.664** (0.051)	2.531** (0.074)	3.027** (0.079)	2.434** (0.072)
N	1,832	1,832	1,832	1,832
R ²	0.019	0.011	0.011	0.011
Adjusted R ²	0.017	0.010	0.009	0.010

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

The results in Figure A.14 indicate that the treatment effect of Cyrillic is not moderated by political knowledge. In fact, except for one instance, the estimated effect is positive and statistically significant. Moreover, there is no difference in effect size between those who are highly knowledgeable and those who missed both political knowledge questions. In sum, these analyses demonstrate that neither interest in politics nor political knowledge drives the treatment effect.

Figure A.14: Marginal Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Political Knowledge



Note: 95% Confidence Intervals.

Table A.16 shows the results for the models in which party identification (SNS) is the moderator. The coefficient for the treatment is positive and statistically significant. In contrast, the coefficient for the interaction is positive in three of the four models but lacks statistical significance in all the cases.

Figure A.15 shows the treatment effect conditional upon the respondent's party identification. In three out of the four panels, we observe that the treatment effect seems to be larger for those who identify with SNS. In panel (c), we find the opposite. The effect appears to be smaller for those who identify themselves with SNS and the effect is null. Nevertheless, in all four panels, we

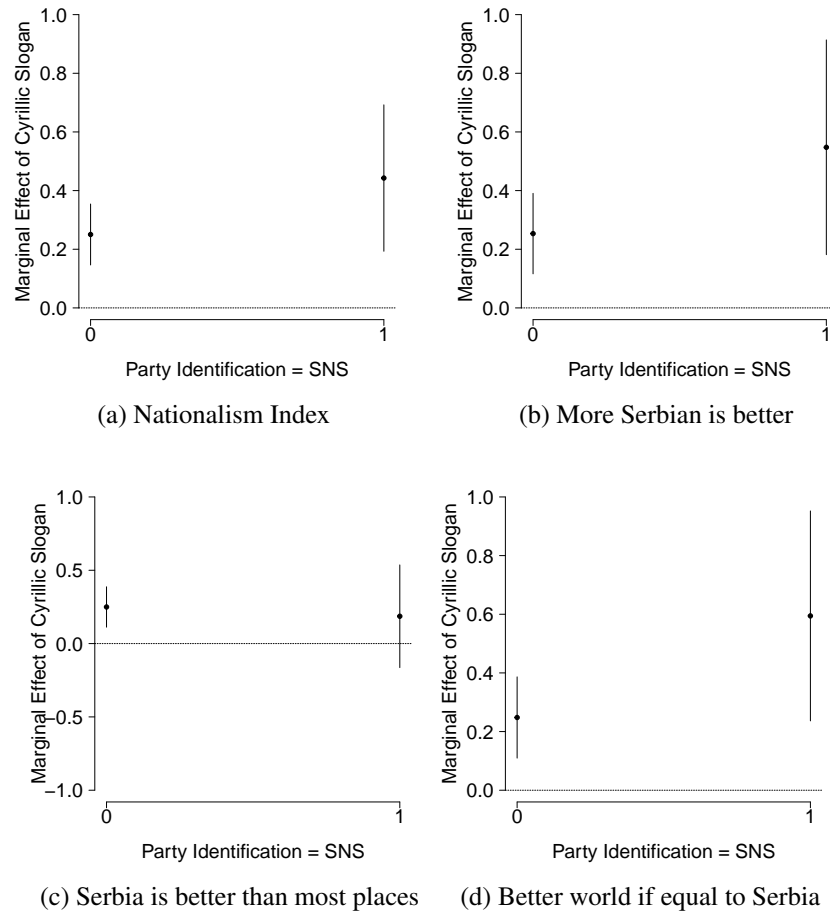
Table A.16: Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Party Identification = SNS

	Nationalism index (1)	More Serbian is better (2)	Serbia is better than most places (3)	Better world if equal to Serbia (4)
Slogan = Cyrillic	0.250** (0.053)	0.253** (0.070)	0.250** (0.070)	0.248** (0.071)
Party Identification = SNS	0.034 (0.084)	0.005 (0.130)	0.053 (0.134)	0.044 (0.122)
Slogan = Cyrillic x Party Identification = SNS	0.192 (0.138)	0.294 (0.199)	-0.063 (0.192)	0.346 (0.196)
Constant	2.763** (0.036)	2.614** (0.048)	3.157** (0.050)	2.518** (0.049)
N	1,832	1,832	1,832	1,832
R ²	0.018	0.012	0.008	0.014
Adjusted R ²	0.017	0.011	0.006	0.012

Note: Table's entries are estimates from linear regression models. HC2 Robust standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$.

have that the treatment effects for non-SNS supporters and SNS supporters are not different from each other. Therefore, we can conclude that our results are not driven by party identification.

Figure A.15: Marginal Effect of Alphabet on Respondents' Perceptions of Politicians Conditional upon Party Identification = SNS



Note: 95% Confidence Intervals.

B The Use of Different Alphabets by Politicians

B.1 Facebook Pages Included in the Analysis

Table B.1: Facebook Pages included in the Analysis

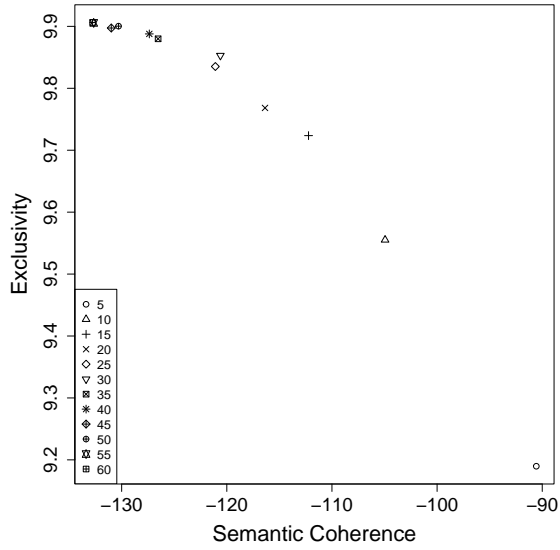
Page Name	FB User Name	Page Owner	Description
SDP SRBIJE	sdpsrbije	Social Democratic Party Of Serbia	Party in the National Assembly
Српски покрет обнове	sposrbija	Serbian Renewal Movement	Party in the National Assembly
Shaip Kamberi	sh.kamberi	Shaip Kamberi	Party Leader
Ненад Поповић - Nenad Popovic	nenadpopovic	Nenad Popovic	Minister and Party Leader
Demokratska stranka	demokrate	Democratic Party	Included in Crowdtangle's list of Serbian Politicians
Српска напредна странка	snsrbija	Serbian Progressive Party	Party in the National Assembly
Dragan Đilas	djilasdragan1	Dragan Dilas	Included in Crowdtangle's list of Serbian Politicians
Небојша Стефановић	nesa.stefanovic	Nebojsa Stefanovic	Minister
Siniša Mali	sinisa.malii	Sinisa Mali	Minister
Savez vojvođanskih Mađara - SVM	svmface	Alliance Of Vojvodina Hungarians	Party in the National Assembly
Александар Вучић	vucialeksandar	Aleksandar Vucic	President
Ne davimo Beograd	nedavimobeograd	Don't Let Belgrade D(r)own	Included in Crowdtangle's list of Serbian Politicians
Muamer Zukorlić	MuamerZukorlic	Muamer Zukorlic	National Assembly Vice President
Aleksandar Vučić	buducnostsrbiyevucic	Aleksandar Vucic	President
Српска народна партија	srpska.narodna.partija	Serbian People's Party	Party in the National Assembly
Dragan Marković Palma	DraganMarkovicPalma	Dragan Markovic Palma	Party Leader
Социјалистичка партија Србије - Socijalistička partija Srbije	socijalistiSPS	Socialist Party Of Serbia	Party in the National Assembly
Jadranka Joksimovic	JoksimovicJadranka	Jadranka Joksimovic	Minister
Др Владимир Орлић	dr.vladimir.orlic	Vladimir Orlic	National Assembly Vice President
Zeleni Srbije	ZeleniSrbije	Greens Of Serbia	Party in the National Assembly
Ivica Dačić	dacic.ivica	Ivica Dacic	National Assembly President
Pokret snaga Srbije BK	PokretSnagaSrbijeBK	Strength Of Serbia Movement	Party in the National Assembly
Aleksandar Šapić	acasapic	Aleksandar Sapic	Party Leader
Srpski patriotski savez - SPAS	SPAS.Srbija	Serbian Patriotic Alliance	Party in the National Assembly (at the time of data collection)
Branko Ružić	RuzicBranko	Branko Ruzic	Minister
Milija Miletić	mileticmilija	Milija Miletic	Party Leader
Savez za Srbiju - Савез за Србију	UdruzenaOpozicijaSrbije	United Opposition Of Serbia	Included in Crowdtangle's list of Serbian Politicians
Марија Обрадовић	marija.obradovicbgd	Marija Obradovic	Minister

B.2 Number of Topics

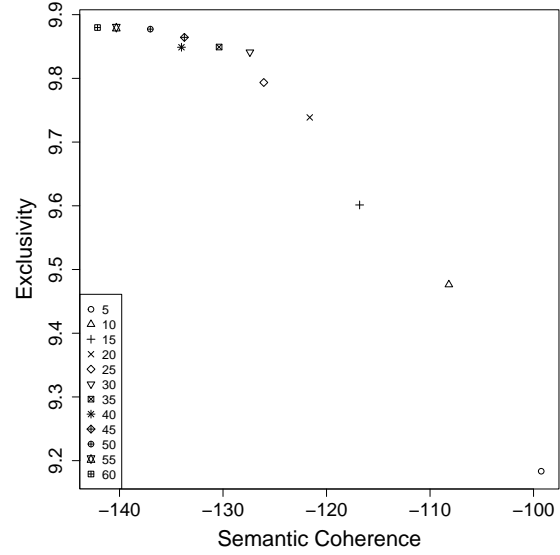
We select the number of topics that maximize both semantic coherence and exclusivity. For the analysis of the entire corpus, the maximum observed values for these statistics are 9.90 (exclusivity) and -93.00 (semantic coherence). Unfortunately, these two values are not achieved for the same number of topics. As a result, we select the number of topics that best approximate these values. To do so, we calculated the Euclidean distance between each point in panel (a) of Figure B.1 to a theoretical point in which both measures are at their observed maximum values (i.e., 9.90 and -93.00). Because exclusivity and semantic coherence are in different ranges (exclusivity varies from 9.25 to 9.90, and semantic coherence from -131.08 to -93.00), the simple application of the Euclidean distance would return the number of topics that maximizes semantic coherence (5 topics) but has the worst performance for exclusivity (9.18). To avoid this issue, we first rescaled and centered the two statistics using the function `scale()` in R. Specifically, this function centers the variable “by subtracting the column means (omitting NAs) of x from their corresponding columns” and rescales the variable “by dividing the (centered) columns of x by their standard deviations” (R Core Team, 2024, `scale()`). Note that this process does not alter the position of each point in the plots (see Figure B.2). Then, we compute the Euclidean distance. Finally, we select the number of topics with the smallest Euclidean distance. We use the same process to select the number of topics for the analysis of President Vučić’s pages.

Tables B.2 and B.3 display the rescaled values and Euclidean distance for two dimensions for both analyses. Tables show that 15 topics are the choice that produces the smallest Euclidean distance for the entire corpus, and 20 topics are the number of topics that produce the smallest Euclidean distance for President Vučić’s pages.

Figure B.1: Semantic Coherence and Exclusivity



(a) Entire Corpus



(b) Pres. Aleksandar Vučić's Pages

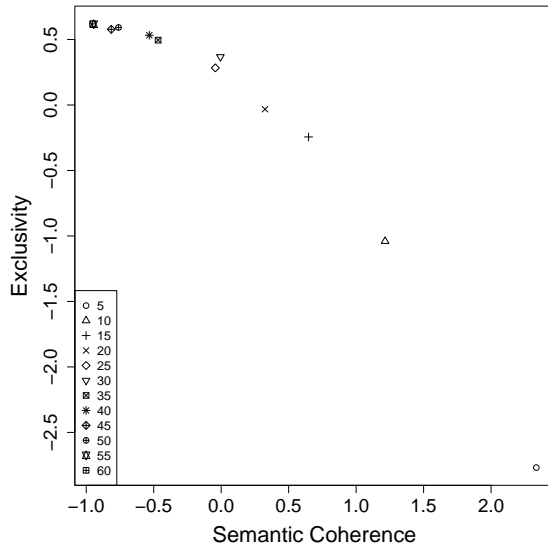
Table B.2: Number of Topics, (Rescaled and Centered) Semantic Coherence, (Rescaled and Centered) Exclusivity, Euclidian Distance — Entire Corpus

# of Topics	Exclusivity	Coherence	Euclidian Distance
5	-2.768	2.335	3.388
10	-1.040	1.215	2.003
15	-0.244	0.647	1.896
20	-0.032	0.325	2.114
25	0.284	-0.043	2.402
30	0.368	-0.006	2.355
35	0.495	-0.467	2.805
40	0.533	-0.533	2.869
45	0.578	-0.814	3.150
50	0.592	-0.761	3.096
55	0.617	-0.945	3.280
60	0.620	-0.953	3.288

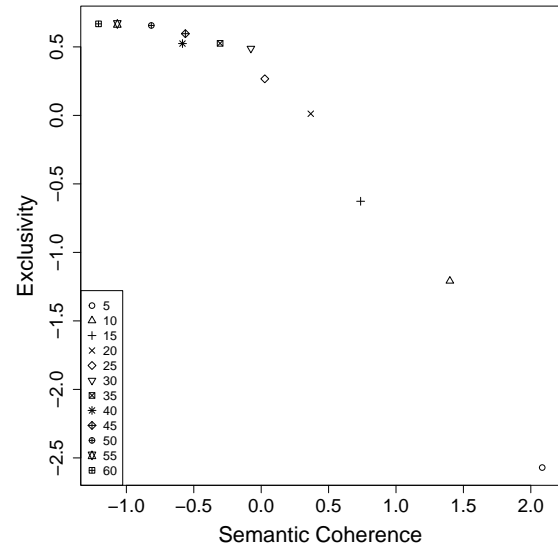
Table B.3: Number of Topics, (Rescaled and Centered) Semantic Coherence, (Rescaled and Centered) Exclusivity, Euclidian Distance — Pres. Aleksandar Vučić’s Pages

# of Topics	Exclusivity	Coherence	Euclidean Distance
5	-2.570	2.085	3.239
10	-1.208	1.400	1.998
15	-0.627	0.738	1.869
20	0.012	0.368	1.838
25	0.267	0.027	2.097
30	0.488	-0.076	2.168
35	0.526	-0.305	2.394
40	0.524	-0.584	2.672
45	0.596	-0.562	2.648
50	0.657	-0.815	2.900
55	0.667	-1.067	3.152
60	0.668	-1.207	3.291

Figure B.2: Semantic Coherence and Exclusivity — Recentered and Rescaled



(a) Entire Corpus



(b) Pres. Aleksandar Vučić’s Pages

B.3 Topics: Entire Corpus

Highest Prob refers to words with the highest probability of occurrence in a given topic. FREX refers to words that are frequent and exclusive to a given topic.

- Topic 1 (Media Appearance):
 - Highest Prob: president, serbia, guest, media, assembly, video, zoran
 - FREX: guest, video, zoran, tonight, march, interview, media
- Topic 2 (European Integration):
 - Highest Prob: european, integration, serbia, meeting, union, minister, jadranka
 - FREX: integration, european, jadranka, union, meeting, process, commission
- Topic 3 (Local Governments):
 - Highest Prob: government, assembly, vojvodina, local, parliamentary, group, parliament
 - FREX: vojvodina, parliamentary, pastor, government, group, local, assembly
- Topic 4 (Elections, Politics):
 - Highest Prob: serbia, party, citizens, democratic, political, elections, greens
 - FREX: democratic, greens, election, opposition, political, parties, aign
- Topic 5 (Belgrade):
 - Highest Prob: belgrade, city, citizens, new, public, let, initiative
 - FREX: belgrade, initiative, city, drown, water, let, vesia
- Topic 6 (Kosovo):
 - Highest Prob: kosovo, serbia, said, metohija, serbian, agreement, dialogue
 - FREX: kosovo, metohija, dialogue, pristina, agreement, office, montenegro
- Topic 7 (Opinions and General Talk):

- Highest Prob: can, people, one, show, want, dragan, see
- FREX: show, djilas, know, say, can, like, see
- Topic 8 (Serbia Heritage):
 - Highest Prob: people, day, serbian, world, years, today, great
 - FREX: day, world, orthodox, war, church, family, great
- Topic 9 (Education, Schools):
 - Highest Prob: novi, construction, sad, center, new, young, company
 - FREX: novi, sad, construction, center, company, works, young
- Topic 10 (Economy (Covid-19)):
 - Highest Prob: said, serbia, year, health, citizens, work, million
 - FREX: health, euros, measures, million, percent, mali, help
- Topic 11 (Government Affairs):
 - Highest Prob: minister, serbia, republic, prime, foreign, deputy, ivica
 - FREX: prime, ivica, republic, minister, foreign, daä, affairs
- Topic 12 (Environmental, Human, and Women's Rights):
 - Highest Prob: national, law, held, protection, women, environmental, education
 - FREX: women, protection, environmental, law, national, violence, held
- Topic 13 (International Cooperation):
 - Highest Prob: serbia, cooperation, countries, development, economic, relations, important
 - FREX: cooperation, countries, region, joksimoviä, relations, development, economic
- Topic 14 (Serbian Presidency):
 - Highest Prob: president, serbian, aleksandar, vuä, party, progressive, sns

- FREX: progressive, vuä, aleksandar, president, sns, board, vice
- Topic 15 (Police, Military):
 - Highest Prob: members, police, security, army, ministry, general, serbia
 - FREX: police, defense, army, security, interior, members, crime

We show below the two most representative posts for each topic.

- Topic 1 (Media Appearance):
 1. spo president vuk draskovic will be a guest of h television on monday march where he will speak about the th anniversary of the march demonstrations and the current political situation from p m
 2. announcement ds president zoran lutovac at the tribune of the alliance for serbia in rakovica
- Topic 2 (European Integration):
 1. brussels by working on reforms and engaging in the implementation of the brussels agreement serbia deserves to start accession negotiations with the european union in december reads the draft annual progress report that will soon be presented to members of the european parliament which tanjug exclusively had eu serbia conference to be held in december if conditions set by european council in june are met says draft report to be debated by meps at the end of the month
 2. minister for european integration jadranka joksimoviä talked with the head of the delegation of the european union to serbia sam fabrici and the ambassadors of the eu member states on the report of the european commission
- Topic 3 (Local Governments):
 1. heads of parliamentary groups in vojvodina expect consultations with vojvodina parliament speaker istvan pastor on pre draft statute to be held after easter holidays pastor gave parliamen- tary groups a maximum of days last week to complete talks on a new text of the statute legal position of vojvodina in recent months has been harmonized with the constitution

2. the reputation of the assembly of vojvodina has been restored in the last seven months and it has become a respectable institution again said the president of the provincial assembly istvan pastor the president of the assembly of vojvodina istvan pastor stated that the reputation of the provincial assembly has been restored
- Topic 4 (Elections, Politics):
 1. coalition socialist party of serbia united serbia on a walk with the citizens of sokobanja ivi- cadaä d iä draganmarkoviä palma sps js coalition elections domestic js
 2. the coalition partners of the ds in nis whose list is called election for a better life boris tadic are the sdg of serbia dhss and the greens of serbia
 - Topic 5 (Belgrade):
 1. for today a public tender is scheduled for the sale of the building of the city of belgrade in sazanova street in vracar which once served as the space of the association of the blind in this municipality the association of the blind and visually impaired that space and the initiative let s not drown belgrade demands that public goods be kept to serve the citizens of belgrade nedeljnik writes about that
 2. while the city authorities are cutting down trees and pouring our city into concrete the let s not drown initiative belgrade plans to plant several hundred seedlings together with citizens this fall with the support of milojevic from krusevac we are financing on a civic drive support our action with a donation and find out how to donate to
 - Topic 6 (Kosovo):
 1. the serbian list will not enter coalitions or reach any agreements regarding the formation of the kosovo government until pristina starts treating the serbian list equally which is the only legitimate representative of the serbian people in kosovo and metohija with of the votes said the assistant director of the office for kosovo and metohija petar petkoviä more on
 2. director of the office for kosovo and metohija marko ä uriä stated that it does not occur to serbia to accept the recognition of kosovo s independence and the imposition of pristina s membership

in the united nations and told the representatives of pristina s temporary institutions that they will return from washington without recognizing kosovo news news djuric serbia does not think to recognize the independence of kosovo

- Topic 7 (Opinions and General Talk):

1. they say that those who overcome their own vanity and no one and nothing can hurt them are good people the big question is whether the one who has no emotion is good or bad when he can t touch anything and is the same for everyone they don t hide their emotion but they work on themselves but for a machine that smiles at everyone and in fact doesn t care about anyone
2. there is no man you can ask me about and i have to kneel before or to whom i owe something if you have that name say it right away i will show that i am right without a doubt everyone will get their turn

- Topic 8 (Serbia Heritage):

1. tomorrow orthodox church celebrates the resurrection of the lord jesus christ to all orthodox christians let s happy feast of all orthodox christians regardless of differences in the calendar of easter the christian passover celebrated on the same day from the resurrection of christ to the present day of the week that was once on the first day of the week is counted as the eighth day sabbath was by then on the seventh day following the commandments of the old testament to six days for a seventh resting jewish people today saturday marks the seventh day christians as the day that christ was resurrected first day of the week that followed after saturday dedicated to the resurrection of christ and the kingdom of heaven that realm which was announced by st john the baptist empire which they aspired all the just from the beginning of the history of the empire which is the holy prince lazar placed over his earthly empire empire of christ s victory us death empire justice christian eighth day is the day that symbolizes the end of history overcoming time victory over injustice victory over death ratio the above troubles accidents diseases and ultimately triumph over evil russian people every day of the week so called voskresenijem and only one passover because it really is every week day when it serves the liturgy one small easter that day is a piece of the future kingdom of heaven which in the words of st john the

baptist is inevitable orthodoxy is not merely keeping petrified traditions of the distant past more orientation towards the future a future in which christ's truth and justice triumph at this time and history we have testimony occasional triumph of justice while the rest of the time in a constant battle with our serbian people together with the brotherly russian people still unmistakably was on the side of justice and truth but only thanks to its orthodox christian identity our calvary suffering throughout history have always ended passover resurrection we our faith and strength so do not draw much from our glorious past as much from the future may how in certain times it seemed that the situation beznadež on how hopeless the past reminds us of similar moments after which we went out as winners but the future is the one that gives us hope and faith in the ultimate triumph of our culture spirituality and civilization and it is not mere wishful thinking to the stark reality of reality that prophesied the great orthodox thinkers as dostoevsky bishop nikolaj and many others our future is our orthodox slavs because our identity is based on the gospel of christ in the only just and philanthropic learning all the orthodox christians a happy easter holidays are christ is risen

2. holy martyrs faith hope love and their mother sophia today the orthodox church celebrates the holy martyrs faith hope love and mother sophia may all orthodox christians have a happy holiday holy martyrs lived and suffered in rome in the second century during the reign of emperor hadrian in the time of hadrian in the roman empire christianity spread quite quickly but the persecution of christians was intense these four martyrs for the faith of christ did not want to obey the command of emperor hadrian to offer sacrifices to pagan idols and therefore the three names of holy martyrs were tortured and executed as a symbol of the three christian virtues preached by the apostle paul as the greatest christian virtues it is these virtues that make man human and are in fact the culmination of christian aspirations to realize himself as a man and a christian in the end sophia as wisdom that is the source of these three virtues and mother of three holy martyrs of human existence even these three virtues would not be known in the lives of these four martyrs or the virtues are literally embodied and therefore the whole christian world has respected and celebrated them with respect since the earliest times may all orthodox christians have a happy holiday

- Topic 9 (Education, Schools):

1. from to august the cultural center of novi sad kcns will organize the summer yez academy novi sad dortmund cultural center and this year candidates have applied to work at the academy who will be joined by ten musicians from dortmund karloviä and guitarist vanja kevreå an
2. my mother was a shepherdess until the age of she looked after sheep and during high school she finished high school she finished high school and all three of her children are university professors it s socialism

- Topic 10 (Economy/Covid-19):

1. serbia s budget in january had a surplus of billion instead of the planned deficit of billion so the result is billion dinars better than planned said finance minister sinisa mali mali who said that revenues were ten billion higher than planned and added that collection taxes are going better and economic activity is developing we expect better results and in february and march we create a reserve so we will have enough money in the account to pay the first aid package in the first half of the year without borrowing said mali mali emphasizing that he is proud of serbia s results in because it has the smallest drop in gdp and in europe he added that the budget for this year plans to increase salaries and increase pensions our economy is moving forward we have decided to additionally help our citizens with euros which will be one time for all adult citizens payments will be in may and in november and whoever applies for the first amount is automatically registered for the second explained mali and added that last year million citizens used the help of euros more on
2. in order to maintain the liquidity of the private sector the state has decided to extend the existing guarantee scheme has been established and the new guarantee scheme to support the most vulnerable enterprises minister of finance of the republic of serbia siniša mali reveals that the expansion of guarantee schemes entails two major changes that first changes to the previous period relates to the maximum value of loans that banks can market to guarantee the country which will be increased by million euros so that it will be a total of to billion euros another change regards the period of availability of these loans namely these credits will be available

until June was said Mali noted that according to latest records of the banks so far in the framework of the existing guarantee scheme approved by about billion loan it is greatly helped our businesses to provide liquidity at a time of uncertainty for pandemic corona virus also some of them helped and further investments to una before their business Mali said deo businessmen notice the possibilities of new soft loans understood as an opportunity that is given only to companies from affected sectors and Mali to deny extension of the existing guarantee scheme does not alter the conditions of eligibility so that all entrepreneurs of micro small and medium sized enterprises that fulfill the conditions law for establishing the guarantee scheme can apply for credits which are guaranteed state in accordance with the law on the other hand the republic of Serbia establishes and other guarantee scheme which is intended for all firms from vulnerable sectors as well as companies in other sectors with a decrease in operating income in excess of percent in maximum value of loans covered by another guarantee scheme amount to million euros said Mali loans covered by the existing guarantee scheme given with a repayment period of months includes the mandatory grace period of nine to months loans with another guarantee scheme to the period period up to months includes the mandatory grace period of to months we wanted in this way to provide additional support to especially vulnerable sectors in which this crisis is most affected and help them to provide the necessary liquidity stressed Mali more at

- Topic 11 (Government Affairs):

1. the first deputy prime minister and minister of foreign affairs of the republic of Serbia Ivica Dačić received in a farewell visit the ambassador of the republic of Finland to the republic of Serbia Pekko Orpan on the occasion of his resignation
2. first deputy prime minister of the government of Serbia and minister of foreign affairs Ivica Dačić received in a farewell visit the ambassador of the republic of Tunisia to the republic of Serbia Maâ el Hamlaoui

- Topic 12 (Environmental, Human, and Women's Rights):

1. at the session of the committee held on October the draft law on amendments to the law on prevention of violence and misconduct at sports events was considered draft law on amendments

to the law on detective activity draft law on amendments to the law on police on road traffic safety and the draft law on amendments to the law on fire protection

2. zeleni a abac held a press conference on the report on the removal of ionizing radiation sources from radioactive lightning rods compiled by the environmental inspection sector of the ministry of agriculture and environmental protection as well as on the national radon measurement program in serbia implemented by the ionizing radiation protection agency nuclear safety of serbia

- Topic 13 (International Cooperation):

1. meeting with the ambassador of the united arab emirates to serbia he al daher we discussed stronger cooperation between serbia and the uae in the field of innovation and technological development special emphasis will be placed on promoting the importance of innovation to achieve sustainable economic growth february has been declared the month of innovation in the united arab emirates
2. cooperation with the uae is of the greatest importance for serbia with crown prince sheikh mohammed bin zayed al nahyan on ways to strengthen cooperation in the field of trade and development economy as well as current regional and international issues of common interest

- Topic 14 (Serbian Presidency and SNS):

1. the vice president of the main board of the serbian progressive party marija obradoviä a member of the presidency of the sns aleksandar joviä iä and the commissioner of the municipal board of the sns palilula jelana mijatoviä socialized with pensioners in krnjaä d a and borä d a in a pleasant atmosphere
2. the vice president of the main board of the serbian progressive party of the sns marija obradoviä visited the municipal board of the sns in äcää d ak

- Topic 15 (Police, Military):

1. i am satisfied with the security situation on the territory of the kraljevo police department we have a reduction in the crime rate we do not commit serious crimes and we have good opera-

tional work of the police i am also satisfied with the increased seizure of narcotics by the police on the territory of this police department

2. we have introduced the electronic service of the ministry of the interior criminal records which enables the submission of requests for the issuance of certificates of non conviction via electronic forms on the egovernment portal without going to the ministry of the interior we have also enabled electronic payment of fees

B.4 Topics: Pres. Aleksandar Vučić

Highest Prob refers to words with the highest probability of occurrence in a given topic. FREX refers to words that are frequent and exclusive to a given topic.

- Topic 1 (President, (himself)):
 - Highest Prob: vuă, president, attended, serbia, aleksandar, national, show
 - FREX: attended, television, vuă, occasion, show, national, attending
- Topic 2 (Belgrade):
 - Highest Prob: belgrade, construction, works, highway, city, beautiful, built
 - FREX: highway, construction, works, city, section, project, railway
- Topic 3 (Kosovo):
 - Highest Prob: kosovo, metohija, serbia, dialogue, pristina, belgrade, state
 - FREX: metohija, kosovo, dialogue, pristina, interests, serious, international
- Topic 4 (Infrastructure):
 - Highest Prob: lot, tour, care, take, building, invest, roads
 - FREX: tour, family, take, lot, roads, building, money
- Topic 5 (China):
 - Highest Prob: china, people, serbia, republic, friendship, great, chinese

- FREX: china, friendship, chinese, friend, shown, sincere, strategic
- Topic 6 (Military):
 - Highest Prob: army, serbian, freedom, military, security, serbia, protect
 - FREX: army, freedom, military, police, protect, non, exercise
- Topic 7 (Serbian Heritage):
 - Highest Prob: great, serbia, country, one, world, today, proud
 - FREX: dear, one, like, just, best, great, everyone
- Topic 8 (Standard of Living):
 - Highest Prob: future, want, citizens, better, children, life, many
 - FREX: future, want, build, nostsrbiye, life, better, citizens
- Topic 9 (Covid-19):
 - Highest Prob: important, serbia, also, citizens, fight, first, meeting
 - FREX: vaccines, measures, tomorrow, problems, coronavirus, fight, important
- Topic 10 (Peace, No Conflict):
 - Highest Prob: serbian, people, peace, srpska, republika, church, serbia
 - FREX: srpska, republika, patriarch, serbian, irinej, church, peace
- Topic 11 (Russia):
 - Highest Prob: russian, minister, serbia, federation, ambassador, prime, president
 - FREX: russian, federation, putin, bocan, russia, minister, kharchenko
- Topic 12 (Institutional Visits):
 - Highest Prob: today, thank, happy, vuä, welcome, visited, village
 - FREX: village, welcome, happy, thank, today, education, tonight

- Topic 13 (International Cooperation):
 - Highest Prob: relations, cooperation, two, countries, visit, year, serbia
 - FREX: two, countries, relations, friendly, highest, next, year
- Topic 14 (Public Policy):
 - Highest Prob: people, work, can, important, health, country, job
 - FREX: job, thing, difficult, health, hospital, young, work
- Topic 15 (Development/Investments):
 - Highest Prob: serbia, development, help, especially, support, thefutureofserbia, buduä
 - FREX: development, buduä, thefutureofserbia, especially, help, investments, coming
- Topic 16 (Economy):
 - Highest Prob: new, serbia, factory, opening, company, novi, investors
 - FREX: factory, company, opening, new, investors, large, novi
- Topic 17 (Presidential Meetings):
 - Highest Prob: president, republic, serbia, vuä, aleksandar, met, presidency
 - FREX: republic, aleksandar, met, president, received, guest, vuä
- Topic 18 (Foreign Affairs):
 - Highest Prob: european, serbia, foreign, affairs, policy, france, delegation
 - FREX: european, foreign, france, affairs, delegation, macron, french
- Topic 19 (Festivities and Announcements):
 - Highest Prob: serbia, live, people, long, thank, always, must
 - FREX: long, live, love, never, without, must, always
- Topic 20 (Economy (International)):

- Highest Prob: economic, europe, world, balkans, region, western, growth
- FREX: growth, economic, director, europe, forum, balkans, committee

We show below the two most representative posts for each topic.

- Topic 1 (President, (himself)):

1. the president of the republic of serbia aleksandar vučić will be in the united states from september to where he will participate in the 75th session of the united nations general assembly
2. address by the president of the republic of serbia aleksandar vučić at the meeting of the 75th general assembly at the high level on the occasion of the 75th anniversary of the united nations

- Topic 2 (Belgrade):

1. today serbia is the largest construction site in europe marking the beginning of works on the section of the road new belgrade surčin in continuation of the highway e 63 miloš veliki
2. today i visited the works on the construction of the iverak lajkovac highway which will connect valjevo with the miloš veliki highway the whole area will come to life and people from valjevo will no longer move to belgrade

- Topic 3 (Kosovo):

1. the role of the united nations in kosovo and metohija is crucial for serbia with the special envoy of the un secretary general and the head of the un mission in kosovo and metohija zahir tanin
2. serbia is fully committed to dialogue in order to reach a compromise solution but pristina has blocked dialogue by introducing a tax on goods from serbia with bundestag mps johan vadeput florian hahn and hans joachim falenski

- Topic 4 (Infrastructure):

1. we take care of opovo as we take care of the entire south banat district tour of the health center health clinic opovo and parts of the built road opovo debeljaca

2. we have neglected different roads for decades but we have started to change it in previous years this is of great importance for us and i ask our turkish partners to do their job as soon as possible and to make people happy we want to change a lot when it comes to building a road network what is coming will change life in every village in this region tour of works on the construction of the road karajukiä a bunari rasno and on the reconstruction of the road novi pazar tutin
- Topic 5 (China):
 1. we owe a great deal of gratitude to you personally and to the people s republic of china for everything you have done for serbia with president xi Jinping
 2. although serbia is small in terms of space and population it is a great friend and reliable partner of china with the ambassador of the people s republic of china chen bo
 - Topic 6 (Military):
 1. the serbian army is stronger than it has ever been and will be even stronger i believe that the one who serves his country deserves to get its attention at the joint tactical exercise with combat shooting begej
 2. i am proud that we are part of a drastic and very strong strengthening of the serbian army the skies of serbia and our country are today incomparably more protected than before and completely free and will remain so
 - Topic 7 (Serbian Heritage):
 1. with a great deal of justified optimism i think that savski trg with the monument to the founder of our country stefan nemanja as the central part of the urban architectural ensemble will become probably the most beautiful public space in belgrade nemanja was the beginning for us all who come after us he is proof that history created us but also that we are able to create history and that good history history of peace history of knowledge history of growth like we never had in the name of that history we are here today in the name of that history and we discover the monument to stefan nemanja to the father the ancestor the creator and the saint and let him stand here illuminated and let everyone see him let them see serbia as we have made long live serbia

2. i hosted philip plaine one of the world s greatest fashion designers in the hope that he would come to serbia more often and that he would tie part of his future to our country forward serbia

- Topic 8 (Standard of Living):

1. that our children leave this airport only as tourists to return to their country and stay here forever
biljana stevanoviä mother of four children from äceä d ak came to kraljevo today with nikola miloå bogdan and boris to support the president and government for the birth rate program
biljana is a member of movement whose activities want to mobilize all actors of social and political life in order to become aware of the responsibility for the demographic structure of serbia in the future kraljevo
2. many will call our meeting in novi sad known for its spirit of tolerance revolutionary i think that the meeting is extremely important for our three countries for serbia the document is undoubtedly based on the implementation of four key freedoms that are internationally accepted we are doing this for the great benefit that our citizens will have because we are convinced that people in our countries deserve a better future and a higher standard of living they deserve an incomparably lower unemployment rate in many ways we work together if we remove barriers it means more work for our people and higher salaries for us it is crucial that we work in a concrete way and that we fight for the interests of our citizens this is essential for our essential progress i am convinced that our cooperation will i can be better and closer and that we will bring a lot of benefits to our citizens you can imagine that we have a single labor market competition is increasing it is easier to come to a solution edi rama novi sad serbia

- Topic 9 (Covid-19):

1. today we brought vaccines that is the first phase i think that is good news for the people in northern macedonia for our brothers i am happy that the citizens of northern macedonia can start immunization and that we were able to help our brothers and friends
2. serbia has enough medical equipment to fight the corona virus and we will procure more we are ready to help our brothers and friends who need that help at any time only together can we defeat the corona virus pandemic

- Topic 10 (Peace, No Conflict):

1. i am convinced that we will preserve peace for the serbian people wherever they live and that we will succeed in protecting the shrines that our people have managed to preserve for centuries with his holiness the serbian patriarch irinej
2. serbia is facing great political temptations at a time when the economy is strongest in the last years serbia is with its people in republika srpska and montenegro we need peace and time to further strengthen serbia with political representatives of serbs from the region

- Topic 11 (Russia):

1. with the deputy prime minister of the russian federation and the co chair of the intergovernmental committee for trade economic and scientific technical cooperation between the republic of serbia and the russian federation yuri borisov on cooperation in the field of energy industry and infrastructure
2. thanks to president putin for his support especially when it comes to preserving the territorial integrity and integrity of our country

- Topic 12 (Institutional Visits):

1. thank you very much for the magnificent welcome today of president vuä d iä in sokobanja sokobanja
2. thank you for everything you have done for krå³4ava president vuä d iä and the residents of the village of kråava

- Topic 13 (International Cooperation):

1. i believe that your visit to serbia is a confirmation of mutual interest in strengthening political dialogue at the highest level and i am sure that it will provide additional impetus to further improve all forms of cooperation between our two countries
2. relations between serbia and hungary are at the highest level in the common history they are based on mutual understanding and trust as a result of many years of cooperation with the prime minister of hungary viktor orban

- Topic 14 (Public Policy):

1. these wonderful people have been working in the red zone for a year now and they have a four year old child dedicated to their work nothing can stop them from helping those who need it the most bravo and thank you to these dedicated young people pandemic together to drink
2. the most important thing was to set the goals of the government and to meet a few more conditions so that we could measure the results of the work of the government at the end of to see who succeeded and who did not and then we can make additional changes if we gain people s trust and new energy some new government in

- Topic 15 (Development/Investments):

1. more than companies from india operate in serbia and there is interest from many others for investments in serbia especially in the field of agriculture it industry and tourism the abolition of visas for indian citizens has resulted in a significant increase in indian tourists in serbia vucic rs
2. i am proud and especially happy that i was able to visit this wonderful library and learn a lot from the helpful staff i am convinced that learning and knowledge is the key to success and the future of serbia and therefore i will help open and preserve libraries throughout serbia city library radoje domanoviä

- Topic 16 (Economy):

1. toyo tire is an investment of million euros which is the largest japanese investment so far in serbia this investment brings new technology a new approach and a great victory for serbia
2. germany is one of the most important economic partners of serbia as well as one of the largest investors in the serbian economy there are about companies with german capital in serbia employing about workers with german bundestag mps peter bayer and christian schmidt

- Topic 17 (Presidential Meetings):

1. the president of the republic of serbia aleksandar vuä d iä received letters of credence from the newly appointed ambassadors of the slovak republic fedor rosoh and the ambassador of the

islamic republic of iran rashid hassan pour and the ambassador of the republic of croatia hidayet biã ä d eviã

2. the president of the republic of serbia aleksandar vuã d iã received the ambassador of the republic of turkey tanju bilgic to the presidency of serbia

- Topic 18 (Foreign Affairs):

1. with the ambassadors of the quintet countries of the united kingdom of great britain france italy and germany and the head of the eu delegation i discussed the meeting held in berlin with the eu high representative for foreign affairs and security policy federica mogherini and the stalemate in dialogue with pristina
2. with the rapporteur of the european parliament for serbia vladimir bilã d ik and the chair of the delegation of the european parliament for relations with serbia tanja fajon on serbia s european path and concrete results

- Topic 19 (Festivities and Announcements):

1. we must never forget we will never forget gradina jasenovac jadovno drakuliã e motike å argovac no c no knife hammer bullet no tomb and no crime we have no right to that long live serbia
2. there will be no more storm against the serbian people we will never again allow anyone to kill srdjan and mrdjan and mladjen at any time serbia will ask serbia to forget its victims but in vain the people must not and will not be forgotten

- Topic 20 (Economy (International)):

1. serbia wants to become the regional center of the world economic forum for the fourth industrial revolution in order to enable technological and economic progress not only for itself but also for the entire western balkans with the president of the world economic forum berge brende
2. serbia will continue to be a constructive partner of the regional cooperation council because through the work of the council it wants to contribute to the strengthening of cooperation in the

region and its progress with the secretary general of the regional cooperation council majlinda bregu

B.5 Complete Results for the Entire Corpus

Note that the results in panel (a) of Figure 1 are from 15 different models (one for each topic). The tables below contain the estimated coefficients and standard errors.

Table B.4: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 1 to 5

	Topic 1 Appearances on Media	Topic 2 European Integration	Topic 3 Local Government	Topic 4 Elections, Politics	Topic 5 Belgrade
	(1)	(2)	(3)	(4)	(4)
Cyrillic	-0.026 (0.001)	0.000 (0.001)	-0.021 (0.001)	-0.040 (0.001)	-0.080 (0.001)
Legislative Election	0.007 (0.002)	-0.009 (0.002)	0.001 (0.002)	0.043 (0.003)	-0.011 (0.003)
Presidential Election	0.014 (0.003)	-0.002 (0.004)	-0.026 (0.004)	0.045 (0.005)	-0.014 (0.004)
Intercept	0.052 (0.002)	0.039 (0.003)	0.128 (0.004)	0.116 (0.004)	0.091 (0.004)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.5: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 6 to 10

	Topic 6 Kosovo	Topic 7 Opinions and General Talk	Topic 8 Serbian Heritage	Topic 9 Education, Schools	Topic 10 Economy (Covid-19)
	(6)	(7)	(8)	(9)	(10)
Cyrillic	0.041 (0.001)	-0.025 (0.001)	0.019 (0.002)	-0.004 (0.001)	0.002 (0.001)
Legislative Election	-0.013 (0.002)	0.014 (0.003)	-0.003 (0.003)	0.012 (0.002)	-0.003 (0.003)
Presidential Election	-0.001 (0.003)	0.013 (0.005)	0.008 (0.005)	-0.006 (0.004)	0.013 (0.005)
Intercept	0.017 (0.003)	0.113 (0.004)	0.074 (0.004)	0.041 (0.003)	0.091 (0.004)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.6: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 11 to 15

	Topic 11 Government Affairs	Topic 12 Environmental, Human, and Women's Rights	Topic 13 International Cooperation	Topic 14 Serbian Presidency	Topic 15 Police Military
	(11)	(12)	(13)	(14)	(15)
Cyrillic	0.064 (0.001)	-0.020 (0.001)	0.045 (0.001)	0.028 (0.001)	0.017 (0.001)
Legislative Election	-0.015 (0.003)	-0.013 (0.002)	-0.010 (0.003)	0.008 (0.002)	-0.010 (0.002)
Presidential Election	-0.020 (0.004)	-0.013 (0.003)	-0.016 (0.005)	0.015 (0.004)	-0.008 (0.002)
Intercept	0.023 (0.004)	0.068 (0.003)	0.030 (0.004)	0.082 (0.004)	0.034 (0.002)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

B.6 Complete Results for the Pres. Aleksandar Vučić's Pages

Note that the results in panel (b) of Figure 1 are from 20 different models (one for each topic). The tables below contain the estimated coefficients and standard errors. We removed the *Presidential Election* from

the models because there was no presidential election between 2019 and 2021.

Table B.7: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 1 to 5

	Topic 1 President (himself)	Topic 2 Belgrade	Topic 3 Kosovo	Topic 4 Infrastructure	Topic 5 China
	(1)	(2)	(3)	(4)	(5)
Cyrillic	-0.060 (0.005)	0.007 (0.006)	0.044 (0.007)	0.020 (0.004)	0.016 (0.005)
Legislative Election	-0.014 (0.011)	0.042 (0.015)	-0.021 (0.015)	0.009 (0.009)	0.002 (0.013)
Constant	0.059 (0.004)	0.041 (0.004)	0.041 (0.005)	0.034 (0.003)	0.036 (0.004)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	1937	1937	1937	1937	1937

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.8: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 6 to 10

	Topic 6 Military	Topic 7 Serbian Heritage	Topic 8 Standard of Living	Topic 9 Covid-19	Topic 10 Peace, No Conflict
	(6)	(7)	(8)	(9)	(10)
Cyrillic	0.020 (0.007)	0.003 (0.005)	0.014 (0.004)	0.013 (0.006)	0.013 (0.006)
Legislative Election	-0.008 (0.015)	0.010 (0.013)	0.007 (0.009)	-0.012 (0.015)	-0.019 (0.012)
Constant	0.036 (0.004)	0.053 (0.004)	0.043 (0.003)	0.021 (0.004)	0.032 (0.004)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	1937	1937	1937	1937	1937

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.9: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 11 to 15

	Topic 11 Russia	Topic 12 Institutional Visits	Topic 13 International Cooperation	Topic 14 Public Policy	Topic 15 Development Investments
	(11)	(12)	(13)	(14)	(15)
Cyrillic	0.028 (0.007)	-0.034 (0.003)	0.024 (0.006)	0.024 (0.007)	0.005 (0.004)
Legislative Election	-0.002 (0.016)	0.012 (0.007)	0.004 (0.012)	0.018 (0.016)	0.002 (0.009)
Constant	0.048 (0.005)	0.05 (0.002)	0.046 (0.004)	0.040 (0.004)	0.042 (0.003)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	1937	1937	1937	1937	1937

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.10: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 16 to 20

	Topic 16 Economy	Topic 17 Presidential Meetings	Topic 18 Foreign Affairs	Topic 19 Festivities and Announcements	Topic 20 Economy (International)
	(16)	(17)	(18)	(19)	(20)
Cyrillic	0.013 (0.005)	-0.192 (0.009)	0.003 (0.006)	0.025 (0.006)	0.013 (0.005)
Legislative Election	0.009 (0.011)	-0.023 (0.023)	-0.022 (0.014)	0.022 (0.013)	-0.016 (0.010)
Constant	0.046 (0.004)	0.185 (0.007)	0.058 (0.004)	0.043 (0.004)	0.043 (0.003)
FE by Year	Yes	Yes	Yes	Yes	Yes
N	1937	1937	1937	1937	1937

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

B.7 Additional Analysis

To further investigate how President Vučić uses Latin and Cyrillic, we analyze posts that have at least 50% of their content tied to a single topic. In total, we identified 487 posts (out of 1,937 posts) that satisfy such a condition. When considering all topics positively correlated with Cyrillic, we find that 62% of the posts with at least 50% of their content belonging to one of those topics were indeed in Cyrillic. Notable is President Vučić’s use of Cyrillic to address questions regarding Kosovo. Specifically, we observe that

24 out of 33 posts coded as Kosovo were in Cyrillic. As an example, President Vučić used Cyrillic to communicate that Serbia would quickly react to Kosovo’s decision to tax Serbian goods, showing that his government would do everything in its power to protect Serbian interests.⁵ Regarding the topics negatively correlated with Cyrillic, President Vučić made 244 posts that had at least half of their content related to himself or his agenda (no posts were mostly about institutional visits). Of these posts, only two were coded as Cyrillic posts (i.e., they had more than ten Cyrillic characters). These results, combined with President Vučić’s past as an ultranationalist and his government’s attempts to save the Cyrillic alphabet (Erar, 2018; Zivanovic, 2017), support the idea that there is a clear link between a politician using the Cyrillic alphabet and nationalist content.

Even though President Vučić has pages in both alphabets, he is more likely to use Cyrillic (66% of his posts). Similar behavior is common among other nationalist politicians: Ivica Dačić (current minister of foreign affairs), Marija Obradović (former minister of public administration and local self-government), Nebojša Stefanović (current deputy prime minister), and Nenad Popović (minister without portfolio) almost only use Cyrillic (95.84% of their posts, on average). Parties and individuals who oppose the nationalist ideals mostly use Latin. For example, the Democratic Party, the movement Don’t Let Belgrade D(r)own, and the Social Democratic Party of Serbia barely employ Cyrillic (1.68% of their posts, on average).

B.8 STM analysis using Two-Ways Fixed Effects For the Entire Corpus

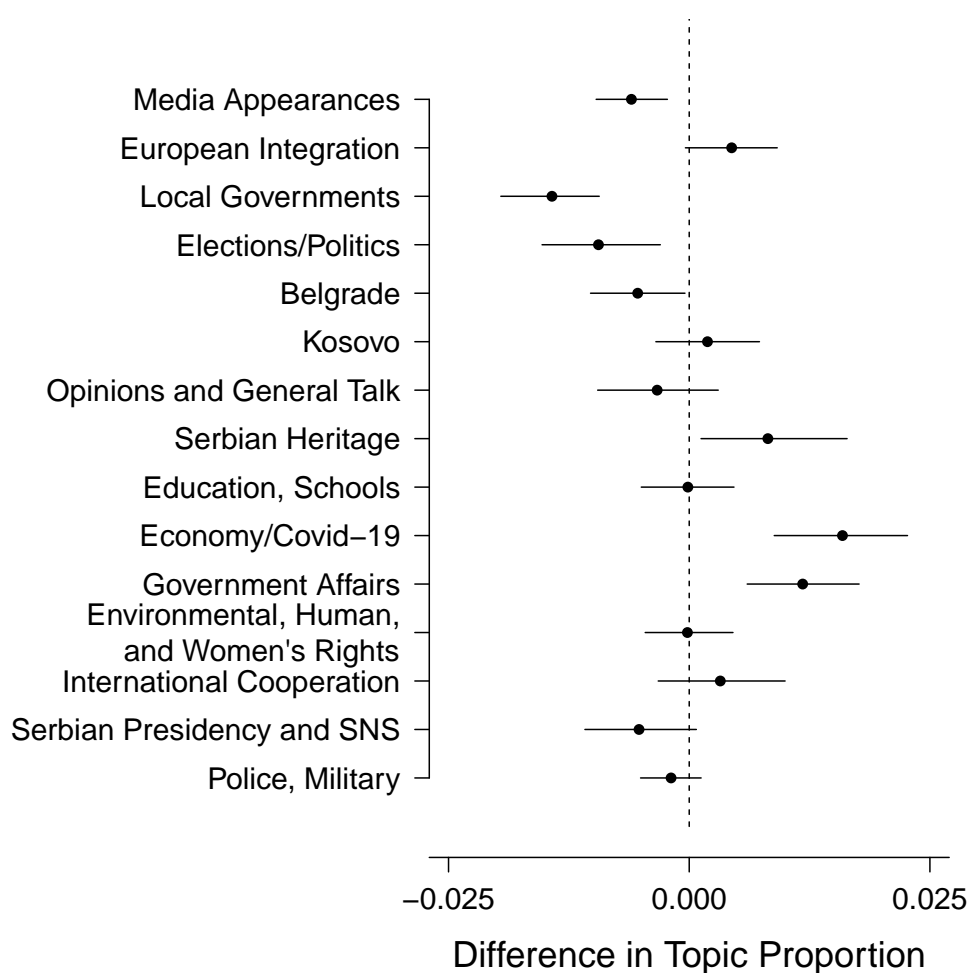
In this SI, we present the results for a STM in which we include fixed effects by Facebook page to account for time-invariant characteristics of pages and the fixed effects by year included in the main analysis. The first noticeable aspect of the model with TWFE is that the detected topics in this analysis are not different from the ones in the main analysis. In fact, a comparison between the top words in this analysis and the top words in the main analysis indicates that most of the top words in each topic are the same.

Figure B.3 shows the results for the model in which we evaluate whether Cyrillic is associated with each of the fifteen topics. A comparison between the TWFE model shown in Figure B.3 and the main model

⁵“Serbia will adopt measures in a relatively short period of time to respond to the non-fulfillment of obligations from the Brussels Agreement, the introduction of taxes and Pristina’s decision to end all dialogue with Belgrade - with the Undersecretary for Political Affairs at the United States Department of State, David Hale. <https://vucic.rs/>,” 03/08/2019. The post was accompanied by a picture of President Vučić with the Undersecretary for Political Affairs at the United States Department of State, David Hale.

for the entire corpus shows that the direction of the relationships remain consistent. There are two cases — Serbian Presidency and SNS and Police/Military — where the topics have a positive sign and are statistically significant in the main model. These topics now have a negative sign, but are not statistically significant in the TWFE model. As a result, most associations are similar in both models. These results increase our confidence that our findings are not a product of our modeling strategy.

Figure B.3: Difference in Topic Proportion with Cyrillic as a Predictor, Two-Way Fixed Effects Model



Note: Point estimates are the average differences in topic proportions varying *Cyrillic*. Positive values indicate that the topic proportion is larger when the text is in Cyrillic. 95% confidence intervals.

B.8.1 Complete Results for the Entire Corpus

The tables below contain the estimated coefficients and standard errors.

Table B.11: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 1 to 5

	Topic 1 Media Appearances	Topic 2 European Integration	Topic 3 Local Government	Topic 4 Elections, Politics	Topic 5 Belgrade
	(1)	(2)	(3)	(4)	(4)
Cyrillic	-0.006 (0.002)	0.004 (0.002)	-0.014 (0.003)	-0.009 (0.003)	-0.005 (0.003)
Legislative Election	0.006 (0.002)	-0.008 (0.002)	-0.004 (0.002)	0.046 (0.003)	-0.005 (0.002)
Presidential Election	0.015 (0.003)	0 (0.003)	-0.027 (0.003)	0.028 (0.004)	-0.01 (0.003)
Intercept	0.043 (0.004)	0.027 (0.004)	0.092 (0.005)	0.115 (0.006)	0.06 (0.005)
FE by Year	Yes	Yes	Yes	Yes	Yes
FE by Page	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.12: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 6 to 10

	Topic 6 Kosovo	Topic 7 Opinions and General Talk	Topic 8 Serbian Heritage	Topic 9 Education, Schools	Topic 10 Economy (Covid-19)
	(6)	(7)	(8)	(9)	(10)
Cyrillic	0.002 (0.003)	-0.003 (0.003)	0.008 (0.004)	0 (0.003)	0.016 (0.003)
Legislative Election	-0.013 (0.002)	0.011 (0.003)	-0.005 (0.003)	0.014 (0.002)	-0.003 (0.003)
Presidential Election	0 (0.003)	0.018 (0.005)	0.024 (0.005)	-0.008 (0.004)	0.012 (0.005)
Intercept	0.038 (0.005)	0.062 (0.006)	0.055 (0.007)	0.08 (0.006)	0.102 (0.007)
FE by Year	Yes	Yes	Yes	Yes	Yes
FE by Page	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

Table B.13: Estimated Association Between Document Meta-Data Variables and Topic Prevalence, Topics 11 to 15

	Topic 11 Government Affairs	Topic 12 Environmental, Human, and Women's Rights	Topic 13 International Cooperation	Topic 14 Serbian Presidency	Topic 15 Police Military
	(11)	(12)	(13)	(14)	(15)
Cyrillic	0.012 (0.003)	0 (0.002)	0.003 (0.003)	-0.005 (0.003)	-0.002 (0.002)
Legislative Election	-0.014 (0.002)	-0.011 (0.002)	-0.012 (0.003)	0.007 (0.002)	-0.009 (0.001)
Presidential Election	-0.017 (0.003)	-0.016 (0.003)	-0.006 (0.005)	-0.001 (0.004)	-0.012 (0.002)
Intercept	0.032 (0.005)	0.084 (0.005)	0.102 (0.006)	0.068 (0.005)	0.041 (0.003)
FE by Year	Yes	Yes	Yes	Yes	Yes
FE by Page	Yes	Yes	Yes	Yes	Yes
N	48806	48806	48806	48806	48806

Table entries are the estimated coefficients from linear models. Standard errors accounting for global uncertainty are in parentheses.

B.8.2 Topics: Two-Ways FEs Model

Highest Prob refers to words with the highest probability of occurrence in a given topic. FREX refers to words that are frequent and exclusive to a given topic.

- Topic 1 (Media Appearances):
 - Highest Prob: media, president, guest, video, zoran, march, program
 - FREX: video, zoran, media, tonight, march, interview
- Topic 2 (European Integration):
 - Highest Prob: european, integration, union, serbia, jadranka, meeting, minister
 - FREX: integration, european, jadranka, union, process, commission, delegation
- Topic 3 (Local Governments):
 - Highest Prob: government, assembly, vojvodina, parliamentary, local, parliament, group
 - FREX: vojvodina, parliamentary, pastor, government, local, group, assembly

- Topic 4 (Elections, Politics):
 - Highest Prob: serbia, party, democratic, citizens, elections, political, greens
 - FREX: democratic, greens, election, sps, aign, socialist, opposition
- Topic 5 (Belgrade):
 - Highest Prob: belgrade, city, citizens, public, new, let, initiative
 - FREX: city, water, belgrade, initiative, drown, let, vesiä
- Topic 6 (Kosovo):
 - Highest Prob: kosovo, said, serbia, metohija, serbian, agreement, dialogue
 - FREX: kosovo, metohija, pristina, dialogue, agreement, office, issue
- Topic 7 (Opinions and General Talk):
 - Highest Prob: can, people, one, show, want, everything, see
 - FREX: show, djilas, can, everything, say, know, like
- Topic 8 (Serbia Heritage):
 - Highest Prob: people, serbian, day, world, years, great, today
 - FREX: day, world, orthodox, great, war, church, history
- Topic 9 (Education, Schools):
 - Highest Prob: new, novi, construction, sad, center, young, company
 - FREX: sad, novi, construction, company, center, young, school
- Topic 10 (Economy (Covid-19)):
 - Highest Prob: said, serbia, year, citizens, health, million, work
 - FREX: health, euros, million, measures, percent, workers, year
- Topic 11 (Government Affairs):

- Highest Prob: minister, republic, serbia, prime, foreign, deputy, ivica
- FREX: prime, republic, foreign, ivica, minister, daä, affairs
- Topic 12 (Environmental, Human, and Women's Rights):
 - Highest Prob: national, law, held, protection, women, environmental, education
 - FREX: women, protection, environmental, national, law, violence, rights
- Topic 13 (International Cooperation):
 - Highest Prob: serbia, cooperation, countries, development, economic, relations, important
 - FREX: cooperation, countries, relations, region, joksimoviä, economic, development
- Topic 14 (Serbian Presidency):
 - Highest Prob: president, serbian, aleksandar, vuä, party, progressive, sns
 - FREX: vuä, aleksandar, progressive, president, sns, board, vice
- Topic 15 (Police, Military):
 - Highest Prob: police, members, security, army, fight, general, defense
 - FREX: police, defense, army, security, crime, interior, members

We show below the two most representative posts for each topic.

- Topic 1 (Appearances on Media):
 1. click on the photo sandå ak on october the holder of the list for bosniaks sandå ak and mufti dr jahja fehratoviä sent a letter to the president of the sda sandå ak sulejman ugljanin to the president of the sdp of serbia rasim ljajiä to the president of the sdp
 2. spo president vuk draskovic will be a guest of h television on monday march where he will speak about the th anniversary of the march demonstrations and the current political situation from p m
- Topic 2 (European Integration):

1. minister for european integration jadranka joksimoviä talked with the head of the delegation of the european union to serbia sam fabriçi and the ambassadors of the eu member states on the report of the european commission
 2. organized by the embassy of the slovak country holding the eu council presidency in kovacica a meeting was held today between the ambassadors of the eu member states the head of the eu delegation to serbia michael davenvenport and the minister for european integration jadranka joksimovic
- Topic 3 (Local Governments):
 1. the reputation of the assembly of vojvodina has been restored in the last seven months and it has become a respectable institution again said the president of the provincial assembly istvan pastor the president of the assembly of vojvodina istvan pastor stated that the reputation of the provincial assembly has been restored
 2. the group of members of the alliance of vojvodina hungarians in the municipal assembly of senta has been increased by two members said the president of that group marta rac sabo laszlo rac sabo the current president of the committee group remained lonely
 - Topic 4 (Elections, Politics):
 1. coalition socialist party of serbia united serbia on a walk with the citizens of sokobanja ivi-cadaä d iä draganmarkoviä palma sps js coalition elections domestic js
 2. greens of serbia call on all citizens to vote today for a better safer and greener serbia our choice is choice for a better life boris tadic
 - Topic 5 (Belgrade):
 1. while the city authorities are cutting down trees and pouring our city into concrete the let s not drown initiative belgrade plans to plant several hundred seedlings together with citizens this fall with the support of milojevic from krusevac we are financing on a civic drive support our action with a donation and find out how to donate to

2. for today a public tender is scheduled for the sale of the building of the city of belgrade in sazonova street in vracar which once served as the space of the association of the blind in this municipality the association of the blind and visually impaired that space and the initiative let s not drown belgrade demands that public goods be kept to serve the citizens of belgrade nedeljnik writes about that
- Topic 6 (Kosovo):
 1. the serbian list will not enter coalitions or reach any agreements regarding the formation of the kosovo government until pristina starts treating the serbian list equally which is the only legitimate representative of the serbian people in kosovo and metohija with of the votes said the assistant director of the office for kosovo and metohija petar petkoviä more on
 2. director of the office for kosovo and metohija marko ä uriä stated that it does not occur to serbia to accept the recognition of kosovo s independence and the imposition of pristina s membership in the united nations and told the representatives of pristina s temporary institutions that they will return from washington without recognizing kosovo news news djuric serbia does not think to recognize the independence of kosovo
 - Topic 7 (Opinions and General Talk):
 1. they say that those who overcome their own vanity and no one and nothing can hurt them are good people the big question is whether the one who has no emotion is good or bad when he can t touch anything and is the same for everyone they don t hide their emotion but they work on themselves but for a machine that smiles at everyone and in fact doesn t care about anyone
 2. i ve always been someone who is ready to talk to everyone but has a hard time negotiating unlike many who hug times and then argue and then get angry at everyone else who doesn t behave like that
 - Topic 8 (Serbia Heritage):
 1. tomorrow orthodox church celebrates the resurrection of the lord jesus christ to all orthodox christians let s happy feast of all orthodox christians regardless of differences in the calendar of

easter the christian passover celebrated on the same day from the resurrection of christ to the present day of the week that was once on the first day of the week is counted as the eighth day sabbath was by then on the seventh day following the commandments of the old testament to six days for a seventh resting jewish people today saturday marks the seventh day christians as the day that christ was resurrected first day of the week that followed after saturday dedicated to the resurrection of christ and the kingdom of heaven that realm which was announced by st john the baptist empire which they aspired all the just from the beginning of the history of the empire which is the holy prince lazar placed over his earthly empire empire of christ s victory us death empire justice christian eighth day is the day that symbolizes the end of history overcoming time victory over injustice victory over death ratio the above troubles accidents diseases and ultimately triumph over evil russian people every day of the week so called voskresenijem and only one passover because it really is every week day when it serves the liturgy one small easter that day is a piece of the future kingdom of heaven which in the words of st john the baptist is inevitable orthodoxy is not merely keeping petrified traditions of the distant past more orientation towards the future a future in which christ s truth and justice triumph at this time and history we have testimony occasional triumph of justice while the rest of the time in a constant battle with our serbian people together with the brotherly russian people still unmistakably was on the side of justice and truth but only thanks to its orthodox christian identity our calvary suffering throughout history have always ended passover resurrection we our faith and strength so do not draw much from our glorious past as much from the future ma how in certain times it seemed that the situation beznadež on how hopeless the past reminds us of similar moments after which we went out as winners but the future is the one that gives us hope and faith in the ultimate triumph of our culture spirituality and civilization and it is not mere wishful thinking to the stark reality of reality that prophesied the great orthodox thinkers as dostoevsky bishop nikolaj and many others our future is our orthodox slavs because our identity is based on the gospel of christ in the only just and philanthropic learning all the orthodox christians a happy easter holidays are christ is risen

2. holy martyrs faith hope love and their mother sophia today the orthodox church celebrates the holy martyrs faith hope love and mother sophia may all orthodox christians have a happy holi-

day holy martyrs lived and suffered in rome in the second century during the reign of emperor hadrian in the time of hadrian in the roman empire christianity spread quite quickly but the persecution of christians was intense these four martyrs for the faith of christ did not want to obey the command of emperor hadrian to offer sacrifices to pagan idols and therefore the three names of holy martyrs were tortured and executed as a symbol of the three christian virtues preached by the apostle paul as the greatest christian virtues it is these virtues that make man human and are in fact the culmination of christian aspirations to realize himself as a man and a christian in the end sophia as wisdom that is the source of these three virtues and mother of three holy martyrs of human existence even these three virtues would not be known in the lives of these four martyrs ov the virtues are literally embodied and therefore the whole christian world has respected and celebrated them with respect since the earliest times may all orthodox christians have a happy holiday

- Topic 9 (Education, Schools):

1. children are our future today the distribution of new year s packages for svrljig children started dear children i congratulate you on the upcoming christmas and new year holidays
2. as part of the celebration of children s week the students of the first grade of the elementary school dobrila stamboliä visited the municipality of svrljig today on that occasion the mayor in the presence of her associates presented the children with gifts from the municipality

- Topic 10 (Economy (Covid-19)):

1. serbia s budget in january had a surplus of billion instead of the planned deficit of billion so the result is billion dinars better than planned said finance minister sinisa mali mali who said that revenues were ten billion higher than planned and added that collection taxes are going better and economic activity is developing we expect better results and in february and march we create a reserve so we will have enough money in the account to pay the first aid package in the first half of the year without borrowing said mali mali emphasizing that he is proud of serbia s results in because it has the smallest drop in gdp and in europe he added that the budget for this year plans to increase salaries and increase pensions our economy is moving forward

we have decided to additionally help our citizens with euros which will be one time for all adult citizens payments will be in may and in november and whoever applies for the first amount is automatically registered for the second explained mali and added that last year million citizens used the help of euros more on

2. adopted budget for the budget is aimed at raising the living standard of citizens but it is also developmental because billion dinars or percent of gdp will be allocated for capital investments the budget constructed next year should enable economic growth of six percent

- Topic 11 (Government Affairs):

1. first deputy prime minister of serbia and minister of foreign affairs ivica daä d iä talked with deputy minister of foreign affairs of the republic of kazakhstan alexei volkov
2. first deputy prime minister of the government of serbia and minister of foreign affairs ivica daä d iä received in a farewell visit the ambassador of the republic of tunisia to the republic of serbia maå id hamlaui

- Topic 12 (Environmental, Human, and Women's Rights):

1. state secretary of the ministry of environmental protection ivan kariä participated in the work of the international conference on oceans blue economy which was held from to september in lisbon portugal
2. zeleni å abac held a press conference on the report on the removal of ionizing radiation sources from radioactive lightning rods compiled by the environmental inspection sector of the ministry of agriculture and environmental protection as well as on the national radon measurement program in serbia implemented by the ionizing radiation protection agency nuclear safety of serbia

- Topic 13 (International Cooperation):

1. meeting with the ambassador of the united arab emirates to serbia he al daherî we discussed stronger cooperation between serbia and the uae in the field of innovation and technological development special emphasis will be placed on promoting the importance of innovation to

achieve sustainable economic growth february has been declared the month of innovation in the united arab emirates

2. cooperation with the uae is of the greatest importance for serbia with crown prince sheikh mohammed bin zayed al nahyan on ways to strengthen cooperation in the field of trade and development economy as well as current regional and international issues of common interest

- Topic 14 (Serbian Presidency):

1. the vice president of the main board of the serbian progressive party marija obradoviä a member of the presidency of the sns aleksandar joviä iä and the commissioner of the municipal board of the sns palilula jelana mijatoviä socialized with pensioners in krnjaä d a and borä d a in a pleasant atmosphere
2. the vice president of the main board of the serbian progressive party of the sns marija obradoviä visited the municipal board of the sns in äæää d ak

- Topic 15 (Police, Military):

1. i am satisfied with the security situation on the territory of the kraljevo police department we have a reduction in the crime rate we do not commit serious crimes and we have good operational work of the police i am also satisfied with the increased seizure of narcotics by the police on the territory of this police department
2. thanks to the members of the internal control sector for their dedicated work in the sector filed criminal charges against a total of persons of which were police officers and other employees of the ministry of the interior

C Ethics

1. Consent: This survey was approved by the university Institutional Review Board. Respondents agreed to participate in the survey before beginning it and could end participation at any time.
2. Deception: There was no deception in this survey.

3. Confidentiality: There was no way to identify respondents with their survey responses.
4. Harm and impact: The survey did not ask questions that were sensitive in nature or have the potential to cause harm.
5. Compensation: We distributed eight gift cards valued at RSD 5,000.00 (\approx \$50.00) each. These gift cards were sent to randomly selected respondents who chose to enter their e-mail address using a link at the end of the survey (thereby anonymizing survey responses and e-mail addresses). At an estimated completion time of 5 minutes, the expected compensation for each participant works out to more than double the minimum wage in Serbia.
6. Data availability: Replication code is available for all analyses in the article. Crowdtangle restricts the use of its data to individuals who have an academic contract with them. We provide raw data for the experimental results and instructions for how to obtain the raw data in order to run the replication code for the results that use Crowdtangle.

D Pre-Analysis Plan and Survey Questions

This analysis was conducted in accordance with our Pre-Analysis Plan for Hypothesis 1 and 2; Hypothesis 3 is analyzed elsewhere. We pre-registered the survey and analysis on EGAP. We note one change to our study design: we initially planned to randomize the alphabet that the politicians' slogan was rendered in, but we felt that the earlier alphabet randomization would result in respondents being confused about whether the randomized alphabet in the slogan was meant to represent the politician or if it was just another computer randomization. The full pre-analysis plan follows.

Introduction

While most people living in a country will never meet one another, they have a common national identity. This identity manifests through a series of shared experiences, signs, and symbols that are thought to represent the nation. Perhaps nowhere is this better illustrated than during the Parade of Nations at the Olympics, where nations display their flag, sing their national anthem in their national language, and often wear culturally significant dress. Many national symbols gain their prominence as a result of thousands

of years of historical connection to a particular nation. However, not all longstanding symbols are salient. Political elites play an important role in identifying, formalizing, and giving meaning to national symbols. Do individuals take political elites' lead and increase nationalism when exposed to national symbols?

Perhaps no national symbol is more frequently used than is language. While a national anthem, slogan, or bird are all important symbols, most people in a nation are not exposed to them every day (e.g., Becker et al., 2012; Butz, Plant, and Doerr, 2007; Ehrlinger et al., 2011; Kalmoe and Gross, 2016). Language serves as a persistent reminder of who has adopted the national identity in the 178 countries that have one or more national languages (Carli et al., 2003; Laitin, 1992; Wright, 2016). Previous work has studied language use as a symbol of national identity (Citrin, Reingold, and Walters, 1990; Reingold, 1996). Exposure to a foreign language tends to increase nationalism (Enos, 2014; Flores and Coppock, 2018) and to reduce support for more inclusive immigration policies (Darr et al., 2020; Hopkins, 2014). Other work focuses on bilingual individuals who speak both the language of the national majority and a minority language, finding that language signals group consciousness (Kerevel, 2011). When asked to speak in the minority language, bilingual individuals are more likely to evaluate policies through an ethnic lens (Perez and Tavits, 2019a).

Yet, these studies conflate understanding the meaning of language with the use of language as a national symbol. When someone hears an unfamiliar language, they react both to the fact that an unfamiliar language is being spoken and to the fact that they do not comprehend what the person speaking is saying (Newman, Hartman, and Taber, 2012). Similarly, by virtue of being able to communicate in multiple languages, bilingual individuals demonstrate the ability to understand and use both languages in their cultural contexts (Danziger and Ward, 2010; Harzing, 2005; Lamy, 1979; Wright and Bougie, 2007). The ways in which language functions as a national symbol are wrapped up in the process of learning a new language.

We isolate the effect of what we call language-based nationalist symbols from the ability to understand language and the differential cultural connotations that bilingualism often implies. In this setting, the impact of language on nationalism is reduced to the symbols of language itself (i.e., the alphabet used to write the language, the font used, or the way in which words are pronounced) (Peled and Bonotti, 2019). These symbols can be employed intentionally: political elites can choose to associate them with nationalist identity. We argue that language-based nationalist symbols work to increase nationalism. Further, we argue that the power of language-based nationalist symbols extends to how individuals view politicians, with individuals viewing politicians using said symbols as more nationalist than those who do not.

The gender of the politician also contributes to how nationalism is evaluated. Women are typically more liberal than men and tend to vote for more left parties (Harteveld et al., 2019). When female politicians run for office, individuals tend to infer from their gender that they are more likely than not to be more liberal compared to a male politician (Schneider and Bos, 2019). This effect is particularly pronounced when gender stereotypes intersect with partisan identity; individuals can reliably infer female candidates' partisanship based only on their gender (Bauer, 2020; Ondercin and Fulton, 2020; Thomsen, 2020). However, gender and partisanship need not align. Individuals responses to these gender inconsistent stereotypes are substantially less clear. Some prior work has shown that women from right-wing parties can successfully employ gender-bending stereotypes to garner voter support (Schneider, 2014). Yet, women who deviate from gender-based expectations are more frequently punished (Cassese and Holman, 2018; see also Ono and Yamada, 2020).

The women violating gender-based partisan stereotypes in previous work are almost exclusively women belonging to conservative parties, not women belonging to or supporting far-right populism or nationalism. Mudde and Kaltwasser (2015) note that there is a relative dearth of scholarship that considers women politicians espousing far-right populist or nationalist views. Part of the reason for this is that conventional wisdom assumes that nationalism and far-right populism are supported and run exclusively by men (Rashkova and Zankina, 2017). Beyond prominent examples like Marine Le Pen in France, the image of women eschewing nationalism does not match the real base of support that nationalism and nationalist parties have from women in many countries (de Lange and Mugge, 2015; Snipes and Mudde, 2020). This means that it is all the more critical to understand how individuals view female politicians espousing far-right populist or nationalist views. We argue that individuals evaluate a politician's nationalism primarily based on nationalist cues, but adjust their perceptions on account of the politician's gender. That is, individuals respond to nationalist cues by evaluating both male and female politicians as more nationalist, but they evaluate female politicians as significantly less nationalist than their male counterparts.

We test our expectations using survey experiments in Serbia for two main reasons. First, Serbia has a large and active far-right nationalist political movement that actively uses nationalist symbols, meaning that Serbians are frequently exposed to such rhetoric. Second, Serbian is digraphic, meaning that it is fully mutually intelligible in two alphabets: Latin and Cyrillic, with Cyrillic as the alphabet associated with nationalism. We experimentally manipulate the alphabet (Latin or Cyrillic) with which survey text is written in order to determine whether the association between Cyrillic and nationalism in fact cues nationalist sen-

timent. We then develop an experiment about a prospective political candidate, altering the candidate's gender and the alphabet the candidate uses to describe his/her platform. Here we examine whether the candidate's gender moderates the relationship between the use of Cyrillic and respondents' evaluations of the candidate's nationalist sentiments. Our findings will speak to the symbolic nature of language alone, absent issues understanding language or special cultural connections, and determine whether language-based cues are enough to influence public opinion and if politicians can effectively use these cues to signal nationalist sympathies to the public.

Theory

We define language-based nationalist symbols as those that elites use to remind people about nationalism. Examples of these symbols include phrases, accents, or alphabets that can be connected with national identity. When national and ethnic identity align, these symbols often, but do not always, remind people about both national and ethnic identity. We argue that elites adopt and repeat these symbols in such a way that they become ingrained in people's discourse, providing a persistent symbol of nationalism.

Much previous literature has focused on how political elites select and deploy nationalist symbols (e.g., Laitin, 1988; Fox, 2018; Laitin and Eastman, 1989). While political elites are largely responsible for creating nationalist symbols, individuals do not immediately adopt all symbols articulated by political elites (Brubaker et al., 2006). We argue that the process by which individuals assign relevance to language-based nationalist symbols follows what Fox and Miller-Idriss (2008) call "everyday nationalism." Everyday nationalism can be broken down into two parts (Jones and Merriman, 2009). First, a symbol needs to be pervasive, ordinary, and banal (Billig, 1995). But along with its ordinary nature, the symbol simultaneously needs to hold some salience or "heat" that individuals reproduce each time they employ it (Fox, 2018).

That language-based nationalist symbols are banal is straightforward. Language is a necessary component of functioning within society. People need to express themselves in order to productively interact with others and to have their basic needs met. Language expresses emotion (Lindquist et al., 2006), conveys cultural meaning and community ties (Johnson, Stein, and Wrinkle, 2003), and facilitates economic exchange (Gal, 1989). Indeed, human development is inextricably intertwined with our ability to use language to communicate (Christiansen and Kirby, 2003).

Symbols gain salience through “supply-side market policies” (2, 5). That is, elites put forth a wide range of language-based nationalist symbols. Each individual takes some of these elite cues and adopts them in their own language use. Effective communication relies on shared understanding of the meaning and symbols behind language. When two people communicate with each other, they may find that they are using different language-based symbols (Fox and Miller-Idriss, 2008). In these cases, explanation of the symbols is required in order for both parties to understand the meaning behind the language used. As this process is repeated, some symbols rise in prominence, whereas others fade (Perez and Tavits, 2019). Those symbols that rise in prominence gain a shared meaning resulting from the ways in which the symbol is used and explained to others. Such symbols become ingrained in individuals’ collective memories (Ariely, 2019).

That the explanation for these language-based symbols relates to nationalism only heightens their salience (Edensor and Sumartojo, 2018). Individuals possess a natural sense of national identity, and national identity is a clear way to delineate in and outgroup membership (Huntington, 2004; Triandafyllidou, 1998). Thus, while any language-based symbol can gain salience, political elites have incentives to promote and individuals to adopt language-based nationalist symbols.

After a language-based nationalist symbol obtains meaning and is placed into collective memory, how do people respond to exposure to this symbol? The process depends on people’s baseline levels of nationalism. For individuals who are more nationalist, exposure to nationalist symbols activates the collective memory and the meaning associated with the symbol (Ariely, 2019; Butz, 2009). Repetition breeds familiarity and comfort, meaning that stronger nationalists exposed to anti-nationalist symbols will find these symbols unfamiliar (Condra and Linardi, 2019; Sambanis and Shayo, 2013) and, therefore, anxiety inducing (Pettigrew et al., 2008; Shamo-Nir and Razpurker-Apfeld, 2020). In the face of anxiety, individuals’ threat levels increase (Riek, Mania, and Gaertner, 2006; Van Zomeren, Fischer, and Spears, 2007). As a result, individuals seek to find a way to uphold a positive self-image of themselves and their ingroup (Tajfel and Turner, 1986; Bourhis and Giles, 1977), reinforcing their ingroup favoritism and pride by identifying even more strongly with their ingroup (Jones, 2001; Perez, 2016). Hence, when strong nationalists are exposed to anti-nationalist symbols, they will increase their levels of nationalism (see also Noels, 2014).

We argue that the same process works in the same way for anti-nationalists — individuals who express opposition to nationalism and do not identify as nationalists. As such, less nationalist individuals will find nationalist symbols unfamiliar and ingroup threatening, resulting in them further decreasing their levels of

nationalism.

Hypothesis 1 *Anti-nationalist symbols will increase nationalism among nationalist individuals.*

Not all political elites choose to use language-based nationalist symbols. Political elites have incentives to employ such rhetoric when they believe that they will politically benefit. Thus, use of language-based nationalist symbols is a strategic choice (Polese et al., 2020; Ricks, 2020). The most straightforward reason why political elites would strategically employ nationalist symbols is to signal that they support nationalism (Hu, 2020). Individuals are receptive to these kinds of elite cues, as they provide an informational shortcut about politicians' attitudes and policy priorities (Adida, 2015; Adida, Davenport, and McClendon, 2016; Moehler and Conroy-Krutz, 2016). This means that individuals associate politicians who choose to use language-based nationalist symbols with higher levels of nationalism (see also Ash et al., 2020).

Hypothesis 2 *Politicians using language-based nationalist symbols are perceived as more nationalist than politicians who do not.*

A robust prior literature has shown that voters use politician gender as an informational cue to determine ideology (Koch, 2000, 2002). These cues mostly inform about female politicians, who are seen as more liberal compared to men (McDermott, 1997). Extending this work to consider nationalist views, we expect that female politicians will be viewed as less nationalist than their male counterparts. That is, it is even more unexpected that female politicians — who we know are more liberal than male politicians — will be fervent nationalists, so female politicians will be evaluated as less nationalist than their male counterparts (Alvarez-Benjumea, 2020; Lloren and Rosset, 2017; Spierings and Zaslove, 2017).

We are interested in how individuals respond to intersecting gender and nationalist cues. There are two main possibilities: either gender identity dominates, such that female politicians are consistently seen as less nationalist than male politicians regardless of their use of nationalist cues, or nationalist identity dominates, such that politicians using nationalist cues are consistently seen as more nationalist than politicians using anti-nationalist cues (Bauer, 2018).⁶ We argue that individuals primarily make decisions about whether to support or oppose a politician based on nationalism, not gender. This is in line with work that argues

⁶Some female politicians may try to establish a nationalist reputation. This is particularly difficult because of the assumption that female politicians are more liberal than men (Rashkova and Zankina, 2017), but those female politicians who are successful are likely to gain prominence because of their relative rarity.

that people care more about partisan cues than gender (Bauer, 2019; Dolan, 2014; Dolan and Lynch, 2014; Hayes, 2011; King and Matland, 2003). While nationalist cues are not fully informative about partisan membership, nationalist cues do indicate more extreme ideological positions than do traditional partisan cues. Thus, on balance, the uncertainty of a nationalist cue is outweighed by the extreme ideological position that it signals, meaning that these cues should be just as powerful as if individuals learned about politicians' political party membership (Snipes and Mudde, 2020). As such, we expect that people will use nationalist cues to identify politicians' levels of nationalism and then take into account gender by reducing female politicians' nationalism levels relative to male politicians who use the same nationalist cues (e.g., Sanbonmatsu and Dolan, 2009). In other words, nationalist cues help individuals make primary assessments about politicians' nationalism, whereas gender cues help them adjust these assessments (Bauer, 2015).

Hypothesis 3 *Female politicians who use nationalist symbols will be evaluated as more nationalist than either male or female politicians who use anti-nationalist symbols, but less nationalistic than male politicians who use nationalist symbols.*

The Survey

We propose a survey experiment to test our hypotheses in which we recruit Serbian respondents on Facebook. Specifically, we run ads on Facebook to invite users to respond to a short survey for a chance of winning a gift card. We leverage the fact that Serbia can be written in two alphabets and run ads in both Cyrillic and Latin, where Cyrillic use is associated with nationalist attitudes (Ivkovic, 2013; Jovanovic, 2018). The alphabet of the ad corresponds to the initial alphabet used in the beginning of the survey.

The first bloc of questions collects demographic information about each respondent. Next, we ask a few questions about using Cyrillic and Latin alphabets at home and work and if respondents speak, read, or write any language other than Serbian. In the same section, we include our pre-treatment nationalism question. We ask respondents to use a 5-point scale (Strongly Disagree to Strongly Agree) to say how much they agree with the statement, "It is important to preserve the Cyrillic alphabet because it is essential for the Serbian nation" (see, for example, Greenberg, 2008).

In the experimental section, we randomly divide respondents into treatment and control groups. Respondents in the treatment group continue the survey in Latin, whereas respondents in the control group continue

the survey in Cyrillic. We inform respondents that the change will occur and that a computer algorithm is responsible for the decision.⁷ Shortly after the treatment assignment, we measure respondents' political knowledge. Then, we ask our post-nationalism question (used to test H1 and H2). For this question, respondents use a 5-point scale (Strongly Disagree to Strongly Agree) to say how much they agree or disagree with the following three statements:

- 1 The world would be a better place if people from other countries were more like Serbians.
- 2 Generally speaking, Serbia is no better than most other countries.
- 3 Generally, the more influence Serbia has on other nations, the better off they are.⁸

We take the average of these three items as our dependent variable.⁹ In the same section, respondents use the same scale to state their agreement with a statement on authoritarianism ("What our country needs most is discipline, with everyone following our leaders in unity") from (Bizumic and Duckitt, 2018).

The next section of the survey includes the question that we use to evaluate H3. Again, respondents use a 5-point scale (Strongly Disagree to Strongly Agree) to say how much they believe that a politician who is planning to run in the 2022 parliamentary election using the slogan "Serbia is not safe; we need to bring the old days back" would agree with statements 1 through 3. We constructed this treatment using rhetoric typical of Serbian politicians, including Serbian nationalist politicians who emphasize strong law and order ("Serbia is not safe") and a return to the past ("we need to bring the old days back"). Our treatment here is twofold: we vary the politician's name to inform their gender and the alphabet used in the slogan.¹⁰ Note that the alphabet used in the slogan is randomly selected in order to signify the alphabet that the politician used when writing the slogan. As a result, it is not defined by either the ad's alphabet or the first randomization.

After our second experiment, we ask respondents about their ethnicity and partisanship.¹¹ We end the survey with a statement that asks respondents who want to participate in the gift card raffle to click on a link. Those who decide to click will enter another survey in which they will be asked to supply their e-mail. By doing this, we guarantee that the responses in our first survey remain confidential.

⁷Our treatment text is based off of Perez and Tavits (2019).

⁸We borrow these statements from Carter and Pérez (2016).

⁹Should these statements not be highly correlated, we will evaluate each one separately.

¹⁰We use Milan and Milena, as they represent a common male and female version of the same Serbian Slavic name.

¹¹These questions are necessarily post-treatment to avoid priming effects (Klar, Leeper, and Robison, 2020).

Empirical Tests

We will use the following tests to evaluate our three hypotheses.

Test of Hypothesis 1

$$Y_i = \alpha + \beta_1 \cdot D_i + \beta_2 \cdot P_i + \beta_3 \cdot (D_i \cdot N_i) + \gamma \cdot A_i + \varepsilon_i, \quad (1)$$

where Y is the post-treatment nationalism measure, D is the treatment, P is the pre-treatment nationalism measure, A is the Facebook ad's language, γ is the ad's language estimated fixed effect, and ε is the idiosyncratic error term. Our quantity of interest is $\beta_2 + \beta_3 \cdot P_i$, the effect of the treatment conditional upon pre-treatment nationalism. We will estimate a linear regression model with HC2 correction.

Test of Hypothesis 2

$$Y_i = \alpha + \beta_1 \cdot T_i + \beta_2 \cdot D_i + \gamma \cdot A_i + \varepsilon_i, \quad (2)$$

where Y is the post-treatment nationalism measure for the politician, T is the treatment (the language in the politician's slogan), D is the treatment at the survey level (the language in the second part of the survey), A is the Facebook ad's language, γ is the ad's language estimated fixed effect, and ε is the idiosyncratic error term. Our quantity of interest is β_1 , the effect of the treatment on how nationalist the politician is perceived by respondents. We will estimate a linear regression model with HC2 correction.

Test of Hypothesis 3

$$Y_i = \alpha + \beta_1 \cdot T_i + \beta_2 \cdot F_i + \beta_3 \cdot (T_i \cdot F_i) + \beta_4 \cdot D_i + \gamma \cdot A_i + \varepsilon_i, \quad (3)$$

where Y is the post-treatment nationalism measure for the politician, T is the treatment (the language in the politician's slogan), F is an indicator for a female politician, D is the treatment at the survey level (the language in the second part of the survey), A is the Facebook ad's language, γ is the ad's language estimated fixed effect, and ε is the idiosyncratic error term. Our quantities of interest *alpha* (male politician and control), β_1 (male politician and treated), β_2 (female politician and control), and $\beta_2 + \beta_3 \cdot T_i$ (female politician and treated). We will estimate a linear regression model with HC2 correction. Using the estimates, we will conduct linear hypothesis tests in which we expect that:

$$\alpha > \beta_2 + \beta_3 \cdot T_i > \beta_1 \geq \beta_2 \quad (4)$$

Power Analysis and Sample Size

To verify whether our proposed design is able to detect even relatively small substantive effects, we use a simulation-based power analysis. Note that our power analysis is designed to find a sample size that maximizes power for Hypothesis 1.

We simulate sample sizes between 100 and 3,000 in intervals of 100. For each potential sample size, we first sample whether respondents clicked on the Cyrillic or Latin version of our Facebook Ad. We define the probability of clicking on the Latin ad equal to 0.5. Next, we create our simulated version of pre-treatment nationalism (P) by using the following formula:

$$P_i = 2.15 - 0.1 \cdot A_i + \varepsilon_i,$$

where, 2.15 is the intercept, -0.1 is the slope for respondents from the ad in Latin and ε is the idiosyncratic term distributed $N \sim (0, 1)$.¹² As a result, we define that respondents from the Latin ad have, on average, a lower P than respondents from the Cyrillic ad. We round the generated number and replace $P > 5$ by 5 and $P < 1$ by 1.

After creating P , we start our experiments. First, we draw the treatment (D) from a Binomial distribution with $p = 0.5$. Then, we create our measure for post-treatment nationalism (Y) as

$$Y_i = 2.15 + 0.5 \cdot P_i - \tau_1 \cdot D_i - 0.1 \cdot A_i + \tau_2 \cdot (D_i + P_i) + \varepsilon_i,$$

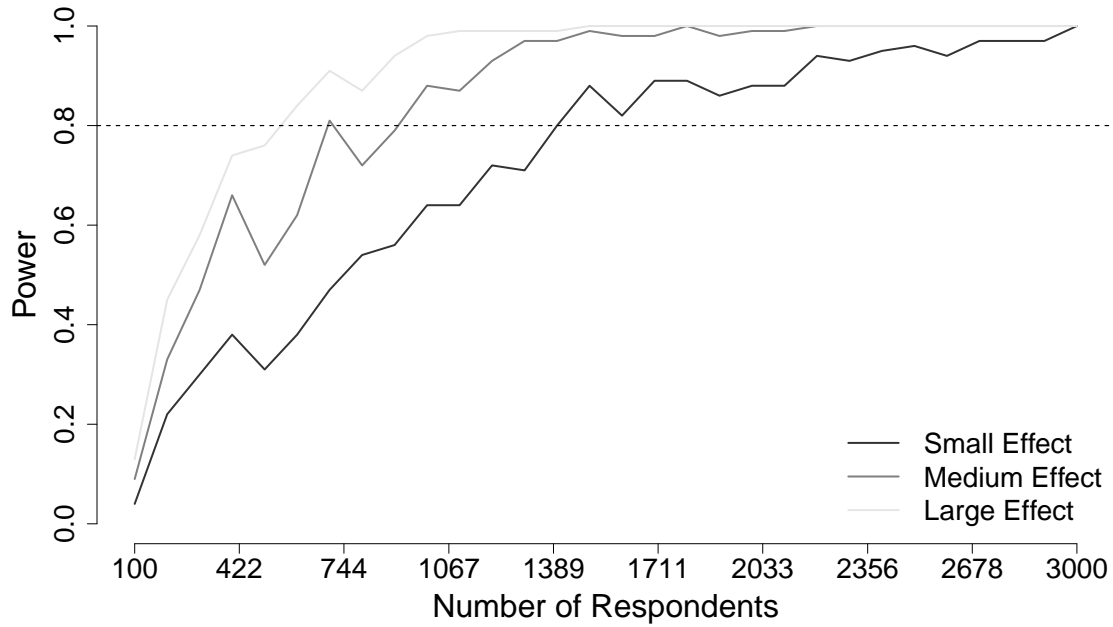
again, 2.15 is the intercept, 0.5 is the correlation between pre-treatment and post-treatment nationalism, -0.1 is the slope for respondents from the ad in Latin, and ε is the idiosyncratic term distributed $N \sim (0, 1)$. τ_1 and τ_2 are define by Cohen's d (Cohen, 1988), which we set equal to 0.35 (small to medium effect size),

¹²The precise value of the intercept does not substantively impact the resulting calculations.

0.50 (medium effect size), and 0.65 (medium to large effect size).¹³ Again, we replace $Y > 5$ by 5 and $P < Y$ by 1. However, we do not round the generated numbers because our dependent variable is the average of three Likert scales. With these data, we run 100 experiments for each sample size in which we estimate the model in equation (1) and evaluate where $\beta_3 > 0$ and statistically significant at $\alpha = 0.05$.

Figure D.1 shows the results from our power analysis. We see that our estimated power is never below the 0.8 for a sample of 1,400 respondents. As a result, we will target 1,400 individuals in our data collection.

Figure D.1: Power Analysis for Hypothesis 1



Note: Dashed line represents the power 0.8 power level.

Survey Questions

{Note: Text in parentheses describes survey options. Text in brackets describes randomizations. Text in braces is informational and will not be displayed in the survey.}

¹³We convert Cohen's d to r using the following formula:

$$\frac{d}{\sqrt{d^2 + \frac{(N^2 - 2N)}{n_t n_c}}},$$

where, d is Cohen's d , N is the sample size, n_t and n_c are the number of respondents in the treated and control groups, respectively.

{Demographics}

- {Gender:} What is your gender? (Male, Female, Other)
- {Education:} What is the highest educational level you have attained? (incomplete primary school, completed primary school, completed secondary school, completed bachelor's degree).
- {Age:} In what year were you born? (Text box)
- {Married:} Are you married? (Yes, No)
- {Employed:} Which statement best describes your current employment status (in the last seven days)? (Working, Not working — on temporary layoff from a job, Not working — looking for work, Retired, Disabled, Not working — other)
- {Rural/urban:} Please indicate which area you live in: (Urban — 50,000 or more people; Suburban — more than 2,500 and fewer than 50,000 people; Rural — fewer than 2,500 people)

{Pre-Treatment Nationalism}

- {Alphabets at home:} When you read and write in Serbian at home, with what frequency do you use the Cyrillic and Latin alphabets? (1-never to 5-very frequently for Cyrillic and Latin)
- {Alphabets at work:} When you read and write in Serbian at work, with what frequency do you use the Cyrillic and Latin alphabets? (1-never to 5-very frequently for Cyrillic and Latin)
- {Alphabetic Nationalism:} It is important to preserve the Cyrillic alphabet because it is essential for the Serbian nation. (1-strongly disagree to 5-strongly agree)
- {Other languages:} Do you speak, read, and/or write any languages other than Serbian (Yes or No)
- {Other languages list:} Please list any languages you speak, read, and/or write other than Serbian. (Text response)

Alphabet Treatment

- Because the Cyrillic and Latin alphabets are both commonly used in Serbia, we let a computer decide which alphabet will be used for the remainder of this survey. [New page with text displayed in the randomly selected alphabet.]

- Serbian [Cyrillic/Latin] was selected. This means that after this point, the rest of the survey will be in Serbian [Cyrillic/Latin]. This is not a language test.

{Post-Language Treatment Questions}

- {Political knowledge:} What is the total number of MPs in Parliament? (Choose one: 100, 150, 200, 250, Don't know)
- {Political knowledge 2:} What is the length of the Presidential term of office? (Choose one: 3 years, 4 years, 5 years, 6 years, 7 years).
- {News:} I watch or read the news daily. (1-strongly disagree to 5-strongly agree).
- {Nationalism:} The world would be a better place if people from other countries were more like Serbians (1-strongly disagree to 5-strongly agree)
- {Nationalism 2:} Generally speaking, Serbia is no better than most other countries (1-strongly disagree to 5-strongly agree)
- {Nationalism 3:} Generally, the more influence Serbia has on other nations, the better off they are (1-strongly disagree to 5-strongly agree)
- {Measure of authoritarianism:} What our country needs most is discipline, with everyone following our leaders in unity. (1-strongly disagree to 5-strongly agree).

{Politician Gender Treatment}

- {Treatment:} [Milena/Milan] is planning to run in the 2022 parliamentary election. [Her or his] campaign slogan will be [The following quoted text is randomized between Serbian Cyrillic and Serbian Latin: "Serbia is not safe; we need to bring the old days back"] with ads mostly in [Cyrillic/Latin].
- Considering her/his campaign slogan, using a scale from 1 (strongly disagree) to 5 (strongly agree), how much do you think that she/he would agree with the following statements?

{Post-Gender Treatment Questions}

- {Politician:} The world would be a better place if people from other countries were more like Serbians (1-strongly disagree to 5-strongly agree)

- {Politician 2:} Generally speaking, Serbia is no better than most other countries (1- strongly disagree to 5-strongly agree)
- {Politician 3:} Generally, the more influence Serbia has on other nations, the better off they are (1-strongly disagree to 5-strongly agree)
- {Ethnicity:} Which ethnic group do you identify with the most? (Serbian, Hungarian, Roma, Bosniak, Other).
- {Party ID:} Which political party did you support in the last parliamentary election? (Serbian Progressive Party, Socialist Party of Serbia, Serbian Patriotic Alliance, Party of United Pensioners of Serbia, Alliance of Vojvodina Hungarians, Social Democratic Party of Serbia, United Serbia, Movement of Socialists, Serbian Renewal Movement, Serbian People's Party, Strength of Serbia Movement, Party of Democratic Action of Sandzaka, Party for Democratic Action, Justice and Reconciliation Party, Communist Party, People's Peasant Party, United Peasant Party, Greens of Serbia, Other).

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