

# Can Simple Language Affect Voters' Political Knowledge and Their Beliefs About Politicians?

---

**Daniel Bischof**, University of Münster and Aarhus University  
**Roman Senninger**, Aarhus University

How does the level of sophistication in political messages affect citizens? While research has examined how politicians use this element to distinguish themselves, little is known about how it resonates with citizens. We theorize that using simple language in political communication can increase citizens' political knowledge and influence their beliefs about politicians. In a study conducted in Germany using preregistered and large-scale survey experiments, respondents were shown political statements that varied in linguistic sophistication and other factors. The results indicate that simplicity improves citizens' political knowledge and helps them fill in gaps in information about politicians' socioeconomic backgrounds. Additionally, simple language has no direct impact in the electoral arena but was found to moderate the effect of politicians' policy positions. Our findings suggest that linguistic styles can be a powerful tool in contemporary political campaigns.

Social scientists and the media often portray citizens as being distant from and disenchanted with politics. One common explanation for this is that citizens perceive political decision-making as being too complex and difficult to understand (Achen and Bartels 2017; Caramani 2017, 58). Of course, this perspective is hardly new to political science; classical scholarship spanning questions on political trust (Hetherington 1998), dealignment (Dalton, Flanagan, and Beck 1984), and citizens' knowledge in general (Lupia 2016; Popkin 1991; Zaller 1992) discusses citizens' frustration from various perspectives. Along with globalization shocks, scholars and commentators suggest that the perception of "complex politics" has contributed to the rise of new challengers to democracy.

In fact, populists capitalize on the idea that politics is too complex by offering simple solutions to political problems, both in terms of their conceptual framework—the people

versus the elite—and through their use of simple language and imagery that is intended to represent "ordinary people" (Bischof and Senninger 2018; Canovan 1999; Kriesi 2018; Mudde 2004; Taggart 2002, 76). These symbols, which simplify politics and society, are often seen as having a significant impact on politicians' electoral appeal. They are also at the heart of the populists' strategy, as they authenticate and legitimate populists' contention that they are truly representing the ordinary people by speaking the language of the bar, as Mancini (2015, 84–90) puts it. Here, we are interested in how exactly simple language might work as a heuristic for the masses.

While recently scholars have begun to integrate this rather symbolic dimension of political discourse by delivering answers to the question of who simplifies political discourse (Benoit, Munger, and Spirling 2019; Decadri and Boussalis 2020)—frequently politicians on the political right (Bischof

---

Daniel Bischof (db@danbischof.com) is a professor at the University of Münster, Germany, 48149, and an associate professor at Aarhus University, Aarhus, Denmark 8000. Roman Senninger (rsenninger@ps.au.dk) is an associate professor at Aarhus University, Aarhus, Denmark 8000.

Roman and Daniel acknowledge funding from the Department of Political Science at the University of Zurich. Roman acknowledges funding from the Interacting Minds Centre Seed Programme at Aarhus University (Nr. 26167). Daniel acknowledges funding from the Swiss National Science Foundation (SNF Ambizione Grant, NO. 179938). Replication files are available in the *JOP* Dataverse (<https://dataverse.harvard.edu/dataverse/jop>). The empirical analysis has been successfully replicated by the *JOP* replication analyst. The project is preregistered at OSF and aspredicted.org and registered on Aarhus University's list of research projects in which personal data is processed (reference number 2016-051-000001 and serial number 1895). An online appendix with supplementary material is available at <https://doi.org/10.1086/736693>.

Published online June 4, 2026.

*The Journal of Politics*, volume 88, number 4, October 2026. © 2026 Southern Political Science Association. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies. Published by The University of Chicago Press for the Southern Political Science Association. <https://doi.org/10.1086/736693>

000

and Senninger 2018; Schoonvelde et al. 2019; but see McDonnell and Ondelli 2022)—the effects of simple political language on citizens and their beliefs remain largely undiscovered. This is puzzling because on the one hand, its relevance finds suggestive evidence in politicians' style of speech; examples of simplification include several populist politicians (Hayward and Faulconbridge 2019; Shugerman 2018; Swaim 2015). On the other hand, the major motivation for research on simple political language is that simplicity should resonate with the receivers of political messages: citizens. In fact, when asked how important language is for their perception of politicians, 85% of German respondents in a survey conducted by the authors suggest that language is key for their perception of politics and politicians.<sup>1</sup>

Beyond that, theoretically, we have strong reason to believe that the style and tone used by politicians should matter to citizens and their knowledge about and engagement with politics. An enormous strand of research in political science understands parties and politicians not only as representing the interests of citizens (Adams et al. 2004) but also as shaping their political knowledge (Bisgaard and Slothuus 2018; Bullock 2011; Chong and Druckman 2007; Druckman 2001; Slothuus and De Vreese 2010). Moreover, studies in education point toward the importance of message simplicity and clarity for learning. Simpler language eases individuals' learning and engagement with information; it increases their knowledge about the received content (Anderson 1983; Pitler and Nenkova 2008). Combining these findings suggests that we have a strong reason to assume that simpler political messages should allow citizens to better understand, comprehend, and reflect on them; it should increase their knowledge about political messages.

Beyond knowledge of politics, research on populism specifically emphasizes that populists' style of speech also provides a more subtle heuristic about the populist politician. It signals that they are "ordinary persons" as opposed to members of the political elite (Bischof and Senninger 2018; Canovan 1999; Mudde 2004; Taggart 2002). This suggests that another effect of simple language of politicians might lie in how citizens perceive the socioeconomic backgrounds of politicians. Thus, beyond the actual content of a message, simplicity should lead citizens to suspect that the message sender is of a rather modest social background—for instance, educationally or in terms of class. Previous research emphasizes the importance of social background for candidate voting appeals (Hoyt and DeShields 2020; Robison et al. 2020; Vivyan et al. 2020), but in real-world

settings, citizens often appear to be unaware of politicians' social backgrounds and, thus, might rely on heuristics to fill information gaps about them (see also Popkin 1995, 27–28). We argue that citizens might use simple language as a heuristic to judge politicians' class backgrounds. In turn, this might make voters more likely to vote for candidates who rely on simpler campaign messages, as these are more likely to be perceived as "belonging to the people."

To understand how simple versus sophisticated language affects citizens' perception of political candidates, specifically their statements and voting appeals, we designed two pre-registered, large-scale and well-powered survey experiments in Germany (5,800 and 7,200 respondents).<sup>2</sup> To test our theoretical arguments for knowledge uptake, we asked respondents a set of outcome variables after receiving the vignette treatments: an open-ended question asking respondents to reproduce the content of the vignette and a positional question on the message. To understand if language is used as a heuristic, we asked respondents to piece together a profile describing the sender of the last vignette they were shown. More specifically, respondents were asked to name the message sender's party, gender, educational background, and social class. Although both the sender's party and gender were shown to the respondents, educational background and social class were not. Thus, the responses to this question allow us to test whether respondents implicitly but systematically relied on the treatment, and differences in linguistic sophistication, to fill in the lack of information about a politician's educational and social class background.

To test the electoral consequences of language sophistication, we rely on a conjoint experiment in which we asked respondents to choose between two candidates randomly communicating in a simple and sophisticated style in addition to a set of important characteristics such as party affiliation. We used the treatment text of one vignette message from our first experiment to test the effect of simple versus sophisticated language on candidates' electoral appeals. We differentiate between a low and high information environment to examine if the level of language sophistication operates as a heuristic in the electoral arena.

We find that sophisticated language affects citizens' comprehension of political statements. When asked to assess a statement from a politician, respondents exposed to a sophisticated statement are, on average, further away from the correct position than respondents who read a simpler statement.

1. To ensure that the question did not prime respondents before they were shown the treatment vignettes, we asked this question as the last question of our survey.

2. The preanalysis plans are available online (experiment 1: <https://osf.io/rmdnz/overview>; experiment 2: [https://aspredicted.org/ND4\\_3BX](https://aspredicted.org/ND4_3BX)). We report all deviations from the preanalysis plans in app. SI.3.1.

We also show that respondents use language implicitly as a heuristic for the unknown qualities of the politicians (i.e., education and social class background). Respondents are more likely to state that politicians belong to a lower class and have a lower level of education if their statement uses simpler language. Using a set of robustness tests, we also further substantiate that this effect is driven by the treatment and not by omitted (i.e., unobserved) textual characteristics.

Turning to the electoral effects that we test in a conjoint experiment, our results suggest that changing the level of language sophistication from simple to sophisticated does not decrease the probability of choosing the candidate profile. The observed effects are very small and not statistically significant at conventional levels. However, our results show that language sophistication can have an important moderating effect. In the low information environment, sophisticated communication minimizes the positive average effects of candidates' policy positions. While we do not find a direct effect of linguistic sophistication in our experimental setup on vote choice, language might pile up in real-world campaigns and shape voters' reflections on candidates in the long run—specifically if candidates have a similar profile, which might be the case specifically in primaries.

This article makes several contributions to the research on political sophistication, party priming, and populism. First, to our knowledge, we are the first to design a survey experiment on language sophistication in the social sciences to test how politicians' linguistic style and tone resonate with citizens. This is crucial to understand given that pundits, scholars, and the media assume that linguistic sophistication matters to citizens and their knowledge about politics. Second, by using a survey design, we provide plausible causal evidence that simplification not only fulfills its rather mechanical promise of increasing citizens' knowledge but also that citizens use it as a heuristic to approximate the social background of politicians. This speaks to and reinforces the conceptual ideas of populism; the language of the bar appears to authenticate politicians' claims to be among the people instead of the elite. Third, we want to point out that the implications of our findings travel well beyond the research agenda of populism and citizen knowledge. Recently, increasing efforts are being made to not only analyze what politicians say but also how they say it (Knox and Lucas 2021). Yet, the effects on citizens of how things are being communicated are largely undiscovered in the social sciences. Interestingly, in political science, scholars of party competition have been emphasizing strategies of “obfuscation” or “blurring” extensively but without referring explicitly to the language used by politicians (see, e.g., Rovny 2012). Instead, this scholarship has referred to contradictory ideological positions that might ensure that parties can provide appeals to a broader

audience (Somer-Topcu 2015). We add to this debate by providing evidence that the type of language might as well be used to establish broader appeals to specific voter segments. We understand our article as being among the first studies to provide evidence that the how might matter more than we have anticipated so far.

### HOW SIMPLE LANGUAGE MATTERS IN POLITICS

Previous research shows that party behavior and campaign messages affect citizens and their decision-making at the ballot box (Bisgaard and Slothuus 2018; Brader, Tucker, and Duell 2012; Slothuus 2010). However, most research building on this idea focuses on the topics and positions presented in party messages (Adams et al. 2004; Klüver and Spoon 2016; Seeberg, Slothuus, and Stubager 2017; Slapin and Proksch 2008); it focuses on what is being communicated.

Recent scholarship is ever more interested in the style and tone being used by politicians (Benoit et al. 2019; Eichorst and Lin 2019; Knox and Lucas 2021; McDonnell and Ondelli 2022; Schoonvelde et al. 2019; Slapin and Kirkland 2020; Valentim and Widmann 2023). This research is built on the assumption that how politicians communicate should matter as well. Most prominently, conceptual research on populism emphasizes that populists seek to simplify politics not only conceptually—“the elites versus the people”—but also in the style being used to talk about politics. This scholarship contends that by using simple language and exaggerated symbols, populists seek to signal to be “ordinary persons” as opposed to a member of the political elite (Bischof and Senninger 2018; Canovan 1999; Mudde 2004; Taggart 2002). These signals are likely to get through to citizens.

Findings in educational and linguistic sciences show that with increasing sophistication, human beings are less likely to comprehend and memorize information from texts (Anderson 1981; Flesch 1948; Pitler and Nenkova 2008). These studies understand and measure “comprehensibility” (sophistication) via text length, such as the number of words and sentences (see also Spirling 2015). Transferring the insights from these early studies in education to political science, we might observe a similar mechanism at play when citizens engage with political messages. In their observational study, Bischof and Senninger (2018) show that there is a correlation between the linguistic sophistication of party manifestos and citizens' ability to correctly place parties in the ideological space. The more sophisticated a party's messages, the less able citizens are to correctly place a party's left-right position. However, as they outline in their conclusion, such an observational test is no more than a correlation that could be driven by unobserved characteristics and endogeneity. Thus, our first goal is to test the relationship between sophisticated political

messages and citizen knowledge with a more appropriate research design.

**H1.** Message recall: Linguistically sophisticated political messages are more difficult to remember.

Beyond the more mechanical effects discussed above, we suggest that simplification provides an important heuristic for citizens about unobserved characteristics of politicians. Behind the conceptual argument that populists simplify the discourse stands the idea that populists can thereby authenticate and legitimate the claim to be among “the people” (Bischof and Senninger 2018; Canovan 1999; Mudde 2004; Taggart 2002), and a similar argument has recently been developed for Spanish language reference in the United States (Zárate, Quezada-Llanes, and Armenta 2024). This means that beyond the actual content of a message, less sophistication should lead citizens to suspect that the message sender is of a rather modest social background—be it educationally or in terms of class.

Vivyan et al. (2020) argue that what they call “humble beginnings” can help politicians at the ballot box. Using a conjoint experiment, they show that citizens are more likely to vote for candidates with more humble class roots in Germany and Britain. Similarly, Carnes and Lupu (2016, 838–839) find that British, American, and Argentine voters perceive working-class candidates as more capable of understanding their problems and concerns. Other research emphasizes the importance of social background for a candidate’s voting appeals as well (Hoyt and DeShields 2020; Robison et al. 2020). Thus, social background matters for voters’ decision-making at the ballot box.

Yet, as a rich body of research shows, voters’ knowledge and engagement with political candidates are limited, often leading to restricted information about the candidates running (Bartels 1996; Crowder-Meyer, Gadarian, and Trounstein 2020; Fowler and Margolis 2014; Lupia 2016; Rittmann, Sohnius, and Gschwend 2023).<sup>3</sup> Referencing these informational gaps, Popkin (1995, 18–19) outlines that “[t]o overcome the limitations of their knowledge, voters use shortcuts.” Thereby, sociodemographic shortcuts are understood by scholars as a cost-effective tool to project a candidate’s policy positions (Cutler 2002; Popkin 1995, 27–28). However, recent research, such as in Germany, shows that voters barely recall the name of the candidates running in a respective district, let alone any type of socioeconomic background (Rittmann et al. 2023). We

3. To underscore this point, we provide a descriptive analysis in app. SL7, which demonstrates the limited awareness of candidates among German citizens.

also believe that for many citizens, seeking the actual information about candidates’ socioeconomic background is too costly (see, e.g., Lupia 2016). Consequentially, we suggest that voters might rely on shortcuts to get hold of such information, frequently implicitly, likely subconsciously, by relying on heuristics (Petersen 2015; Sniderman, Brody, and Tetlock 1993; Steenbergen and Colombo 2018).

Scholars discuss a range of such heuristics, ranging from names (Crabtree et al. 2022) to voters’ personality traits (Petersen 2015). Following this lead, we seek to understand the language used by politicians working as a heuristic for voters. We propose that voters rely on simple language to judge a candidate’s socioeconomic background, with simpler messages making voters believe that candidates have a lower socioeconomic status. In line with the arguments provided by research on populism, we therefore expect that linguistic style is an informational cue for citizens that informs them about politicians’ socioeconomic backgrounds:

**H2.** Sophistication as a heuristic: Linguistically sophisticated messages increase citizens’ perceptions of politicians with regard to class and education.

In line with that and based on the findings by Carnes and Lupu (2016, 838–839) and Vivyan et al. (2020), we have reason to assume that effects of simple language travel to the electoral arena. If simple language is a heuristic for lower status markers and *ceteris paribus* “humble beginnings,” voters should be more likely to vote for candidates who rely on simple messages.

**H3.** Sophistication as an electoral heuristic: Voters are less likely to vote for candidates who use linguistically sophisticated messages.

## EXPERIMENTAL DESIGN

What would constitute a valid test for these theoretical ideas? In the optimal case, we would observe citizens’ engagement with politicians’ statements in the press, then record how they react to simpler messages, including whether they connect simplicity with different socioeconomic backgrounds. Such a test in the real world is not achievable, which is why we turn to survey experimental designs. Using survey experiments allows us to randomly assign respondents to different political messages containing varying degrees of linguistic sophistication. We preregistered our hypotheses and designs along with our analysis code on OSF.<sup>4</sup>

4. Before going into the field, we conducted a pilot study for our first experiment. The pilot study led to small changes in the design (e.g.,

In our first and main experiment, we collaborated with Bilendi and bought access to a sample of 6,000 German respondents split across three cross sections from October through December 2020.<sup>5</sup> Originally, we planned to survey all respondents at a single point in time, but that was not possible because of the Covid-19 pandemic. In order to rule out that our findings could be driven by specific policy junctures of the pandemic, we decided to survey respondents in three waves. In each of the three waves, we apply quota sampling involving individuals that represent the voting age population according to age, gender, and geography (i.e., state). For more information about our sampling approach, please consult appendix section SI.3.5.

As we discuss in detail below, the German language allows us to convincingly design treatments of low and high sophistication while keeping other factors, such as the content of the statement, constant. The German language is particularly well suited to accomplish this task because of its richness in terms along with the possibility to construct long sentences (*Schachtelsätze*). Beyond this pragmatic reason, Germany offers a significant and representative case for studying the sophistication of language because of its political discourse and political landscape, encompassing the populist radical right “Alternative für Deutschland” (AfD) to the populist radical left “Die Linke.”

Political communication and its level of sophistication in Germany are highly comparable to other European countries, indicating that Germany represents a typical case in this regard. In the appendix, we show that relevant text features of German party manifestos are similar to other German-speaking countries in Europe. We also show that parliamentary speeches in Germany are similar to those in the United Kingdom, the Netherlands, and Sweden in terms of different measures of sophistication and other text features (see app. SI.6) (Schoonvelde et al. 2019). Additionally, Germany closely resembles other European countries in terms of the socioeconomic characteristics of its politicians (see table SI 22). Together, these characteristics suggest that Germany represents a typical case concerning the theorized relationship between the level of sophistication in political communication and its effects on citizens’ political knowledge and beliefs about politicians.

At the beginning of the survey, respondents are informed that they take part in a scientific survey seeking to understand their political preferences. This is followed by several questions

about political attitudes, behavior, interest, and knowledge. Next, respondents answer socioeconomic background questions including gender, age, and education. Subsequently, respondents are randomly exposed to the experimental component of our survey, which builds on vignette experimental designs. We show respondents statements from politicians on three issues: asylum policy, climate change, and the budget. The three issues represent salient political topics that are frequently discussed in the media. They are chosen in order to compare possible effects of sophistication across issues. Each statement begins with an introduction: “When asked about X, a politician from party Y answered the press as follows.” We chose this introduction along with the information about the politician as it also closely resembles how the German press tends to report statements by politicians.<sup>6</sup> We note that respondents were debriefed after the experiment that the statements do not reflect real statements by politicians. This is important as it forestalls deception in our experiment.

Given that we are not interested in estimating effects stemming from the sender’s characteristics (e.g., education, age, expertise) but, rather, in the effect of the sophistication of the message, we opt for a fairly neutral introduction. Our introductory text does not provide any information about the politician’s characteristics other than the gender and party.<sup>7</sup> We believe that information about the partisan affiliation of the politician is relevant and cannot be omitted from the experiment without diminishing the external validity.

A key question in relation to our experimental design is external validity; “the confidence one has that the cause-effect relationship holds over variation in persons, settings, treatment variables, and measurement variables” (Druckman 2022, 61). We do believe that our design provides high confidence that the cause-effect relationship we might uncover travels to other settings, that is, the real-world setting. For one, our

6. See, for instance, a recent example from the German newspaper “Die Zeit” on a meeting of the governing coalition: <https://www.zeit.de/politik/deutschland/2023-08/ampel-koalition-kabinettsklausur-meseberg-live>: “Auch Bundeswirtschaftsminister Robert Habeck (Grüne) und Bundesfinanzminister Christian Lindner (FDP) lobten die gute Atmosphäre der zweitägigen Kabinettsklausur. Habeck sagte, man müsse verstehen, ‘dass verschiedene Blickwinkel eine Stärke sind.’ Eine ‘lernende Geschlossenheit’ ins Zentrum zu stellen, sei ‘der Geist dieser Klausur gewesen.’ Auch Lindner sprach von einer ‘guten Tagung.’” [English translation: Federal Minister of Economic Affairs Robert Habeck (Greens) and Federal Minister of Finance Christian Lindner (FDP) also praised the good atmosphere of the two-day cabinet retreat. Habeck said, “We must understand that different perspectives are a strength.” Putting “learning unity” at the center was “the spirit of this retreat,” he added. Lindner also spoke of a “good meeting.”]

7. Note also that when writing the term “a politician” in German, one cannot avoid stating the gender. We therefore randomly indicate whether the politician is male (*ein Politiker*) or female (*eine Politikerin*).

attention test). We report all changes after the pilot study in our preanalysis plan.

5. Wave 1: October 15–23, 2020; wave 2: November 9–13, 2020; wave 3: November 25 to December 1, 2020.

introductory text is a statement that could easily be found in the German press. An illustrative example from the *Frankfurter Allgemeine Zeitung* further substantiates this claim: In an article about the budget, several direct quotes from politicians were introduced with the following sentence: “In the debate about future issues such as climate protection, several applicants for the SPD party chairmanship are pushing for a move away from the black zero, that is, foregoing new debts.”<sup>8</sup> Furthermore, the way respondents engage with the statements closely mirrors the real-world setting, as we designed statements based on actual statements made by politicians. Of course, the setting—an online webpage with an article containing potentially several statements—might be different. But if we sought to isolate a reader’s immediate reaction to one such statement in the real world, this would look very much alike to the experimental setting we use here.<sup>9</sup>

### Treatment and pretests of our treatment

Respondents are exposed to three statements about three issues (i.e., climate change, budget, and asylum policy). The order of the appearance of issues is randomized. For each of the three issues, we have designed six versions. The different versions represent variation with regard to the level of sophistication (high/low), which is our main variable of interest, and the party representative’s position on the issue (in favor/neutral/against).

A key critique of existing research emphasizes that off-the-shelf operationalizations of textual sophistication such as readability scores frequently lack validation and reliability (see also Klare 1963; Redish 2000). To address such concerns, we conducted our own extensive pretest to learn about the ideal representation of textual sophistication for the purpose of our research interest. Crucially, our approach follows recent suggestions in the literature to separate the discovery and estimation of latent representations of text (e.g., sophistication) (Egami et al. 2022). In our comprehensive pretest, we combine crowdsourcing and a pairwise comparison framework (building on the workflow pre-

sented in Benoit et al. 2019).<sup>10</sup> More precisely, we first extract hundreds of text snippets from German party manifestos. In a second step, we let crowd coders evaluate the sophistication of pairs of snippets. We then identify relevant predictors of sophistication using random forests.

The results of the pretest revealed that German citizens consider the length of the political message, the length of words in the message, and the rarity of words in the message as major sources of sophistication. Accordingly, our treatment conditions representing high and low levels of sophistication vary on these dimensions. To make sure that the treatment is internally consistent, the three identified dimensions do not vary randomly but rather are lumped together so that the treatment condition “high sophistication” consists of longer text, longer words, and rarer words. Conversely, the treatment condition “low sophistication” consists of shorter text, shorter words, and more familiar words. The two panels in figure 1 provide an example.<sup>11</sup>

The two texts represent statements on climate change that present the same position “against” but vary in their level of sophistication.<sup>12</sup> Both texts consist of three sentences and follow the same structure. In the first sentence, the politician rejects a CO<sub>2</sub> cap. In the second sentence, the politician further rejects the funding of green energy. Finally, in the third sentence, the politician says that parliament should hold off on introducing new legislation. Even though the two texts present the same message, one can clearly see that they vary with regard to text length and word length. The text representing the high sophistication condition in the lower panel consists of 60 words and has an average of 6.7 characters per word. The upper panel shows the low sophistication condition. The text consists of 48 words, and the average number of characters per word is 5.5.

In addition to text length and word length, the two texts vary with regard to the inclusion of familiar words. For each text used in our survey experiment, we calculated the percentage of words that are among the 1,000 most frequently

8. The original quote reads as follows: “In der Debatte um Zukunftsthemen wie den Klimaschutz drängen mehrere Bewerber für den SPD-Parteivorsitz auf eine Abkehr von der schwarzen Null, also den Verzicht auf neue Schulden” (<https://www.faz.net/aktuell/wirtschaft/streit-um-bundshaushalt-politik-der-schwarzen-null-unter-druck-16325078.html>).

9. When we talk about setting, we frequently question “mundane realism,” the correspondence to the actual treatment that people receive in their everyday lives (Findley, Kikuta, and Denly 2021, 371). This is a common critique and applies to almost all survey experiments. But as Mutz (2011, chap. 8) outlines and Druckman (2022) foreshadows in the quote presented in the main text, experimental realism is what we seek to achieve with our experiment. We seek to create a controlled study that is meaningful and engaging to participants, triggering behavior that is spontaneous and natural.

10. For details, please consult the section “Pre-Test Textual Sophistication” in our preanalysis plan.

11. Please note that the English translation provided may not fully capture the nuances and differences in sophistication present in the original German statements. The translation is intended to convey the main ideas and content, but because of language variations, some subtleties of language may be lost in the process.

12. To ensure external validity, we introduced nine restrictions for positions in relation to political parties and certain issues. For instance, if the politician belongs to the radical right party AfD, the position on the issue asylum policy must take on the value against. The reason for that lies in the fact that—to the best of our knowledge—not a single AfD politician holds a “pro” position toward refugees and their rights. We report a full overview of these restrictions in app. SI.3.2.



Figure 1. Treatment text example: different levels of sophistication, same issue and position.

used words according to the Leipzig Corpora Collection (Biemann et al. 2013). The numbers are 67.3% for the upper panel and 65.0% for the lower panel. As the example shows, differences regarding this summary statistic are not always large. We therefore further manipulated the word familiarity by using more and less frequent synonyms. In the case of climate change, an example is given in the second sentence of the two texts. To describe green energy, the simpler text in the upper panel uses *Ökostrom* (eco-power), while the sophisticated condition includes the term *regenerative Energie* (renewable energy). The former term is frequently used in the German news corpus 2020 (1,527 occurrences), while the latter is used less frequently (316 occurrences). Similarly, according to Google trends data, the former is more frequently

used as a search term compared to the latter. Table SI 2 in the appendix provides further examples of how we manipulated our treatment texts across conditions. Figure 2 shows descriptive statistics providing evidence that the treatment conditions “high” and “low” vary according to the features identified in our pretest.<sup>13</sup>

Aside from sophistication, we make sure that treatment conditions are as similar as possible across issues and that all texts follow the same structure to ensure that the observed effects of the treatment stem from our manipulations.<sup>14</sup> In

13. Please see table SI 4 for the raw data.

14. The remaining treatment vignettes are listed in the preanalysis plan (see pages 4–9).

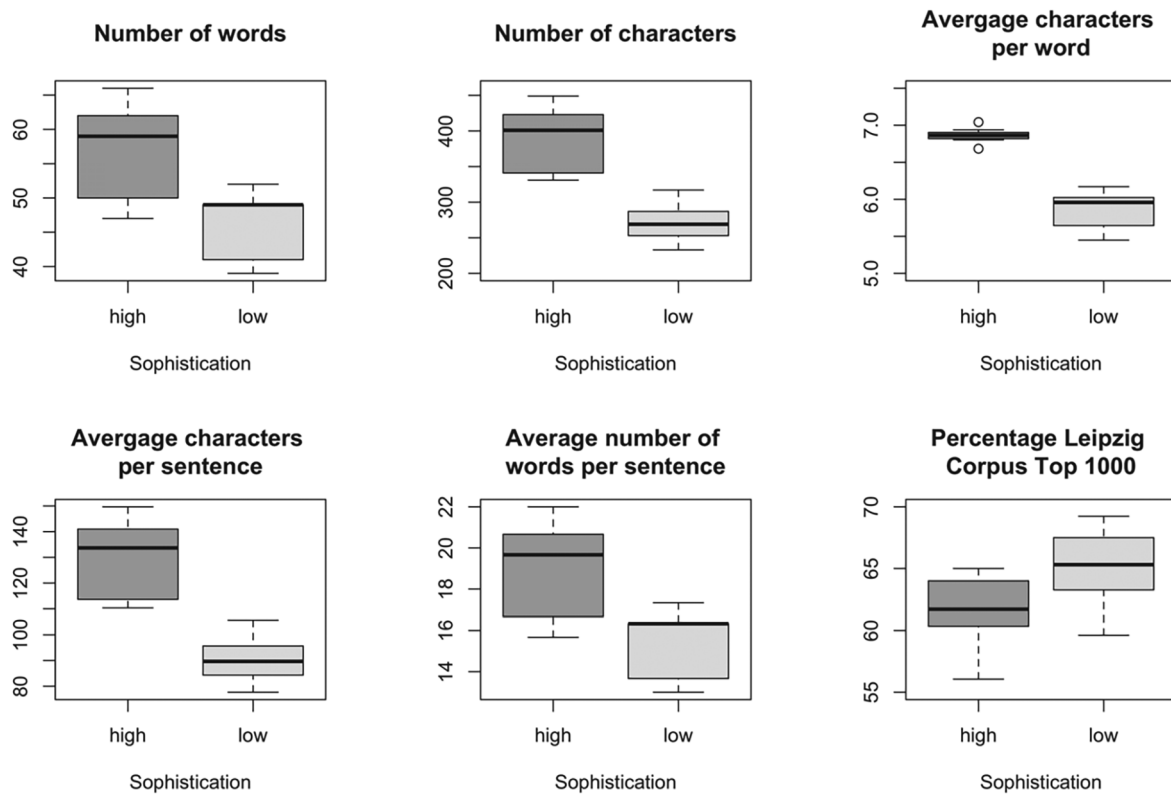


Figure 2. Descriptive statistics: high versus low sophistication. y-axes differ across panels.

appendix SI.3.4, we report that treatment text does not differ with regard to sentiment and emotional vocabulary.

### Outcome variables

We measure several outcome variables—posttreatment only—which allows us to test our theoretical arguments. Our first argument about message recall is captured in two different ways. To begin with, we ask respondents to briefly reproduce the politician’s position. For this purpose, the respondents write their answer in a text box. We apply a bag of words representation of the texts and use the cosine similarity between the treatment text and the text written by the respondents as outcome variables. The measure is bounded between 0 and 1 and indicates the cosine of the angle between two document vectors. When the value is closer to one, it means the angle is smaller and the texts are more similar. The cosine similarity is a measure of the relative occurrence of common attributes and captures the orientation of the data attributes and not their magnitude. The attribute vectors of two documents are the term frequency vectors of the documents, and the cosine similarity can be seen as a method of normalizing documents. Thus, it measures similarity between documents independent of the length of the documents. Our approach is similar to Ziegler (2022), who suggests that the cosine similarity between treatment text and respondents’

open-ended answers provides useful information about respondents’ understanding of the treatment information.<sup>15</sup> We use both the raw data and preprocessed data for our analysis. The data preprocessing includes removing stop words, punctuation, and numbers and applying word stemming. In addition, we take advantage of a state-of-the-art transformer model to capture the semantic similarity between open-ended responses and treatment texts. We use BERT multilingual base model to create embeddings reflecting the relationships among words, where proximity in the embedding space represents similarity in latent meaning (Devlin et al. 2018; Kjell, Giorgi, and Schwartz 2023).

Subsequently, we ask respondents to position the politician’s statement, which reads as follows: “Based on the statement you just read, how much does the politician support 1) the fight against climate change, 2) a balanced budget, 3) a ban on refugees?” Respondents are then shown a five-point Likert scale

15. In the appendix, we present keyness statistics (see fig. SI 5). Responses that have a low cosine similarity score frequently state that the respondent does not understand the position and that the text is too complicated as indicated by the high keyness scores of the terms “verstanden,” “habe,” “kompliziert,” and “unverständlich.” This provides evidence that answers with lower cosine similarity scores indeed do not capture the position well. We note that respondents were prohibited from copying and pasting the treatment text.

to share their responses ranging from “not supporting at all” to “strongly supporting.” For each respondent’s answer, we then measure the absolute distance to the “correct” answer. For example, if respondents are shown a statement that indicates that the politician supports the fight against climate change, the “correct” answer would be 5. If respondents are shown a statement that indicates that the politician does not support the fight against climate change, the “correct” answer would be 1, and if respondents are shown a statement that indicates that the politician has a neutral position toward the fight against climate change, the “correct” answer would be 3. This approach mimics a situation in which an expert assesses a position as either against/neutral/in favor (i.e., the correct answer), and our measure of the distance to the correct answer captures whether people can assess like experts.

Second, we seek to test whether sophistication influences respondents’ perception of politicians. In essence, this boils down to testing a violation of “information equivalence” (Dafoe, Zhang, and Caughey 2018), meaning that we seek to understand whether confronting respondents with simplicity drives them to update their beliefs about candidates’ socioeconomic background and not only their beliefs about the usage of simple language.

To do so, we ask the respondents to bring together several characteristics of the message sender, a politician, after they saw the treatment text. They do so by choosing between several attribute levels. To avoid respondent fatigue, this question is only asked with regard to the final of the three statements and reads as follows: “Considering the last statement, if you had to describe the politician, which of the following characteristics do you think would best describe him/her?” The attributes include class and education to test how the politician is perceived and gender and party to test the respondents’ attention. Respondents are asked to drag-and-drop attribute features into a profile box, and they can explicitly leave attributes empty as a nonresponse (see fig. SI 4 for a screenshot). The appearance of these attributes is randomized. In total, we collect various outcome measures to test our hypotheses. Education and class are both measured using ordinal variables with three categories (i.e., high, intermediate, and low education and upper, middle, and lower class, respectively).

### Additional variables, attention, and manipulation tests

As mentioned above, we asked respondents to answer a number of questions before they were exposed to the treatments, including questions about voting behavior, gender, year of birth, left–right self-placement, and class identification. We asked all of these questions prior to the treatments, as

almost all of them might be subject to posttreatment biases (Montgomery, Nyhan, and Torres 2018) and are unlikely to prime respondents in any meaningful way toward our treatment—linguistic sophistication.

In addition, we check whether respondents respond to our manipulation. First, we find that respondents spend an additional four seconds reading the high sophistication statement compared to the simpler one. In waves 1 and 2 and our pilot study, this difference is even more noticeable—ranging from 5.5 seconds to 7.2 seconds. Considering that the sophisticated statement contains an additional 12 words and 1.2 characters per word on average, we conclude that respondents spend a reasonably greater amount of time on the high sophistication statement. Second, we opt for a factual manipulation check using a single question that is (1) asked of all participants in the experiment, (2) specifically about the experimental material, and (3) has factually correct or incorrect answers (Kane and Barabas 2019). As mentioned above, the final statement is followed by a drag-and-drop task to describe the politician regarding class, education, gender, and party affiliation. The correct levels of two of the attributes (i.e., gender and party) were presented before and are thus known. We use respondents’ answers to test the attentiveness to the treatment material. We find that 65% could identify the correct gender and 52% answered correctly with regard to the party. Given that respondents already engaged with two other statements and answered several outcome questions before this final exercise, we consider the level of attention to the treatment material to be satisfactory.<sup>16</sup>

### Estimation

To test our first hypotheses, we estimate models of the following form to return the average treatment effect of our survey experimental manipulation:

$$y_i = \beta_0 + \beta_1 t_i + \gamma_i + \delta_i + \epsilon_i. \quad (1)$$

$y_i$  indicates the response for respondent  $i$ , which is either the cosine similarity score or the distance to the “correct” answer.  $\beta_1$  is the estimated effect of a randomly assigned binary treatment variable  $t$  indicating the level of the sophistication (high versus low).<sup>17</sup> Even though we aim to create similar treatment conditions across the three issues, we cannot rule

16. We use an attention check to assess respondent attentiveness during the study (Kane and Barabas 2019). Prior to the presentation of our treatment, we ask respondents how often they usually work out. Right after the question, we instruct respondents to ignore the question but to answer “click here.” We find that 56% of the respondents followed our instruction. Reestimating our findings on those who passed the attention test does not change the conclusions drawn from our analysis (see tables SI 18–SI 21).

17. Fig. SI 1 shows balance tests for six pretreatment covariates.

out that respondents' prior perception toward the sophistication of the three issues differs. For example, it might be the case that respondents have a greater interest in the issue of "migration" than the issue of "budget." As a result, they read the text more carefully and are better able to give a "correct" answer. To adjust for such possible baseline differences across issues, we run an analysis with issue fixed effects  $\gamma_i$ . Our models also include position fixed effects  $\delta_i$  to adjust for possible baseline differences regarding the position communicated by the politician. Each respondent makes up three observations in the data set. We therefore cluster our standard errors on the respondent identification variable. To test the second hypothesis, we estimate ordinal logistic regression models and include the same terms on the right-hand side of the equation as above.

## FINDINGS

### Effects on knowledge

To begin with, we present results regarding the effect of political sophistication on message recall. The two panels in figure 3A present estimated effects of sophisticated political communication on the cosine similarity between the treatment text and respondents' open-ended answers in the three waves and a pooled estimate. Using the raw data, the pooled point estimate is  $-0.007$  (95% CI:  $-0.005, -0.010$ ). The point estimates for the individual waves range from  $-0.006$  to  $-0.010$ . Across all waves, the cosine similarity is lower when respondents receive a sophisticated message (as compared to the simple message), which indicates that sophisticated messages impede citizens' message recall. The estimated differences in cosine similarity between respondents receiving the high and low sophistication treatments are larger when using the preprocessed data. The point estimate for the pooled data is  $-0.086$  (95% CI:  $-0.082, -0.089$ ), suggesting that noise is substantially reduced compared to the raw data. The point estimates for the individual waves range from  $-0.078$  to  $-0.091$ . The results from the word embedding representations based on the transformer model point in the same direction as the results from the bag of words representation. When the political message is simple, the open-ended responses seem to match it better in terms of meaning. In the overall model using the pooled data, the estimate is  $-0.008$  (with a 95% CI between  $-0.012$  and  $-0.003$ ). Regardless of the data and text representation, it shows that respondents produce text that is more similar to the treatment text when the statement is about refugees compared to the budget. This might reflect the high level of exposure to the topic due to the refugee crisis and its repercussion on German politics.

We now turn to our results regarding respondents' distance to the "correct" answer. Again, we find that the level of so-

phistication indeed has the potential to affect citizens' comprehension of political statements. When asked to assess a statement from a politician, respondents who are presented with a sophisticated statement are on average further away from the correct position than respondents who read a simpler statement.

Figure 3B shows the pooled estimate and effect estimates for all three waves. The point estimate for the pooled data is  $0.123$  (95% CI:  $0.091, 0.155$ ). The point estimates for the individual waves range from  $0.087$  to  $0.160$ . Reassuringly, we find rather small differences across the waves, suggesting that the effects are not driven by time trends.<sup>18</sup> The size of the treatment effect is substantial, comparable to the *ceteris paribus* difference of moving one unit on a three-point political knowledge scale. One also has to keep in mind that we measure the outcome right after the respondents have read the short text. As a result, respondents are, on average, very close to the correct answer. The average distance to the correct answer is  $1.03$ . Estimated coefficients for issue fixed effects in the pooled data show that respondents are closer to the correct answer when the statement is about refugees than when it is about the budget. Again, this might stem from the high salience of the subject due to the refugee crisis. In addition, we explore whether respondents with high political interest and knowledge respond differently to our treatment. As shown in table SI 15, we do not find evidence for such heterogeneous treatment effects. In sum, we find robust evidence across survey waves that support our first hypothesis and are in line with previous findings reported in Bischof and Senninger (2018). However, our findings add the important layer to previous research that the effect of sophistication is plausibly causal in our study design.

### Sophistication as a heuristic

Our second hypothesis states that sophisticated statements affect citizens' perception of politicians. More specifically, we expect that citizens use sophistication as a heuristic such that politicians using sophisticated language will be perceived as belonging to a higher class and having a higher education. Figure 4 reports the effects of our sophistication treatment on politicians' social class and educational backgrounds. Recall that our design did not include any information on the educational and social class backgrounds of message senders.

18. Citizens might engage differently with positions and statements of their own party compared to positions and statements of other parties (Brader et al. 2012; Slothuus 2010; Taber and Lodge 2006; Zaller 1992). All our findings are robust to the inclusion of a variable indicating whether the party presented in the treatment text matches the respondent's preferred party as well as the interaction of this variable with the treatment variable (see Model 4 in tables SI 8–SI 13).

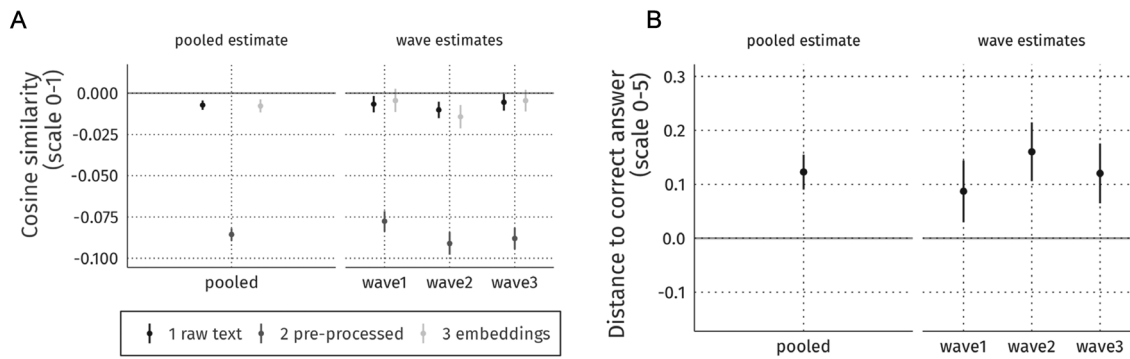


Figure 3. OLS regression: average treatment effect of sophisticated political communication on message recall. Average treatment effect estimate and 95% CI. (A) Results using the cosine similarity as the outcome variable. (B) Results using the distance to the “correct” position as the outcome variable. Results are based on the specification in Model 3 in tables SI 8 and S 11. Please note that the y-axes differ across panels.

Thus, any guesses by respondents on these factors are plausibly only driven by differences across the treatment conditions—meaning political sophistication.

Figure 4A reports the findings for social class, while the figure 4B reports findings for educational backgrounds. Drawing on the pooled data reported in figure 4A, we find that citizens indeed seem to draw conclusions about politicians’ class belonging based on the level of sophistication in their statements. It shows that the predicted probability of seeing the politician as belonging to the upper class is 40.1% (95% CI: 38.4, 41.9) for exposure to statements that display simple statements and 43.5% (95% CI: 41.7, 45.2) for exposure to sophisticated statements. While the direction of the estimated effect of sophisticated communication on perceived class belonging is stable across the cross sections of our survey, the effect size varies and the estimate is not statistically different from zero in cross sections 2 and 3.<sup>19</sup>

We now turn to the treatment effect on the educational background in figure 4B. The estimates resulting from the pooled data show that the predicted probability of stating that the politician has a high level of education is 42.8% (95% CI: 41.0, 44.5) if respondents are exposed to a sophisticated statement. In the case of reading the simple statement, the predicted probability is only 36.5% (95% CI: 34.8, 38.3). As a result, textual sophistication of political statements seems to send a very strong signal about the educational background of politicians. As shown in figure 4B, the effect is strongest in wave 1, but the result holds across survey waves.

Our treatment might affect respondents’ perceptions of politicians differently depending on individual-level characteristics. Even though we have not preregistered specific hy-

potheses regarding heterogeneous treatment effects, we explore two relevant ways in which individuals’ responses to the treatment might differ. The prime motivation for reporting specifically these effects is that colleagues time and again asked us about them. First, it might be that supporters of the populist far-right party AfD respond stronger to sophisticated political communication than other respondents. However, we find that AfD supporters (measured by means of party identification and self-reported vote choice) do not differ in their response to the treatment (see table SI 16). In addition, it might be that respondents’ own educational and class backgrounds affect responses to the treatment. Also, here, we do not find any significant differences in responses to the treatment across individuals with different levels of education and class background (see table SI 17).

We note that almost all respondents provide answers to all profile elements—even though the question design clearly indicates that not answering the question would have been an option. Throughout all cross sections, more than 98% of respondents who read the task description also provide a profile element about politicians’ social class and educational background (see table SI 7). This suggests that most respondents enjoyed engaging with the drag-and-drop task.

One concern of the tests on heuristics discussed above is that linguistic sophistication might not only affect how respondents perceive unknown characteristics of message senders but also how they classify experimentally revealed characteristics. For instance, well-known gender biases might be implicitly at play (Brians 2005; Chiao, Bowman, and Gill 2008; Rohrbach et al. 2020): Respondents might read simpler language as a descriptive trait more likely to occur for female politicians than male politicians. In turn, they might implicitly use this mechanism to guess the gender of the message sender if they are not able to recall it. To further substantiate that our treatment (i.e., sophisticated statements by politicians) is

19. Since the profile question is only asked after the last treatment, we have substantially less power in these estimates. Nonsignificance in cross sections 2 and 3 is thus likely to be driven by lower power in the design.

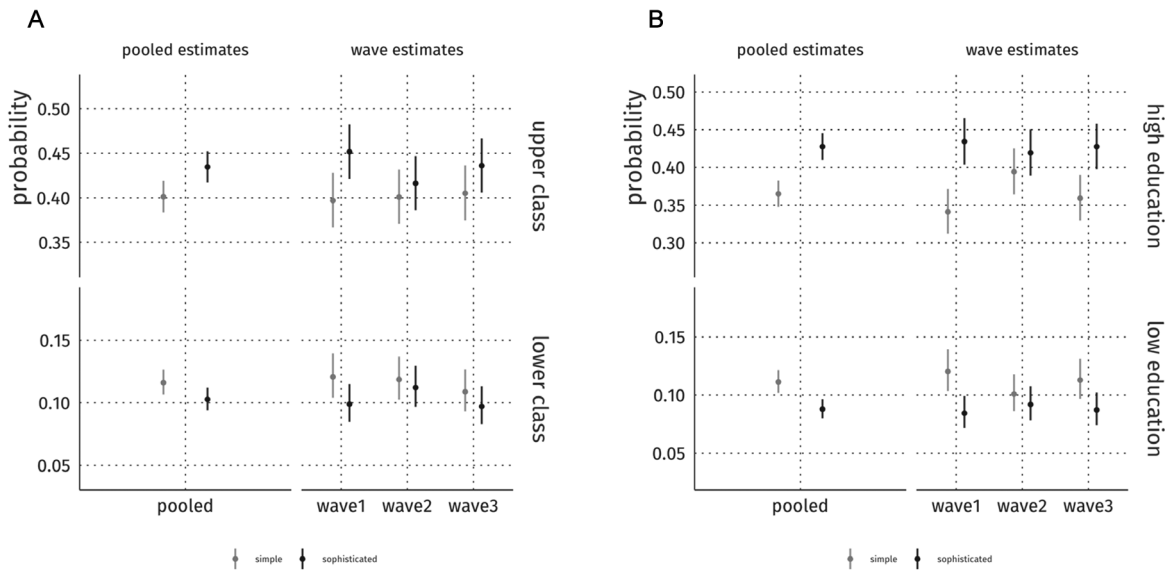


Figure 4. Ordinal logistic regression: politicians’ class and education. Predicted probability and 95% CI. For regression tables based on the pooled data, see table SI 12 and table SI 13. Middle categories (“middle class” and “intermediate education”) are omitted.

responsible for citizens’ perception of politicians, we report the findings of a robustness test below. We do so by testing if the treatment affects other outcome categories in the profile questions that are part of our treatment texts and potentially recalled by respondents—namely, party affiliation and gender. If outcomes regarding the two features are affected by the treatment, it is evidence that the treatment affects outcomes that it should not affect, which could be due to unobserved characteristics of textual differences.

Figure 5B and C present predicted probabilities for possible answers to the two outcome variables gender and party. Reassuringly, we find no differences in the predicted probabilities across treatment conditions (i.e., simple versus sophisticated). The point estimates are almost identical for simple and sophisticated treatments. In addition, figure 5A shows that there are also no differences with regard to stating the correct gender and party. In sum, we find that our treatment only affects outcomes that were not seen beforehand, which is evidence that respondents use politicians’ language as a heuristic for unknown characteristics and qualities of the politician.<sup>20</sup>

### Sophistication as an electoral heuristic

Our final hypothesis concerns the electoral effects of politicians’ linguistic styles. If voters rely on language sophisti-

20. In our preanalysis plan, we register an additional hypothesis and analysis regarding respondents’ engagement with messages. We propose that citizens engage less with sophisticated messages and find that the predicted probability of sharing a politician’s statement on social media is indeed lower for citizens who were exposed to sophisticated statements compared to citizens who read simpler statements.

cation as a heuristic, we expect to see politicians using simple language to be rewarded electorally. This is because they are perceived as being among the masses, “humble” candidates rooted in their communities. To test this last hypothesis, we conducted a second experiment: a preregistered large-scale conjoint survey experiment.<sup>21</sup> A conjoint experiment allows us to set up a multidimensional context providing information about several candidate characteristics and draw a causal relationship between the politicians’ language sophistication and citizens’ voting behavior. We surveyed 7,200 German citizens between August 19 and September 2, 2022. We again partnered with Bilendi to collect our data and apply quota sampling involving individuals that represent the voting age population according to age, gender, and state.

After an introductory screen, respondents were presented with six choice vignettes, each depicting a contest between two current Members of Parliament who run for election. The two profiles randomly exhibit information about the candidate’s position with regard to climate change. For this purpose, we reuse the treatment text on climate change described above and randomly vary whether the position is for, neutral, or against.<sup>22</sup> The texts then again vary in their level

21. The anonymous preanalysis plan is available online ([https://as-predicted.org/blind.php?x=ND4\\_3BX](https://as-predicted.org/blind.php?x=ND4_3BX)). We do not deviate from the preanalysis plan but added some exploratory analysis (see app. sec. SI.5.1).

22. Keep in mind that we ran the conjoint experiment two years after our first experiment. This meant that the budget and the migration treatments in our first experiment were no longer part of the policy debate, which had moved on to questions about crisis management and the war in Ukraine. We thus opted for the climate issue, as it was salient in the policy debate and because the treatment texts were not outdated.

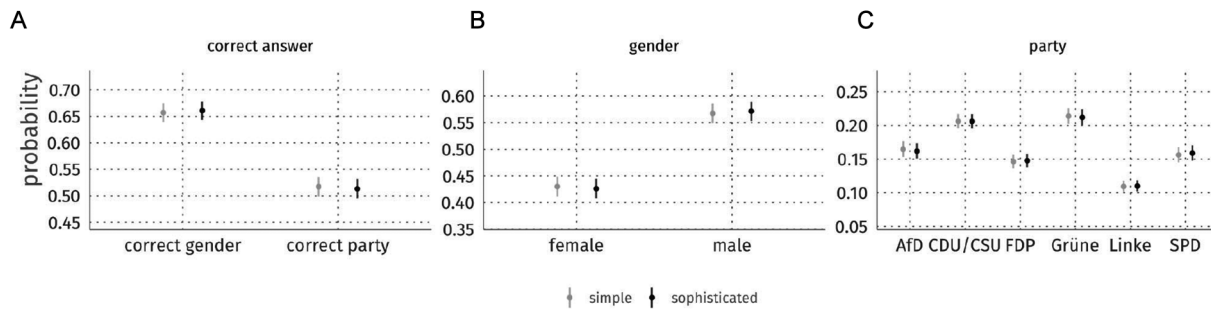


Figure 5. Binary and multinomial logistic regression: predicted probabilities regarding party and gender. Predicted probability and 95% CI. For regression tables, see table SI 14. *y*-axes differ across panels.

of language sophistication (i.e., simple versus sophisticated). The vignettes include additional features that have shown to be of high importance to voters (see, e.g., Bansak, Hainmueller, and Hangartner 2016; Horiuchi, Smith, and Yamamoto 2018; Senninger and Bischof 2023).

Crucially, our theory assumes that information environments might matter for how much voters make use of language as a heuristic: In environments with less information (henceforth low information), simple messages should be more relevant heuristics than in high information environments. To approximate such environments in our conjoint experiment, we vary the amount of candidate characteristics shown to respondents (for a similar approach, see Kirkland and Coppock 2018). Notice that the goal of our design is to perfectly mimic a “lower” versus a “higher” information environment. The intention is not to perfectly mirror a “low” and “high” information environment because this varies tremendously across the contexts in which political messages are embedded. The first three vignettes include the party affiliation, gender, and age of the candidates. This is our low information environment. The final three vignettes add candidates’ experience, occupation, and their motivation to run. Because of the comprehensive information about the candidates presented in the final three vignettes, we label this the high information environment. We use a factual manipulation check to assess respondent attentiveness, which is described in appendix SI.5.3.<sup>23</sup>

We estimate the average marginal component effect (AMCE), which represents how much the probability of choosing a candidate changes on average if one candidate’s attribute switched levels. The AMCE represents a summary of voters’ multidimensional preferences that combines directionality and intensity (Abramson, Kocak, and Magazinnik 2022;

Bansak et al. 2023). With regard to language sophistication, we find no direct effects on the probability of choosing a candidate on average. The difference for the low information environment shown in figure 6 is not statistically significant at conventional levels; the reported AMCE points in the expected direction but is small in size (20.7 percentage point change). The same is the case for the positive AMCE in the high information environment (0.2 percentage point change) shown in figure 7.

While we do not find support for the idea that simple language makes candidates more attractive at the ballot box, the level of sophistication in candidates’ political communication might play a role for how citizens respond to a candidate’s policy position. As discussed regarding our first theoretical expectation, there is a plausible argument that using sophisticated communication might hinder citizens’ comprehension and recall. When a policy position is presented in a sophisticated manner, there is a possibility that it could be misunderstood or met with increased uncertainty. This, in turn, could result in reduced support for a candidate, despite them holding a preferred policy position. Therefore, we examine whether sophistication plays a role in influencing respondents’ preferences for candidates and their climate policy position. We want to highlight that this analysis aligns with our theoretical expectations and could offer insights for future research concerning the connection between linguistic style and citizens’ perceptions of politicians. However, it is crucial to acknowledge that the analysis has not been preregistered. Hence, it should be viewed as an exploratory analysis and interpreted cautiously.

We find that respondents care a lot about candidates’ positions on climate change. In both information environments, we see that the probability of choosing a candidate increases on average if the level switches from against to neutral (11 percentage points in the high information environment and 12 percentage points in the low information environment) and even more so if the level switches from against to for (14 percentage points in the high information environment

23. In the main part of this article, we analyze data from the full sample. In the appendix, we show results for subsamples with a successful and unsuccessful manipulation test (see fig. SI 10 and fig. SI 11).

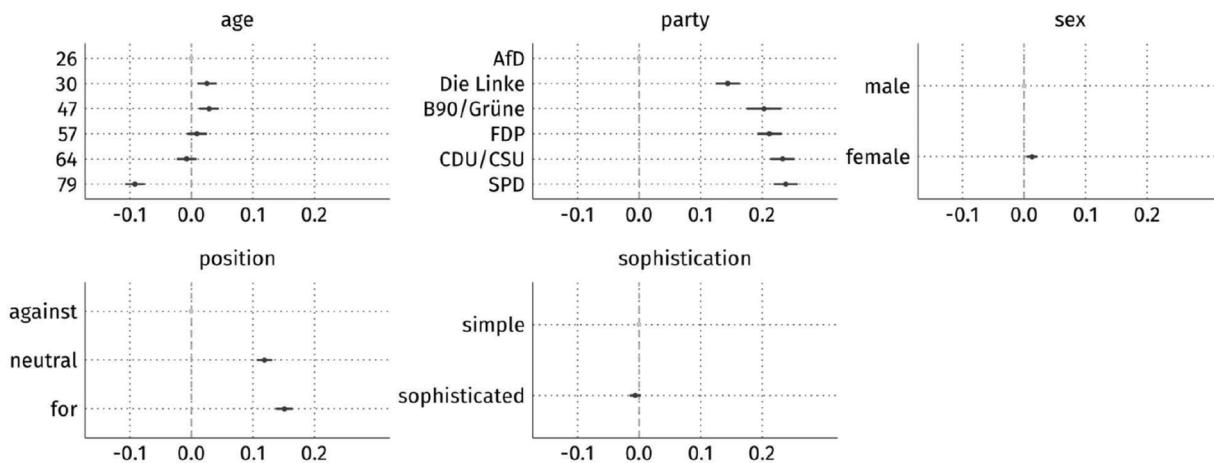


Figure 6. Conjoint experiment. AMCEs: high information environment. y-axes differ across panels.

and 15 percentage points in the low information environment). At the time of writing, this result aligns well with the current emphasis on climate issues and the backing for climate action. It highlights that respondents prioritize candidates who support climate action, showcasing the significant role of candidates’ policy positions for vote choice.<sup>24</sup>

To examine whether language sophistication relates to respondents’ preference for candidates with a proclimate stance, we estimate the average component interaction effect between candidates’ positions and their level of sophistication. In the case of the low information environment, the findings suggest that a sophisticated style of communication reduces the positive effect of the position. Figure 8 reports this interaction effect by plotting the AMCE’s separately for simple and sophisticated communication.

Figure 8A illustrates that the positive probabilities of choosing a candidate with an active climate change agenda (i.e., “neutral” and “for”) are almost cut in half if the politician communicates in a sophisticated manner. This suggests that respondents indeed respond to the manipulation of the level of sophistication in the texts. We do not see this effect in the high information environment (fig. 8B), which suggests that the level of sophistication matters less if additional information about the candidate is presented. In the appendix, we perform additional analysis akin to the first experiment and show that there are no significant differences in responses to candidates’ level of sophistication across individuals supporting the populist far-right AfD and those who support

other parties (see figs. SI 6 and SI 7). In addition, we find that voting preferences across respondents belonging to the lower, middle, and upper class are very similar (see figs. SI 8 and SI 9).

## DISCUSSION

Relying on two large-scale and well-powered survey experiments in Germany, we test the effect of simple language in political statements on voters. In our first experiment, a vignette survey experiment ( $n = 5,800$ ), we show that linguistic simplicity affects citizens in two important ways. First, we find that linguistic simplification fulfills its more mechanical effect of alleviating citizens’ knowledge. This finding speaks to a growing scholarly interest in how the tone and style of speech affect citizens and their perception of campaign messages (Benoit et al. 2019; Eichorst and Lin 2019; Slapin and Kirkland 2020). In particular, research on linguistic sophistication in political science is based on the idea that how politicians speak to their voters should affect citizens’ perception of politics. Yet, studying these effects is difficult—nearly impossible with observational data—and, therefore, rarely done. Our study is the first to actually test and report the causal effects of political sophistication on citizens’ perceptions of politicians. This finding has severe implications for contemporary political discourses—often described as too complex and detached from citizens.

Second and most crucially, this first experiment reveals the “heuristic effects” of linguistic sophistication. Simpler messages can influence how citizens perceive politicians’ socioeconomic backgrounds in low information environments. Our respondents become significantly more likely to perceive politicians to have lower education and lower social class status if messages are kept simpler, while the opposite is the case if messages become more sophisticated. We further underpin these findings by reporting a set of robustness tests revealing

24. However, these are average effects, and it is important to note that not all participants have the same preferences for politicians with proclimate stances. Citizens who support the Greens, SPD, and the Linke tend to prefer such politicians more than those who vote for the CDU/CSU, FDP, and particularly the AfD (see fig. SI 12).

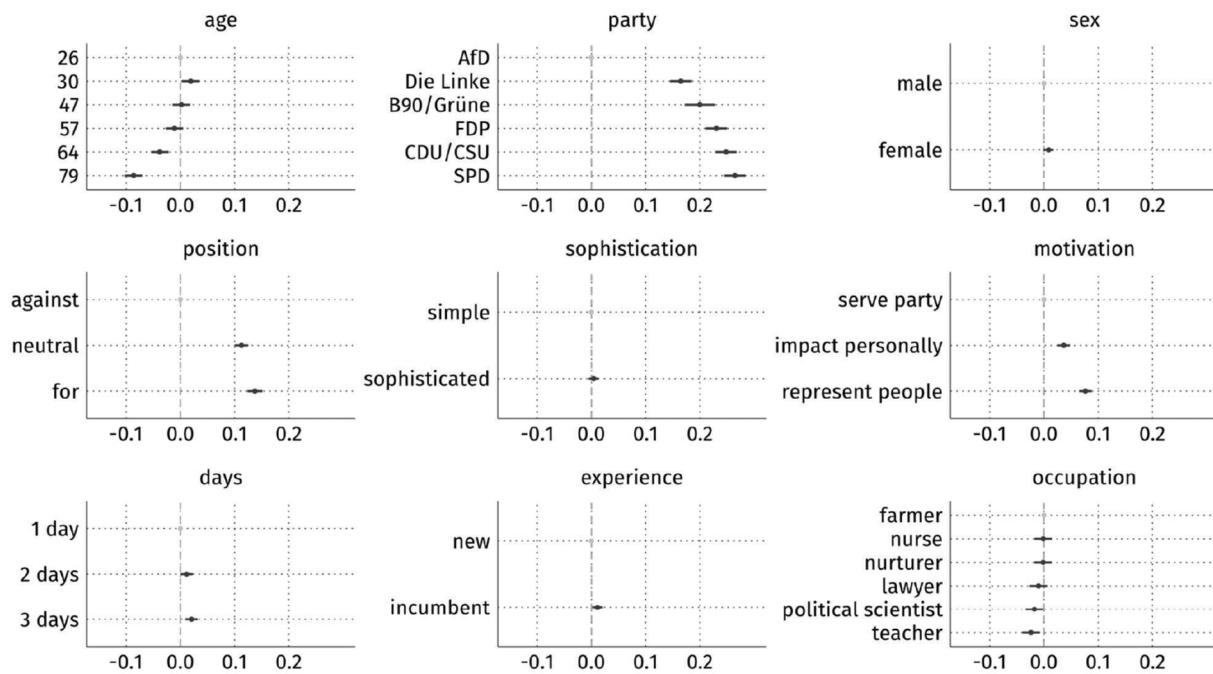


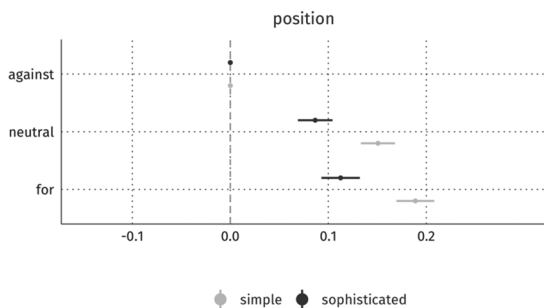
Figure 7. Conjoint experiment. AMCEs: low information environment. *y*-axes differ across panels.

that our treatment has no effect on how citizens judge politicians’ gender and party affiliation—both characteristics revealed in the treatment texts. This finding has implications well beyond the study of linguistic sophistication in politics. It reveals that style of speech can potentially be strategically used by politicians to signal to their citizens which socioeconomic backgrounds of society they seek to represent. Given that almost all politicians in Western democracies are far better off than their citizens—in fact part of “the elite”—using “the language of the bar” might indeed be a strategic tool to chum up to voters (Mancini 2015, 84–90). From this perspective, sophistication can be understood as a form of descriptive representation in which language is strategically used to relate

to specific voter segments while signaling more distance to others. Finally, it speaks well to the rich conceptual knowledge that scholarly work on populism has provided us with (Canovan 1999; Kriesi 2018; Mudde 2004; Taggart 2002, 76).

In our second experiment, based on a large-scale conjoint experiment ( $n = 7,200$ ), we do not find that the sophistication of political messages has direct electoral effects. We find that other important candidate features such as party affiliation and political positions matter most. This implies that language sophistication seems to play a more minor role in the electoral arena than media reports have speculated. This is reassuring for democracies: It appears that voters perceive message sophistication, but that it cannot be used to lure

**A Low-information environment**



**B High-information environment**

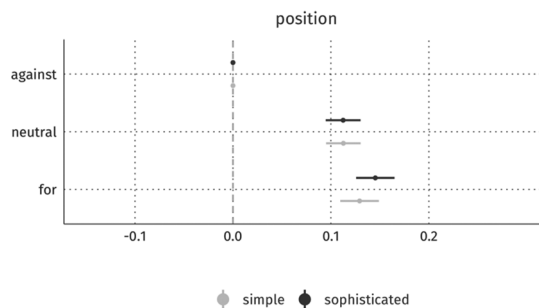


Figure 8. Conjoint experiment: position AMCEs for simple and sophisticated communication. *y*-axes differ across panels.

voters to support candidates that they do not support ideologically. This is especially the case in high information environments. However, as we show in low-information environments—arguably the environment in which many voters make decisions given that previous research underlines their limited knowledge about candidates and politics (Crowder-Meyer et al. 2020; Fowler and Margolis 2014; Lupia 2016; Rittmann et al. 2023)—sophisticated language can diminish the effect of candidates' policy positions on electoral approval. We thus speculate that repeated messages during campaigns, specifically if candidates show stronger ideological alignment in policy positions, such as during primaries, might nevertheless rest with voters and their perception of candidates. Also, impressions about politics and politicians are shaped by their everyday behavior; politics is not only about voters' decision-making at the ballot box but also about their satisfaction with democratic processes and feeling of being represented.

Given that we rely on experimental designs, questions of generalizability naturally emerge. The German language might be considered as fairly specific in its sophistication, specifically in terms of grammar, as it allows speakers to build very complicated syntax. Yet, every language knows simpler and more complex forms of speech, and we show that Germany serves as a representative example in the realm of simple and sophisticated political communication. Thus, we have little reason to assume that our findings do not travel beyond the German case. In other aspects, such as the party system, the German case very much resonates with other countries. All in all, we find that there is little reason to believe that our findings do not travel beyond the German case.

It has to be noted that we rely on a survey experimental setting in which clearly identifiable statements by politicians are presented. In the real world, such settings are less frequently observed. Statements are oftentimes embedded into larger journalistic pieces and might also be presented in a debate type of style—with “pro” and “anti” positions taking turns. This might mean that in such settings, a brief statement could have less of an effect than we find above. However, political actors of course present their citizens with several messages across electoral cycles, which also allows them to present a coherent linguistic style to them. This, then, is much closer to the information citizens received in our experiments. The repeated usage of language can resonate with voters and might then also have electoral effects if used prominently and often enough. This is speculation on our end and will need to be put to the test in future research.

Finally, a key debate our article speaks to is a normative one: How simple should political messaging be? Our findings emphasize that voters might struggle to follow political

statements if they are too complex and filled with jargon. Our open responses contain several statements that explicitly stated that respondents do not understand our complex statements. Keeping in mind that respondents faced our statements in an experimental environment without being embedded in larger political debates, a key message of our findings must be that political messages should seek to use simple language even when engaging with complex concepts and topics.

## ACKNOWLEDGMENTS

We would like to thank Troels Bøggild, Love Christensen, Francesco Colombo, Valentin Daur, Silvia Decadri, Christoffer Green-Pedersen, Carsten Jensen, Lukas Haffert, Frederik Hjorth, Robert A. Huber, Steffen Hurka, Ann-Kristin Kölln, Jordi Muñoz, Tom O'Grady, Christian Rauh, Martijn Schonvelde, Julia Schulte-Cloos, Henrik Seeberg, Kristina Bakkær Simonsen, Jon Slapin, Rune Slothuus, Mathias Tromborg, Vicente Valentim, Markus Wagner, Sarah Wagner, Tobias Widmann, Chris Wratil, and Fabio Wolkenstein for feedback and comments. Our preanalysis plan and previous versions of this article have been presented at Aarhus University, the University of Lisbon, LMU Munich, the Online Populism Seminar, the Online Text-as-Data Seminar, and the Publication Seminar in the Department of Political Science at the University of Zurich. Special thanks go out to Céline Colombo, who was originally collaborating with us and had a profound influence on the design of our study before leaving academia; thanks Céline!

## REFERENCES

- Abramson, Scott F., Korhan Kocak, and Asya Magazinnik. 2022. “What Do We Learn About Voter Preferences from Conjoint Experiments?” *American Journal of Political Science* 66 (4): 1008–20.
- Achen, Christopher, and Larry M. Bartels. 2017. *Democracy for Realists*. Princeton University Press.
- Adams, James, Michael Clark, Lawrence Ezrow, and Garrett Glasgow. 2004. “Understanding Change and Stability in Party Ideologies: Do Parties Respond to Public Opinion or to Past Election Results?” *British Journal of Political Science* 34 (4): 589–610.
- Anderson, Jonathan. 1981. “Analysing the Readability of English and Non-English Texts in the Classroom with Lix.” Presented at the annual meeting of the Australian Reading Association, Darwin, Australia.
- Anderson, Jonathan. 1983. “Lix and Rix: Variations on a Little-Known Readability Index.” *Journal of Reading* 26 (6): 490–96.
- Bansak, Kirk, Jens Hainmueller, and Dominik Hangartner. 2016. “How Economic, Humanitarian, and Religious Concerns Shape European Attitudes Toward Asylum Seekers.” *Science* 354 (6309).
- Bansak, Kirk, Jens Hainmueller, Daniel J. Hopkins, and Tepei Yamamoto. 2023. “Using Conjoint Experiments to Analyze Election Outcomes: The Essential Role of the Average Marginal Component Effect.” *Political Analysis* 31 (4) 500–18.
- Bartels, Larry M. 1996. “Uninformed Votes: Information Effects in Presidential Elections.” *American Journal of Political Science* 40 (1): 194–230.

- Benoit, Kenneth, Kevin Munger, and Arthur Spirling. 2019. "Measuring and Explaining Political Sophistication Through Textual Complexity." *American Journal of Political Science* 63 (2): 491–508.
- Biemann, Chris, Felix Bildhauer, Stefan Evert, et al. 2013. "Scalable Construction of High-Quality Web Corpora." *JLCL* 28 (2): 23–59.
- Bischof, Daniel, and Roman Senninger. 2018. "Simple Politics for the People? Complexity in Campaign Messages and Political Knowledge." *European Journal of Political Research* 57 (2): 473–95.
- Bisgaard, Martin, and Rune Slothuus. 2018. "Partisan Elites as Culprits? How Party Cues Shape Partisan Perceptual Gaps." *American Journal of Political Science* 62 (2): 456–69.
- Brader, Ted, Joshua A. Tucker, and Dominik Duell. 2012. "Which Parties Can Lead Opinion? Experimental Evidence on Partisan Cue Taking in Multiparty Democracies." *Comparative Political Studies* 46 (11): 1485–517.
- Brians, Craig Leonard. 2005. "Women for Women? Gender and Party Bias in Voting for Female Candidates." *American Politics Research* 33 (3): 357–75.
- Bullock, John G. 2011. "Elite Influence on Public Opinion in an Informed Electorate." *American Political Science Review* 105 (3): 496–515.
- Canovan, Margaret. 1999. "Trust the People! Populism and the Two Faces of Democracy." *Political Studies* 47 (1): 2–16.
- Caramani, Daniele. 2017. "Will vs. Reason: The Populist and Technocratic Forms of Political Representation and Their Critique to Party Government." *American Political Science Review* 111 (1): 54–67.
- Carnes, Nicholas, and Noam Lupu. 2016. "Do Voters Dislike Working-Class Candidates? Voter Biases and the Descriptive Underrepresentation of the Working Class." *American Political Science Review* 110 (4): 832–44.
- Chiao, Joan Y., Nicholas E. Bowman, and Harleen Gill. 2008. "The Political Gender Gap: Gender Bias in Facial Inferences that Predict Voting Behavior." *PloS One* 3 (10): e3666.
- Chong, Dennis, and James N. Druckman. 2007. "Framing Theory." *Annual Review of Political Science* 10:103–26.
- Crabtree, Charles, S. Michael Gaddis, John B. Holbein, and Edvard Nergård Larsen. 2022. "Racially Distinctive Names Signal Both Race/Ethnicity and Social Class." *Sociological Science* 9:454–72.
- Crowder-Meyer, Melody, Shana Kushner Gadarian, and Jessica Trounstein. 2020. "Voting Can Be Hard, Information Helps." *Urban Affairs Review* 56 (1): 124–53.
- Cutler, Fred. 2002. "The Simplest Shortcut of All: Sociodemographic Characteristics and Electoral Choice." *Journal of Politics* 64 (2): 466–90.
- Dafoe, Allan, Baobao Zhang, and Devin Caughey. 2018. "Information Equivalence in Survey Experiments." *Political Analysis* 26 (4): 399–416.
- Dalton, Russell, Scott C. Flanagan, and Paul A. Beck. 1984. *Electoral Change and in Advanced Industrial Democracies*. Princeton University Press.
- Decadri, Silvia, and Constantine Boussalis. 2020. "Populism, Party Membership, and Language Complexity in the Italian Chamber of Deputies." *Journal of Elections, Public Opinion and Parties* 30 (4): 484–503.
- Devlin, Jacob, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. 2018. "BERT: Pre-Training of Deep Bidirectional Transformers for Language Understanding." Preprint, arXiv. <https://doi.org/10.48550/arXiv.1810.04805>.
- Druckman, James N. 2001. "The Implications of Framing Effects for Citizen Competence." *Political Behavior* 23 (3): 225–56.
- Druckman, James N. 2022. *Experimental Thinking: A Primer on Social Science Experiments*. 1st ed. Cambridge University Press.
- Egami, Naoki, Christian J. Fong, Justin Grimmer, Margaret E. Roberts, and Brandon M. Stewart. 2022. "How to Make Causal Inferences Using Texts." *Science Advances* 8 (42).
- Eichorst, Jason, and Nick C. N. Lin. 2019. "Resist to Commit: Concrete Campaign Statements and the Need to Clarify a Partisan Reputation." *Journal of Politics* 81 (1): 15–32.
- Findley, Michael G., Kyosuke Kikuta, and Michael Denly. 2021. "External Validity." *Annual Review of Political Science* 24 (1): 365–93.
- Flesch, Rudolph. 1948. "A New Readability Yardstick." *Journal of Applied Psychology* 32 (3): 221–33.
- Fowler, Anthony, and Michele Margolis. 2014. "The Political Consequences of Uninformed Voters." *Electoral Studies* 34:100–10.
- Hayward, Freddie, and Guy Faulconbridge. 2019. "Boris Johnson's Magniloquent Tongue Reaps Political Gold, Linguists Say." *Reuters*. <https://www.reuters.com/article/uk-britain-eu-leader-johnson-language/boris-johnsons-magniloquent-tongue-reaps-political-gold-linguists-say-idINKCN1UI1LK>.
- Hetherington, Marc J. 1998. "The Political Relevance of Political Trust." *American Political Science Review* 92 (4): 791–808.
- Horiuchi, Yusaku, Daniel M. Smith, and Tepei Yamamoto. 2018. "Measuring Voters' Multidimensional Policy Preferences with Conjoint Analysis: Application to Japan's 2014 Election." *Political Analysis* 26 (2): 190–209.
- Hoyt, Crystal L., and Brenten H. DeShields. 2020. "How Social-Class Background Influences Perceptions of Political Leaders." *Political Psychology* 42 (2).
- Kane, John V., and Jason Barabas. 2019. "No Harm in Checking: Using Factual Manipulation Checks to Assess Attention in Experiments." *American Journal of Political Science* 63 (1): 234–49.
- Kirkland, Patricia A., and Alexander Coppock. 2018. "Candidate Choice Without Party Labels." *Political Behavior* 40 (3): 571–91.
- Kjell, Oscar, Salvatore Giorgi, and H. Andrew Schwartz. 2023. "The Text-Package: An R-Package for Analyzing and Visualizing Human Language Using Natural Language Processing and Transformers." *Psychological Methods* 28 (6): 1478–98.
- Klare, George R. 1963. *The Measurement of Readability*. Iowa State University Press.
- Klüver, Heike, and Jae-Jae Spoon. 2016. "Who Responds? Voters, Parties and Issue Attention." *British Journal of Political Science* 46 (3): 633–54.
- Knox, Dean, and Christopher Lucas. 2021. "A Dynamic Model of Speech for the Social Sciences." *American Political Science Review* 115 (2): 649–66.
- Kriesi, Hanspeter. 2018. "Revisiting the Populist Challenge." *Politologicky Casopis* 25 (1): 5–27.
- Lupia, Arthur. 2016. *Uninformed: Why People Know So Little About Politics and What We Can Do About It*. Oxford University Press.
- Mancini, Paolo. 2015. *IL post partito; La fine delle grandi narrazioni*. Societa editrice IL mulin.
- McDonnell, Duncan, and Stefano Ondelli. 2022. "The Language of Right-Wing Populist Leaders: Not So Simple." *Perspectives on Politics* 20 (3): 828–41.
- Montgomery, Jacob M., Brendan Nyhan, and Michelle Torres. 2018. "How Conditioning on Posttreatment Variables Can Ruin Your Experiment and What to Do About It." *American Journal of Political Science* 62 (3): 760–75.
- Mudde, Cas. 2004. "The Populist Zeitgeist." *Government and Opposition* 39 (4): 542–63.
- Mutz, Diana C. 2011. "Population-Based Survey Experiments." In *Population-Based Survey Experiments*. Princeton University Press.
- Petersen, Michael Bang. 2015. "Evolutionary Political Psychology: On the Origin and Structure of Heuristics and Biases in Politics." *Political Psychology* 36:45–78.
- Pitler, Emily, and Ani Nenkova. 2008. "Revisiting Readability: A Unified Framework for Predicting Text Quality." In *Proceedings of the 2008 Conference on Empirical Methods in Natural Language Processing*. Association for Computational Linguistics, 186–95.
- Popkin, Samuel L. 1991. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. University of Chicago Press.

- Popkin, Samuel. 1995. "Information Shortcuts and the Reasoning Voter." In Bernard Grofman, ed., *Information, Participation, and Choice: An Economic Theory of Democracy in Perspective*. University of Michigan Press.
- Redish, Janice G. 2000. "Readability Formulas Have Even More Limitations than Klare Discusses." *ACM Journal of Computer Documentation* 24 (3): 132–37.
- Rittmann, Oliver, Marie-Lou Sohnius, and Thomas Gschwend. 2023. "Candidate Awareness in Mixed-Member Electoral Systems: A Data-Driven Approach." *Electoral Studies* 86:102700.
- Robison, Joshua, Rune Stubager, Mads Thau, and James Tilley. 2020. "Does Class-Based Campaigning Work? How Working Class Appeals Attract and Polarize Voters." *Comparative Political Studies* 54 (5). <https://doi.org/10.1177/0010414020957684>.
- Rohrbach, Tobias, Stephanie Fiechtner, Philomen Schönhagen, and Manuel Puppis. 2020. "More Than Just Gender: Exploring Contextual Influences on Media Bias of Political Candidates." *International Journal of Press/Politics* 25 (4): 692–711.
- Rovny, Jan. 2012. "Where Do Radical Right Parties Stand? Position Blurring in Multidimensional Competition." *European Political Science Review* 5:1–26.
- Schoonvelde, Martijn, Anna Brosius, Gijs Schumacher, and Bert N. Bakker. 2019. "Liberals Lecture, Conservatives Communicate: Analyzing Complexity and Ideology in 381,609 Political Speeches." *PLoS ONE* 14 (2): 1–15.
- Seeberg, Henrik Bech, Rune Slothuus, and Rune Stubager. 2017. "Do Voters Learn? Evidence That Voters Respond Accurately to Changes in Political Parties' Policy Positions." *West European Politics* 40 (2): 336–56.
- Senninger, Roman, and Daniel Bischof. 2023. "Do Voters Want Domestic Politicians to Scrutinize the European Union?" *Political Science Research & Methods* 11 (2): 410–18.
- Shugerman, Emily. 2018. "Trump Speaks at Level of 8-Year-Old, New Analysis Finds." *The Independent*. <https://www.independent.co.uk/news/world/americas/us-politics/trump-language-level-speaking-skills-age-eight-year-old-vocabulary-analysis-a8149926.html>.
- Slapin, Jonathan B., and Justin H. Kirkland. 2020. "The Sound of Rebellion: Voting Dissent and Legislative Speech in the UK House of Commons." *Legislative Studies Quarterly* 45 (2): 153–76.
- Slapin, Jonathan B., and Sven-Oliver Proksch. 2008. "A Scaling Model for Estimating Time-Series Party Positions from Texts." *American Journal of Political Science* 52 (3): 705–22.
- Slothuus, Rune. 2010. "When Can Political Parties Lead Public Opinion? Evidence from a Natural Experiment." *Political Communication* 27 (2): 158–77.
- Slothuus, Rune, and Claes H. De Vreese. 2010. "Political Parties, Motivated Reasoning, and Issue Framing Effects." *Journal of Politics* 72 (3): 630–45.
- Sniderman, Paul M., Richard A. Brody, and Phillip E. Tetlock. 1993. *Reasoning and Choice: Explorations in Political Psychology*. Cambridge University Press.
- Somer-Topcu, Zeynep. 2015. "Everything to Everyone: The Electoral Consequences of the Broad-Appeal Strategy in Europe." *American Journal of Political Science* 59:841–54.
- Spirling, Arthur. 2015. "Democratization and Linguistic Complexity: The Effect of Franchise Extension on Parliamentary Discourse, 1832–1915." *Journal of Politics* 77 (1): 235–48.
- Steenbergen, Marco R., and Céline Colombo. 2018. "Heuristics in Political Behavior." In Alex Mintz and Lesley G. Terris, eds., *The Oxford Handbook of Behavioral Political Science*. Oxford University Press, 13–36.
- Swaim, Barton. 2015. "How Donald Trump's Language Works for Him." *The Washington Post*. <https://www.washingtonpost.com/news/the-fix/wp/2015/09/15/how-trump-speak-has-pushed-the-donald-into-first-place/>.
- Taber, Charles S., and Milton Lodge. 2006. "Motivated Skepticism in the Evaluation of Political Beliefs." *American Journal of Political Science* 50 (3): 755–69.
- Taggart, Paul. 2002. "Populism and the Pathology of Representative Politics." In Yves Meny and Yves Surel, eds., *Democracies and the Populist Challenge*. Palgrave Macmillan.
- Valentim, Vicente, and Tobias Widmann. 2023. "Does Radical-Right Success Make the Political Debate More Negative? Evidence from Emotional Rhetoric in German." *Political Behavior* 45:243–64.
- Vivyan, Nick, Markus Wagner, Konstantin Glinitzer, and Jakob Moritz Eberl. 2020. "Do Humble Beginnings Help? How Politician Class Roots Shape Voter Evaluations." *Electoral Studies* 63:102093.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge University Press.
- Zárate, Marques G., Enrique Quezada-Llanes, and Angel D. Armenta. 2024. "Se Habla Español: Spanish-Language Appeals and Candidate Evaluations in the United States." *American Political Science Review* 118 (1): 363–79.
- Ziegler, Jeffrey. 2022. "A Text-as-Data Approach for Using Open-Ended Responses as Manipulation Checks." *Political Analysis* 30 (2): 289–97.