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Towards a model that measures the impact of disinformation on elections

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Abstract
Disinformation represents a danger to the integrity and legitimacy of the electoral process. From our research based on the 2021 Czech parliamentary elections, we introduce a model for measuring the resilience of citizens to disinformation. This model is then used to draw conclusions about the impact of disinformation on their voting behaviour. We argue that it is important to understand this impact in the context of pre-existing beliefs and opinions, and therefore in terms of disinformation reinforcing rather than changing existing views. In particular, we demonstrate how feeling disappointed with one political party can make people more inclined to endorse disinformation that targets it.

Keywords
Disinformation, Elections, Voting behaviour, Czech parliamentary elections 2021, Democracy

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Introduction

Disinformation remains a resonant topic of public debate, not only in the EU but also globally. Many discussions have focused on the role of disinformation in elections and its impact on voting behaviour (Schünemann 2022). Since free and fair elections represent the very fundament of the democratic political system, it is no wonder that so many people are concerned that the intentional spread of falsehoods might discredit them. Furthermore, the thought that the beliefs and political choices of fellow citizens are not genuine but motivated by misguided false stories is harmful to social cohesion and can undermine open deliberation about political matters. Therefore, the impact of disinformation on elections has to be a matter of rigorous research interest since a proper understanding of this phenomenon will enable us to better understand how the political process functions in the twenty-first century. Equally, looking at disinformation within the context of elections is beneficial since such a specific focus allows us to gain better insights into the role of this phenomenon in contemporary societies.

With these thoughts in mind, the authors decided to join forces to investigate the role of disinformation in the Czech parliamentary elections in 2021 and its interaction with voting behaviour. The research team comprised two entities: the think tank the Prague Security Studies Institute, with its notable expertise in the analysis of disinformation in the online information space, with a special emphasis on elections; and the STEM Institute for Empirical Research, which has been analysing the opinions of Czech citizens since 1992. The multidisciplinary setting of the project, combining skills in media monitoring and interpretation of public opinion, and including insights from political science, sociology and psychology, has allowed us to uncover the role of falsehoods during the elections and gain new knowledge about how people interact with them. With our research we did not aim to address only the context of Czechia in autumn 2021 but to suggest a general model which other researchers in different settings—such as the 2024 European elections—could utilise.

The main purpose of our model was to measure not solely exposure to or belief in disinformation but the resilience of respondents to falsehoods. In our understanding, the key indicator of resilience is the ability to orient oneself in the public debate—not only to recognise false statements but also to identify the factually correct criticisms of running parties. To make this measurement even more precise, we also included fabricated placebo statements about Czech political parties. These statements followed a similar logic to the misinformation that we noticed in the information space in the run-up to the elections. The reason for using placebo statements was to measure the ability of respondents to distinguish between a political bias (e.g. belief in any statement made against a party they dislike or disbelief of all news in general) and the influence of disinformation campaigns. While the combination of factually correct statements, misinformation and placebo headlines had already been used in research (see Allcott and Gentzkow 2017), our model, emphasising the ability to distinguish between them is, to our knowledge, a methodological innovation. We aimed to use this model not only to evaluate the impact of falsehoods prior to the 2021 elections, but also to better understand the audiences that

are receptive to disinformation. For this reason we reimagined the position of disinformation in causal relations and did not consider belief in falsehoods to be the single cause of a change in electoral behaviour but perceived it as part of a self-confirming cycle, in which it reinforces pre-existing stereotypes, opinions and emotions. In particular, our aim was to understand these interactions in the context of the broader socio-economic dynamics that are currently shaping the opinions and behaviour of Czech society.

Before elaborating further on our argumentation, a terminological remark is in order. Since we were not closely investigating the intent of the spreaders of the falsehoods appearing in the course of the election campaign period, we do not use the term *disinformation*, which would imply malicious intent. Rather we will use *misinformation*, referring to a false statement that is spread without malicious intent (for a complex summary of the terminological debate, see Kapantai et al. 2020). In the context of our research, each misinformation test statement consisted of a criticism of the political parties in the running, all of which were possible to verify and refute.

The article is structured as follows. First, we explain our methodology and demonstrate how our model is able to measure resilience to misinformation while overcoming bias related to the selection of the test statements. Second, we show that resilience to misinformation has important sociological underpinnings, which allows us to make an argument for the need for a holistic approach to tackling this threat. Finally, we return to the topic of voting behaviour and demonstrate that—in the right circumstances—everyone can be prone to believe in misinformation. Based on this knowledge, we formulate some general policy-oriented recommendations, which are presented in the final section of the article.

How to design a useful model?

The obvious research question about misinformation in the context of elections concerns its impact on the final results. While this might be the logical question, it is highly difficult to answer, since the academic community even disagrees about the impact of electoral campaigns on election results. Some scholars have observed that political preference tends to be stable over time and highlight the importance of socio-economic factors in electoral decision-making. Even those who are more inclined to believe that political campaigns play a role in influencing voters' behaviour argue that they face significant constraints since they not only have to reach out to voters but also change their existing opinions (Fisher 2018). The same consideration can be applied to the impact of misinformation on voting behaviour. Therefore, the research questions should be reframed thus: in which circumstances might misinformation impact voters and which voters are likely to be impacted?

The question of exposure to misinformation is also not as banal as it seems. Sociological research shows that people are not good at remembering if they have noticed a specific news item, or if they have, where they noticed it (Cardenal et al. 2022). Exposure also has to be put into the context of the broader dynamics of the information space (see, e.g. Allen

et al. 2020). A good illustration is the case of the so-called Pandora Papers, which we also touched on in our research. Shortly before the 2021 elections, journalists released the results of their investigative work into the offshore companies used by rich individuals to lower their taxes. Former prime minister and leader of majority party Yes (ANO), Andrej Babiš, was allegedly involved in such a scheme (Goodley et al. 2021). Unsurprisingly, this news was circulated widely in the Czech media space and became one of the important topics of political discussion. Yet our polling shows that 31% of our respondents were not aware of this news item. This finding forces us to reconsider the impact of misinformation, since there are groups of people who are able to ignore the news completely, including any circulating misinformation. As shown in the chart below, misinformation related to the elections only resonated with a small proportion of the population—only 14% of respondents believed two of the test statements, while just 11% believed three or four of them. This shows that the Czech public is, in general, less prone to believe misinformation related to elections than it is to believe in general conspiracy theories, which can affect the beliefs of about 40% of the population. Another notable finding is the existence of a sizeable group—28% of respondents—that did not believe any of the factually correct test statements. Our approach was based on the assumption that it is not sufficient to draw conclusions from the total number of people believing tested misinformation since there are significant groups of the population which believe either nothing or everything (meaning misinformation as well as factually correct statements).

Therefore, we decided to define resilience to misinformation as the ability to orient oneself in the public debate, which we measured by the ability to distinguish between the factually correct and factually incorrect statements related to the running parties. Being able to make such distinctions not only allows one to identify misinformation but may also help to control personal bias, since it demonstrates the ability to recognise the difference between the true and false criticisms of individual candidates.

When compiling the list of test statements, we utilised real-time media monitoring conducted by the Prague Security Studies Institute within the framework of the project 'Czech Elections in the Era of Disinformation' (Syrovátka and Šefčíková 2021). In total we tested 12 statements of 3 different kinds (real news, misinformation and placebo) for each of the 4 main political parties or coalitions running in the 2021 elections. The sociological polling was conducted in two waves—at the beginning of September and in the week after the elections (middle of October)—on a representative sample of the population. Based on their differing abilities to distinguish the reliability of the test statements, the respondents were divided into four clusters whose differing opinions and values were analysed. The most relevant cluster for this text, comprising the most vulnerable part of the population, is represented by the number 1 (= lowest ability to distinguish between different test statements) in the subsequent figures.

Societal factors as the key indicator of vulnerability

The definition of the vulnerable group of respondents allowed us to reach a deeper understanding of its characteristics. Perhaps surprisingly, the economic situation, level of
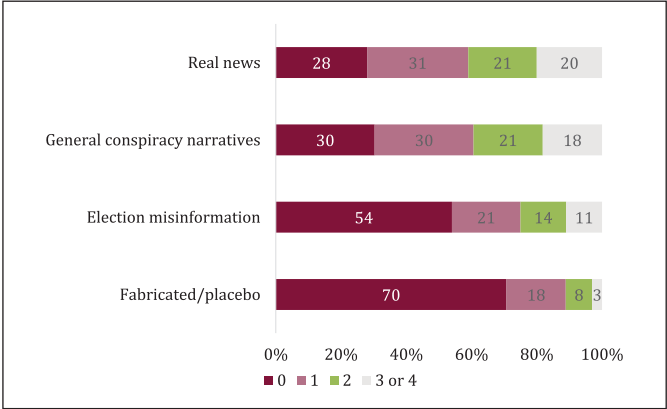
Figure 1. Number of headlines people believed.
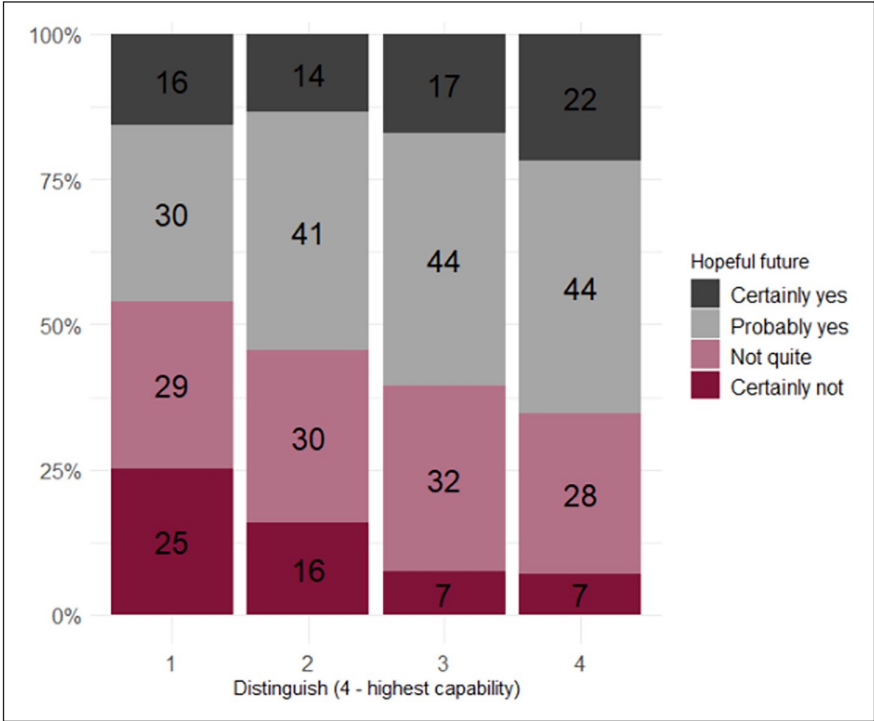*Source*: STEM research data 2021.

Figure 2. Perception of the future.
Source: STEM research data 2021.
Note: Survey question was, 'Do you look to the future with hope?' The respondents were sorted into four groups based on their ability to distinguish between different types of presented statements (real news, misinformation, placebo statements). The figure shows the results for the given groups (1 = lowest ability to distinguish/highest vulnerability to misinformation; 4 = highest ability to distinguish/lowest vulnerability to misinformation).
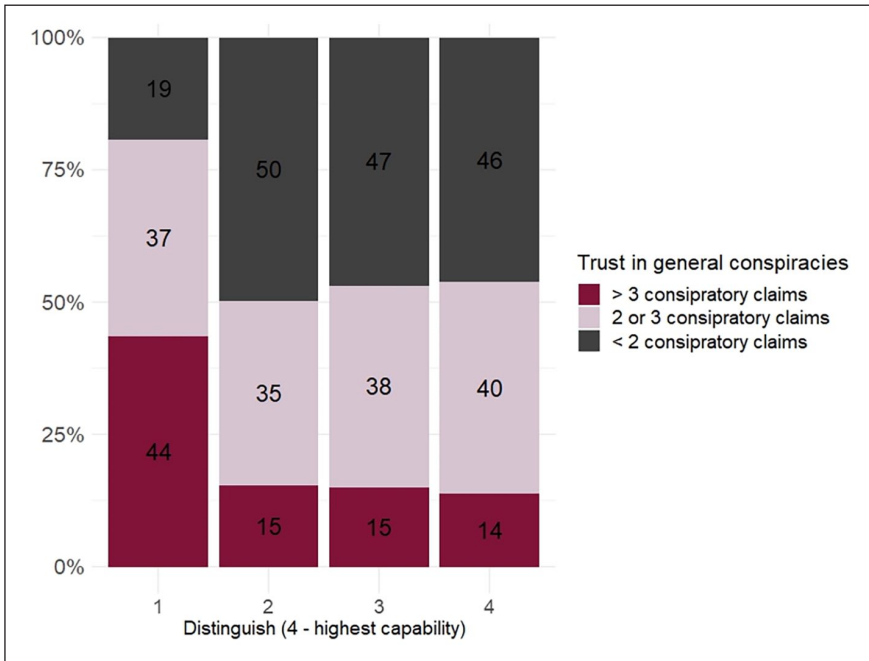
Figure 3. Trust in general conspiracy theories.

Source: STEM research data 2021.

Notes: The trust in general conspiracy theories was evaluated based on the number of trusted (answered 'certainly true' and 'probably true') conspiratorial statements (out of seven claims). The respondents were sorted into four groups based on their ability to distinguish between different types of presented statements (real news, misinformation, placebo). The figure shows the results for the given groups (1 = lowest ability to distinguish/highest vulnerability to misinformation; 4 = highest ability to distinguish/lowest vulnerability to misinformation).

education, age and gender of these respondents did not seem to play a significant role in their ability to distinguish between factually correct and false statements. The more relevant indicator was the perception of the respondents with regard to their personal situation and their general assessment of Czech society, which differed from other clusters. People vulnerable to misinformation felt personally unappreciated in their communities, and they were very sceptical in their evaluation of the future—54% of these respondents looked to the future with no or only very little hope. This negative perception of the situation was not limited only to the personal level but was also manifested in their assessment of the overall situation in Czechia. For instance, the quality of democracy was rated negatively by 44% of the respondents from the vulnerable group—they gave it just two marks out of five.

Generally, the vulnerable respondents felt unhappy and frustrated, which made them receptive to narratives hostile to the existing political system. These people were significantly more likely to believe in general conspiracy theories that had been circulating in
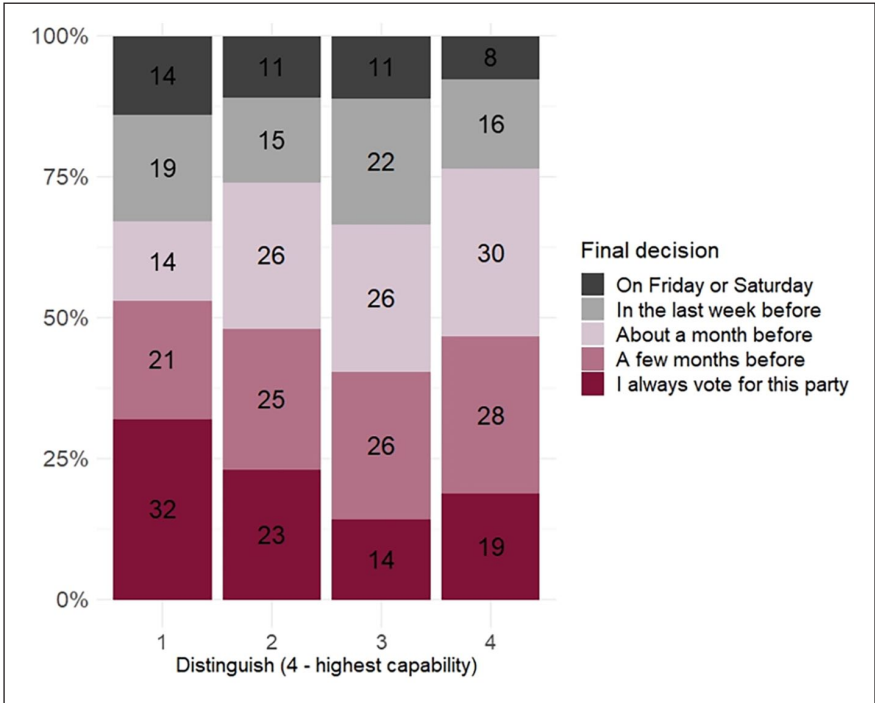
Figure 4. Intent to vote.
Source: STEM research data 2021.
Note: survey question posted was, "When did you finally decide to vote for a particular party, movement, or coalition in the October elections to the Chamber of Deputies?" The respondents were sorted into four groups based on their ability to distinguish between different types of presented statements (real news, misinformation, placebo). The figure shows the results for the given groups (1 = lowest ability to distinguish/highest vulnerability to misinformation; 4 = highest ability to distinguish/lowest vulnerability to misinformation).

the information space for a long time—81% were also prone to endorse them. This percentage is significantly higher than in the other clusters of respondents. This finding is consistent with the monological belief system thesis, which suggests that people who start to believe in one conspiracy theory are significantly more likely to endorse more of them over time (Goertzel 1994).

It is important to point out that people vulnerable to misinformation, despite their negative perception of the system in which they live, were not completely disengaged from its processes. The percentage of respondents in the vulnerable group who voted in the 2021 elections did not differ significantly from the percentages in the other clusters. The difference was that they were more likely to vote for far-right or populist parties that promised to revise the current political system (similar to the effect demonstrated by Cantarella et al. 2023). This group seems to be formed of staunch supporters of these parties since 53% of respondents knew how they would vote several months before the
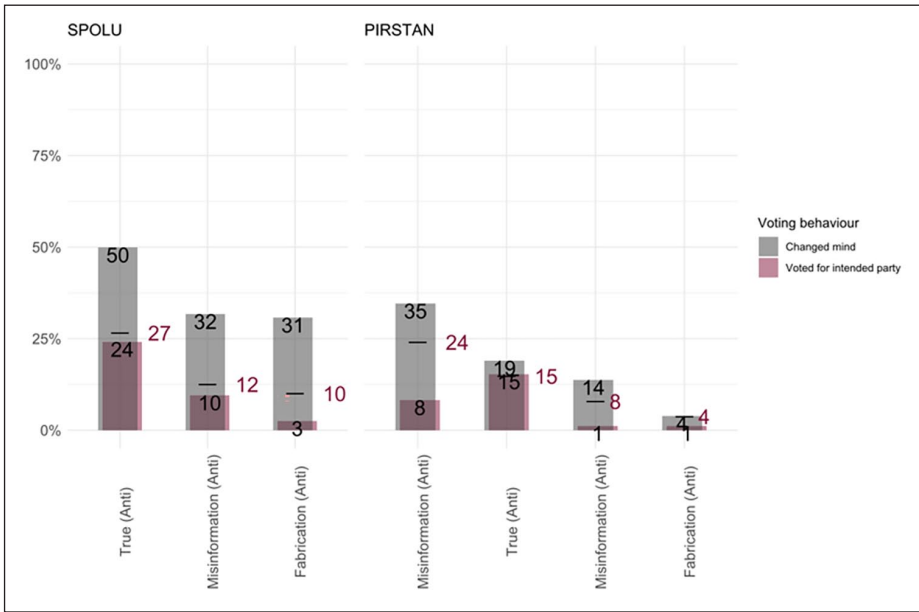
Figure 5. Trust in headlines related to individual parties: the difference between loyal and disappointed voters.
Source: STEM research data 2021.
Note: The figure shows the differing levels of belief in the test statements (real news, misinformation, placebo) that were critical of each coalition among different kinds of voters (disappointed voters = 'changed mind'; loyal voters = 'voted for intended party'). The line indicates the average level of trust in the sample of voters.

elections. Here we found an interesting paradox—a notable proportion of the respondents vulnerable to misinformation were actually fairly immune to falsehoods appearing in the run-up to the elections since they were not likely to be swayed in their voting behaviours. For this group, the more important factor is long-term interaction with general conspiracy theories that reinforce their negative perception of the situation in society—which, to remind readers, might be understandable due to the living conditions of the given individual—and makes them open to the rhetoric of anti-system parties. The exact interaction of variables in this vicious circle should be of further interest to researchers. A single survey such as ours is not able to determine causality and therefore it would be warranted to use different methods, such as a natural experiment or a longitudinal study (see Eady et al. 2023), to establish this.

Opinion first, misinformation second

At the beginning of the article, we reframed the main question regarding the impact of disinformation on elections and tried to define the circumstances in which voters' decisions could be influenced by misinformation. As we demonstrated in the previous

section, in the case of people unable to distinguish between factually correct and false statements, this question requires taking a long-term view and disentangling the interactions between unsatisfying personal situations, dissatisfaction with the political system and the influence of conspiracy theories. However, it was not only respondents from the vulnerable group who were prone to believe falsehoods that appeared in the run-up to the elections. In fact, a significantly higher number of respondents—including those who did not endorse general conspiracy theories—were open to believing misinformation in specific circumstances. To better understand their reasoning, we find it useful to perceive the belief in misinformation as a consequence of pre-existing positions.

Regardless of political preference, people who felt disappointed by a specific party were more likely to believe misinformation about this party. This did not make them change their vote—since they would not have supported this party anyway—but it did reinforce their already formulated position. In explaining this tendency, we refer to the concept of motivated reasoning, which suggests that individuals select the information they believe pragmatically, considering its relevance for achieving the desired goal regardless of its factual correctness (Bolsen et al. 2014). And since, in the case of the 2021 elections, the main goal for disappointed voters was to reinforce or maybe rationalise their negative position towards a specific party, they were keen to believe any negative statement about it—even if it was misinformation or a placebo statement.

A case in point is that belief in both the misinformation and the placebo headlines about the SPOLU coalition[1] did not differ significantly among disappointed voters. The effect of voter disappointment on belief in misinformation is also visible in relation to the PirSTAN coalition[2]—35% of people who decided not to vote for the coalition also believed the false test statement, a significantly higher proportion than believed it among loyal voters. We are convinced that while misinformation can play a role in creating bias against a particular party, it is only one of the relevant factors in the long-term process. Therefore, we hypothesise that the misinformation that appeared directly before the elections did not play a significant role in affecting voting behaviours since it was very likely to resonate most among those who would not have voted for the targeted party anyway. Again, the long-term interaction between party preferences, feelings of disappointment and belief in misinformation should be the topic of further, more precise academic scrutiny.

Conclusions

Our research describing the impact of misinformation on the electoral behaviour of Czech voters in the context of the 2021 parliamentary elections could also be useful in other contexts. We believe that our model, based on the ability to distinguish between factually correct, false and placebo statements, should inspire other research since it overcomes several limitations related to survey methods and the self-reporting of beliefs and behaviours. It might also have more practical uses since it suggests an easy way to operationalise the concept of resilience to misinformation (for various approaches to this topic, see Hassain 2022). Therefore, our model could serve as a tool to assess the impact of projects aiming to increase resilience, such as media-literacy workshops or online

educational games. While the main limitation remains the selection of appropriate state-
ments for testing, we believe that this limitation could be overcome by interdisciplinary
cooperation.

Using the case study of the 2021 elections, we also aimed to contribute to the bur-
geoning debate about determinants of belief in misinformation. Our approach suggests
that the endorsement of falsehoods should be treated as a consequence of pre-existing
positions and perceives this decision to believe them as part of the process of reinforcing
already-made decisions—for instance in voting behaviour.

It is important to distinguish between two different groups affected by misinforma-
tion. First, there are those who are generally distrustful of the political system, who are
stressed and frustrated, and who are open to conspiracy theories and the anti-systemic
voices of far-right and populist parties. To increase the resilience of this group to misin-
formation, a holistic approach is needed that addresses the societal conditions which
have alienated these people from the democratic system. Second, on a more general
level, everyone can become vulnerable to misinformation if it fits with his or her biases—
for instance by fuelling resentment against a particular political party. Since recognising
and filtering one's personal biases represents a significant challenge, this ability should
be addressed and developed alongside existing educational activities that aim to tackle
misinformation. Perfecting such a skill could be helpful in decreasing the polarisation of
European societies and cultivating public discussion, which is always one of the most
important tools in the fight against the spread of manipulative falsehoods.

Disclaimer

Notes

1. Coalition formed of the Civic Democratic Party (Občanská demokratická strana), Christian
    and Democratic Union – Czechoslovak People's Party (KDU-ČSL) and TOP 09.
2. Coalition formed of the Czech Pirate Party (Česká pirátská strana) and Mayors and
    Independents (Starostové a nezávislí).

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