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Looking for Truth: General Scientific Reasoning Predicts Endorsement of Medical and Political Conspiracy Theories

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In an era of pervasive misinformation, understanding the cognitive factors that reduce susceptibility to conspiracy theories is of growing societal and scientific importance. This study investigates whether scientific reasoning – as a domain-general epistemic skill – predicts belief in both medical (e.g., COVID-19-related) and political (e.g., Ukraine war-related) conspiracy theories. Using a sample of 409 Slovak adults, we examine whether scientific reasoning explains variance in conspiracy beliefs beyond what is accounted for by analytic thinking alone. Hierarchical regressions show that scientific reasoning consistently predicts lower endorsement of both medical and political conspiracy theories, outperforming analytic thinking, which only predicts political ones. These findings support the view that evaluating claims based on principles such as testability and evidence is a generalizable cognitive asset. Our results underscore the need to cultivate domain-general scientific reasoning skills, not just analytic thinking, to counter epistemically suspect beliefs across diverse contexts.

Key words: scientific reasoning, analytic thinking, medical and political conspiracy theories

"Believe in truth. To abandon facts is to abandon freedom. If nothing is true, then no one can criticize power, because there is no basis upon which to do so. If nothing is true, then all is spectacle. The biggest wallet pays for the most blinding lights." (Snyder, 2021)

Introduction

Scientific reasoning has become more and more important in today's technology-driven and science-based society (e.g., National

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Research Council, 2012). According to this argument, scientific reasoning applies not just to scientific domains – it also helps people make sense of complex, uncertain information in everyday and societal contexts, including politics. It equips individuals with the ability to evaluate evidence-based claims, argument quality, and reasoning patterns (Engelmann et al., 2018). However, the current debate does not concern the importance of scientific reasoning itself, but rather whether it is domain-general or domain-specific. The domain-specific view holds that scientific reasoning applies only within the realm of science, whereas the domain-general view posits that general aspects of scientific reasoning – such as recognizing valid inferences or evaluating evidence – can transfer to political and social issues, helping individuals detect fallacious claims in misinformation and propaganda. In today's information environment, the ability to assess the credibility of sources, recognize flawed reasoning, or weigh competing explanations is crucial when political actors or interest groups promote conflicting narratives.

While the protective effect of scientific reasoning against pseudoscientific claims and medical conspiracy theories has been convincingly established (Čavojová, Kaššaiová et al., 2023; Čavojová & Ersoy, 2020; Čavojová et al., 2022; Čavojová, Šrol et al., 2023; Georgiou et al., 2023), the domain-general aspects of scientific reasoning has not been tested so far outside the domain of educational interventions (Engelmann et al., 2018). Therefore, in this paper we aim to explore domain-general aspects of scientific reasoning by comparing its predictive power for two types of conspiracy theories: medical and political, as well as comparing it with predictive power of analytical thinking.

Medical conspiracy theories are beliefs that allege hidden, deceptive actions or plots by powerful groups or individuals within the medical or healthcare field. These theories often claim that medical information, treatments, or technologies are being deliberately concealed or manipulated for various ulterior motives, such as financial gain, population control, or other nefarious purposes. Examples include beliefs that vaccines are harmful and intentionally promoted by pharmaceutical companies, that cures for diseases like cancer are being suppressed, or that pandemics are orchestrated to control the population.

The boundary between medical and political conspiracy theories is often blurred. Although their content may differ – and medical conspiracy theories may require some basic scientific knowledge (e.g., understanding how vaccines work) – such theories are frequently used as political tools, and medical issues can become highly politicized. This was evident not only in Slovakia, where segments of the political establishment casted doubt on COVID-19 vaccination using conspiracy rhetoric, but the effect of politization on vaccine hesitancy was observed elsewhere as well (Bolsen & Palm, 2022). This overlap provides a rationale for examining whether scientific reasoning operates as a domain-general skill. In this paper, we argue that scientific reasoning contributes not only to the rejection of medical conspiracy theories but also to political ones, as it enables individuals to assess claims based on testability, falsifiability, and evidence instead of using ideological beliefs as guides (Drummond & Fischhoff, 2017, 2019; Bašnáková et al., 2020; Zimmerman, 2007).

Cognitive and Demographic Correlates of Political Conspiracy Theories

One of the most robust findings in conspiracy theory literature is that various unrelated conspiracy beliefs tend to correlate strongly together (Lobato et al., 2014; Wood et al.,

2012), but they correlate also with all sorts of epistemically suspect (paranormal, pseudoscientific) beliefs (Čavojová, Šrol et al., 2020; Lobato et al., 2014; Pennycook, Cheyne et al., 2015; Šrol, 2022). In essence, various conspiracy theories create a "closed-off worldview", in which beliefs mutually reinforce one another by serving as „evidence" for each other. This interconnected network of beliefs is known as a monological belief system (Wood et al., 2012). Such system can make it easier for political actors to frame messages in ways that resonate with already-held, ideologically motivated conspiracy theories, which also helps explain the politicization of scientific issues, such as vaccination against COVID-19 or climate change.

Moreover, the role of analytic thinking in rejection of epistemically suspect beliefs has been sufficiently established (Pennycook, Cheyne et al., 2015; Swami et al., 2014), and this finding is consistent whether we review medical conspiracy theories (as those related to COVID-19) (Alper et al., 2020; Čavojová et al., 2022; Erceg et al., 2020; Pennycook et al., 2020; Sadeghiyeh et al., n.d.; Stanley et al., 2021; Stoica & Umbreș, 2020) or a more general set of epistemically suspect beliefs including endorsement of alternative medicine or pseudoscience (Erceg et al., 2019; Fasce & Picó, 2019; Šrol, 2022; Stanovich, 2006).

However, analytical thinking usually refers to willingness to engage in more effortful deliberate processing rather than relying on quick – and often inaccurate – intuitions. Yet, recent research suggests that analytical thinking alone may not be sufficient to reject epistemically suspect beliefs; individuals also require specific cognitive tools known as *mindware* – the rules, knowledge, and strategies a person has learned to solve problems, reason logically, and make decisions (Stanovich, 2011). Scientific reasoning appears to be a particularly valuable component of such mindware (Čavojová et al., 2020; Čavojová, Šrol et al., 2023). Thus, while analytical thinking is necessary, it is not sufficient: it reflects the capacity to search for a solution, whereas scientific reasoning provides the tools to arrive at one.

It is yet unclear whether scientific reasoning could also be successfully applied to political conspiracy theories, as the previous research focused on the relationship either with more general epistemically suspect beliefs (consisting of paranormal and pseudoscientific items besides general conspiracy theories; Čavojová et al., 2020) or to COVID-19 (medical) conspiracy theories and pseudoscience (Čavojová et al., 2022; 2023). Still, if we consider scientific reasoning as domain-general ability, it should be directly associated with rejection even of political conspiracy theories unrelated to science (such as conspiracy theories about the war in Ukraine). Scientific reasoning fosters understanding of provisionality of knowledge, probability and need for controlling the confounding factors to counteract one's own biases. Previous research has consistently shown that conspiracy beliefs are linked to cognitive tendencies, such as failure to recognize randomness and overactive tendency to see patterns in random stimuli (Douglas et al., 2016; van Prooijen et al., 2018; Whitson & Galinsky, 2008), and poor understanding of probability and statistical principles (Brotherton & French, 2014; Dagnall et al., 2017; Kovic & Füchslin, 2018). Although the direct relationship between scientific reasoning and cognitive tendencies, such as pattern over-detection and misjudgment of randomness, has yet to be firmly established, there is strong theoretical justification for expecting that scientific reasoning could serve as a predictor of political conspiracy beliefs. Another path that scientific reasoning can help people to reject political conspiracy theories unrelated to science is indirect. Scientific reasoning is usu-

ally strongly correlated with trust in science (Čavojová et al., 2024; Sunyík & Čavojová, 2025; Tabak & Dubovi, 2023), while conspiracy theories are associated with deep distrust of science (Čavojová, Šrol et al., 2023; Hartmann & Müller, 2023; Rutjens & Većkalov, 2022; van Mulukom et al., 2022) and official public institution (Merva et al., 2024), which usually provide evidence against these conspiracy theories. Person needs to understand how various kinds of claims can be tested, and even if they do not have the ability to verify all claims for themselves, people with worse scientific reasoning tend to trust science less, which creates a vicious circle, when evidence against conspiracy theory provided by some institution is distrusted, precisely because it is allegedly part of the conspiracy. Conspiracy theories thus relativize what is true and what is not and even question whether it is possible to know the truth. Therefore, they are often used to justify certain political actions (Jolley et al., 2018; Jutzi et al., 2020). Similarly, in the case of the Russian invasion of Ukraine, a plethora of conspiracy theory explanations provided justification for the attack (termed a „special operation") and shifted blame onto Ukraine or third parties (such as the USA), exploiting deeply ingrained perceptions of threats from the West (Šrol & Čavojová, 2024).

In the current paper we also controlled for two demographic factors: education and religiosity. Education has been recognized as a potential protective factor against conspiracy beliefs (Ballová Mikušková, 2023; van Prooijen, 2017). Finally, higher levels of religiosity have been associated with stronger conspiracy beliefs (Frenken et al., 2023), and it has been hypothesized that conspiracy beliefs may fulfil a similar psychological function as religious beliefs (Franks et al., 2013). Moreover, religious individuals tend to score lower on measures of scientific reasoning (Čavojová & Ersoy, 2020).

To summarize, the primary aim of the current study is to examine whether scientific reasoning is as effective a predictor of belief in political conspiracy theories (specifically regarding the war in Ukraine) as it is for medical conspiracy theories (related to COVID-19). In our analysis, we will control for the effects of education, and religiosity. Specifically, we hypothesize that scientific reasoning will negatively predict endorsement of both medical and political conspiracy theories (H1). Furthermore, we expect that scientific reasoning will account for unique variance in conspiracy beliefs beyond that explained by analytical thinking (H2).

Methods

Participants and Procedure

The study sample consisted of 409 respondents aged 18-69 years. The mean age of men (*N* = 212, 51.8%) was 28.81 years (*SD* = 7.67) and the mean age of women (*N* = 197, 48.2%) was 28.79 years (*SD* = 10.17). Regarding the highest education attained, 9 respondents (2.2%) declared primary school, 2 respondents (0.5%) declared secondary school without a degree, 86 respondents (21%) declared secondary school with a degree, 100 respondents (24.4%) declared a high school degree, 66 respondents (16.1%) declared a Bachelor's degree and 146 respondents (35.5%) declared a Master's degree.

Data collection took place between October 2022 and January 2023. Participants were recruited via social media (Facebook and Instagram) and completed questionnaires via Google Forms. At the beginning of the questionnaire, participants were informed about the purpose of the study, the voluntary nature and anonymity of their participation, and gave their consent to the processing of their data.

Measures[1]

Medical conspiracy theories were measured using three items selected from the medical conspiracy dimension of the COVID-19 Unfounded Beliefs Scale (Teličák & Halama, 2022; e.g., "The COVID-19 pandemic was planned by economic powers," [$\chi^2(0) = 0.00$, $p < .001$; RMSEA = 0.000; CFI = 1.000])[2]. Respondents answered on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Political conspiracy theories were measured by Pro-Kremlin Conspiracy Beliefs Scale (Šrol & Čavojová, 2024), which contained 8 conspiracy beliefs about the Russian invasion of Ukraine (e.g., the war in Ukraine is staged, actors and actresses are paid to be in the footage of it; [$\chi^2(20) = 96.48$, $p < .001$, RMSEA = 0.090; CFI = 0.967]). The items were rated on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Cognitive Predictors[3]

Analytic thinking was measured by the Cognitive Reflection Test (Frederick, 2005), which contains three open questions (e.g., If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? [$\chi^2(0) = 0.00$; $p < .001$; RMSEA = 0.000; CFI = 1.000]).

Scientific Reasoning was measured by the Slovak version of the 7-item Scientific Reasoning Scale by Bašnáková et al. (2021), which was validated based on the original adaptation by Drummond and Fischhoff (2017). For this research we used context-free questions (e.g., A researcher wants to know how to improve population skill X. Based on statistical data, he learns that people with skill X, regularly practice activity Y. This suggests that activity Y improves skill X. Agree/Disagree). We opted for the context-free version, because we believed it would be better suited to capture the understanding of general scientific principles that can be applied both in medical and political domain ($\chi^2(14) = 21.11$; $p = 0.10$; RMSEA = 0.035; CFI = 0.930).

Demographic Variables

Participants answered questions about their gender, age and level of education in the first part of the questionnaire. To measure religious preferences, we used a 7-point Likert scale (*1 = very non-religious, 7 = very religious*).

Statistical Procedures

We used statistical software, including Jamovi 2.2.2 and R-Studio, to process the research data. To assess the internal consistency of the scales and individual dimensions, we calculated Ordinal Alpha (Gadermann at al., 2012). The relationships between analytic thinking, scientific thinking, and both kind of conspiracy theories (medical and political) were examined by hierarchical regression analysis by calculation using the R-Studio, the "lavaan", "haven", and "car" packages. The prevalence of multicollinearity among predictors was assessed by estimating the Variance Inflation Factor (VIF) coefficients. All methods and procedures were performed according to the standards of the APA; all raw data and scripts are available at https://osf.io/pruzv/overview?view_only=c086d564cf8e4d8284ee6882ad89ba35.

[1] For all multi-item measures, we tested a unidimensional measurement model using confirmatory factor analysis (CFA; single-factor solution); the corresponding CFA fit indices for each measure are reported in brackets.

[2] The scale originally consists of three dimensions reflecting different domains of unfounded COVID-19–related beliefs; for the purposes of this study, we used only the items referring to medical conspiracies.

[3] We also measured Bullshit Receptivity (Pennycock et al., 2015) for exploratory purposes. The results for correlations with BSR can be found in Supplementary Materials (Table A, B, C).

Results

First, we report the results of correlational analysis (Table 1), which shows that relationships are in the expected directions: medical and political conspiracy theories show strong mutual correlation and both correlate negatively with analytic thinking and scientific reasoning to approximately same degree. Analytic thinking and scientific reasoning show moderate positive correlation, which suggests that they tap to slightly different aspects. More educated people had significantly higher analytic thinking and scientific reasoning and less medical but not medical conspiracy beliefs. Although education did not correlate with religiosity, religiosity showed opposite patterns to education: more religious people had significantly lower analytic thinking and scientific reasoning, as well as more medical and political conspiracy beliefs.

To test our main predictions, we performed hierarchical regression analyses separately for medical and political conspiracy beliefs as outcome variables (Table 2). Demographic variables (age, gender, education, and religiosity) were entered in the first step (Model 1), followed by the cognitive predictors added sequentially in subsequent models: analytic thinking (Model 2), and scientific reasoning (Model 3). In the first model, gender, education, and religiosity were significant predictors of both types of conspiracy beliefs. Women were more likely to endorse both medical and political conspiracy theories. Education negatively predicted conspiracy beliefs, while religiosity was a positive predictor. This initial block explained 7% of the variance in medical conspiracy beliefs and 11% in political ones. Adding analytic thinking in Model 2 led to a significant increase in explained variance: $\Delta R^2 = 0.02$ for medical and $\Delta R^2 = 0.04$ for political conspiracy theories. Analytic thinking emerged as a significant negative predictor in both domains, with a stronger effect for political conspiracies. In Model 3, scientific reasoning was added and emerged as the strongest negative predictor across both domains, further increasing the explained variance by $\Delta R^2 = 0.05$ (medical) and $\Delta R^2 = 0.06$ (political). The effect of analytic thinking remained significant only for political conspiracy beliefs, while it became marginal in the medical domain. The full models explained 14% of the variance in medical conspiracy theories and 20% in political conspiracy theories. These results demonstrate the cumulative predictive contribution of cognitive variables and show that scientific reasoning was the strongest and consistent negative predictor of belief in both medical and political conspiracy theories.

Discussion

Our study tested the hypothesis that scientific reasoning functions as a domain-general cog-

Table 1 *Descriptive analysis of methods and correlation matrix*

	M	*SD*	Min	Max	Ord α	1	2	3	4	5	6	7
1) Age	28.80	8.95	18	69	—	—						
2) Education			1	6	—	.45***	—					
3) Religiosity	3.66	1.64	1	7	—	.01	-.04	—				
4) Medical conspiracy theories	1.44	0.90	1	5	0.95	-.00	-.09	.20***	—			
5) Political conspiracy theories	1.45	0.76	1	5	0.96	-.08	-.14**	.26***	.71***	—		
6) Analytic thinking	0.67	0.38	0	1	0.87	.10	.14**	-.16**	-.22***	-.27***	—	
7) Scientific reasoning	0.76	0.20	0	1	0.64	.06	.16**	-.25***	-.32***	-.37***	.34***	—

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; Ord α – ordinal alpha

Table 2 *Results of hierarchical regression analysis (standardized β)*

Model	Predictors	Medical conspiracy theories			Political conspiracy theories		
		β	95% CI	VIF	*β*	95% CI	VIF
1	Age	0.05	[-0.05, 0.16]	1.26	-0.02	[-0.13, 0.08]	1.26
	Gender	0.15**	[0.06, 0.25]	1.11	0.17***	[0.07, 0.26]	1.11
	Education	-0.12*	[-0.22, -0.01]	1.26	-0.13*	[-0.23, -0.02]	1.26
	Religiosity	0.15**	[0.05,0.25]	1.11	0.21***	[0.11, 0.31]	1.11
	R^2 / adj. R^2	0.08*** / 0.07***			0.11*** / 0.11***		
2	Age	0.06	[-0.04,0.16]	1.26	-0.02	[-0.12, 0.08]	1.26
	Gender	0.11*	[0.01,0.21]	1.19	0.12*	[0.02, 0.22]	1.19
	Education	-0.10	[-0.20, 0.01]	1.29	-0.10*	[-0.20, -0.00]	1.29
	Religiosity	0.14**	[0.04, 0.23]	1.18	0.19***	[0.10, 0.29]	1.18
	Analytic thinking	-0.16***	[-0.26, -0.07]	1.22	-0.19***	[-0.29, -0.10]	1.22
	R^2 / adj. R^2	0.10*** / 0.09***			0.15*** / 0.14***		
	ΔR^2 / Δadj.R^2	0.02*** / 0.02***			0.04*** / 0.03***		
3	Age	0.05	[-0.05, 0.15]	1.26	-0.02	[-0.12, 0.08]	1.29
	Gender	0.10*	[0.00, 0.20]	1.19	0.10*	[0.01, 0.20]	1.19
	Education	-0.07	[-0.17, 0.03]	1.29	-0.07	[-0.17, 0.03]	1.29
	Religiosity	0.09	[-0.00, 0.19]	1.18	0.14**	[0.05, 0.23]	1.18
	Analytic thinking	-0.10	[-0.19, 0.00]	1.22	-0.12*	[-0.22, -0.01]	1.22
	Scientific reasoning	-0.24***	[-0.34, -0.14]	1.26	-0.26***	[-0.36, -0.17]	1.26
	R^2 / adj. R^2	0.15*** / 0.14***			0.21*** / 0.20***		
	ΔR^2 / Δadj.R^2	0.05*** / 0.05***			0.06*** / 0.06***		

Note. Gender (1-men, 2-women); *p < 0.05, **p < 0.01, ***p < 0.001

nitive ability, capable of predicting belief in conspiracy theories across different thematic domains. Specifically, we examined whether scientific reasoning predicts not only medical, but also political conspiracy beliefs, above and beyond the effects of analytical thinking. The results support this domain-generality hypothesis: scientific reasoning emerged as the strongest predictor in both domains. For medical conspiracy theories, only scientific reasoning – not analytical thinking – was a significant predictor. For political conspiracy theories, scientific reasoning had a stronger predictive value than analytical thinking. This is a notable finding, as analytical thinking has consistently been associated with resistance to epistemically suspect beliefs (Čavojová et al., 2020; Pennycook et al., 2015), including both medical and political conspiracy theories (Ballová Mikušková, 2021; Erlich & Garner, 2023; Stanley et al., 2021).

While our results replicate prior evidence linking analytical thinking to lower susceptibility to conspiracy theories, they crucially extend this literature by demonstrating that the capacity to evaluate evidence and understand scientific principles applies robustly across domains. The similar strength of associations between scientific reasoning and both types of conspiracy theories, as well as its sustained predictive power in regression models controlling for analytical thinking and other relevant variables, provide strong evidence for its domain-general character. Consistent with earlier work (Čavojová et al., 2022; Čavojová, Šrol, et al., 2020), our findings suggest that although analytic thinking reflects a general tendency to override intuitions, scientific

reasoning involves specific epistemic competencies that support belief evaluation across contexts. Importantly, these effects held even after adjusting for demographic covariates.

In the context of medical conspiracy theories and pseudoscience it seems clear how knowledge about scientific methodology can help people to be more critical of various unwarranted claims. In this case scientific reasoning represents specialized mindware (Stanovich, 2011) that can be crucial for evaluating claims related to pseudoscientific treatments or suspicions about Big Pharma and misconduct of scientists. Our results show that the critical assessment of information based on epistemological knowledge (Barz & Achimaș-Cadariu, 2016), is also associated with rejection of political conspiracy beliefs (Čavojová et al., 2022; Georgiou et al., 2021). This is a significant finding with some practical implications, especially in education, because scientific thinking is often regarded as the ability necessary only for professional scientists and of a little use for people who do not pursue any scientific interests. However, in a modern and increasingly complex society people have to often rely on expert advice when making decision, thus some basic civic scientific literacy is of growing importance (Fasce & Picó, 2019; Miller, 1983, 2004). Moreover, to choose efficient policies for many pressing issues, such as climate change or recent COVID-19 pandemic, a person should be able to understand at least the basics of how the knowledge is accumulated and what represents good evidence.

Although our results demonstrate the significance of scientific reasoning as domain-general skill that can help to mitigate various kinds of conspiracy theories, it is also possible that the relationship between scientific reasoning and belief in conspiracy theories is mediated by some variables that we did not measure. As was already observed by Čavojová et al. (2019), scientific reasoning requires sufficient cognitive ability. Therefore, more cognitively sophisticated individuals are both more successful in acquiring and using scientific reasoning and also less prone to believe conspiracy theories and other dubious claims. Moreover, scientific reasoning can be viewed as a part of broader critical thinking that could account for observed relationship. Alternatively, both scientific reasoning and trust in conspiracy theories can be associated with trust in science (Tabak & Dubovi, 2023).

In our study, cognitive and demographic factors explained comparable variance in both medical and political conspiracy beliefs. All demographic variables except age significantly predicted conspiracy beliefs, with women scoring higher across all types – an unexpected finding, given prior studies showing either negligible gender differences or slightly higher scores among men for small-group conspiracies (Ballová Mikušková, 2018). This may reflect women's greater reliance on intuitive thinking (Lobato et al., 2014), as men demonstrated significantly higher levels of both analytic and scientific thinking (see Supplementary Table C). However, the variability across studies suggests that gender differences are not universal and may depend on the content and cognitive demands of specific conspiracy theories. Education negatively predicted conspiracy beliefs, consistent with prior research showing that higher education enhances cognitive complexity, reduces feelings of powerlessness, and discourages reliance on simplistic or illusory explanations (Ballová Mikušková, 2023; Gervais & Norenzayan, 2012; van Prooijen, 2016; Whitson & Galinsky, 2008; Rindermann & Neubauer, 2004; Matute et al., 2011). Higher religiosity also predicted stronger endorsement of conspiracy theories, aligning with findings that link religious and conspiratorial thinking through shared tendencies to attribute events to unseen forces

or as a means of asserting control under uncertainty (Aarnio & Lindeman, 2005; Darwin et al., 2011; Pennycook et al., 2012; van Prooijen & Acker, 2015; Merva et al., 2023).

Limitations and Future Directions

While our findings contribute to the growing body of evidence showing that scientific reasoning is negatively associated with a wide range of epistemically suspect beliefs, including both medical and political conspiracy theories, it is important to note that these results are based on cross-sectional data. As such, they do not permit causal conclusions. Nevertheless, the consistent pattern of associations across multiple belief domains supports the view that scientific reasoning functions as a domain-general skill – one that extends beyond traditional scientific or medical contexts and can be applied to evaluating claims in politically charged environments as well.

Although some studies have attempted to experimentally enhance scientific reasoning to test its causal impact on epistemically suspect beliefs, such interventions remain relatively scarce and their effects modest. For example, Drummond and Fischhoff (2019) showed that priming scientific reasoning led to more objective evaluation of scientific evidence, yet other studies aiming to directly reduce such beliefs by boosting scientific reasoning (Lieskovský, 2022; Sunyík, 2023) have had limited success. Still, the present findings underline that scientific reasoning is not bound to a specific content domain, but rather reflects a transferable set of epistemic skills applicable to a variety of contexts – including political discourse and belief evaluation more broadly.

To conclude, we believe our work provides further evidence for the necessity of enhancing scientific reasoning, which can be a fruitful avenue for reducing belief in conspiracy theories. This task is of significant importance, as conspiracy beliefs have many negative social consequences, such as fostering prejudices (Golec de Zavala & Cichocka, 2012; Jolley et al., 2020; Oleksy et al., 2021), as well as health-related (Yang et al., 2021) and political consequences (Eberl et al., 2021). Beyond populism, these beliefs act as driving forces behind various extremist movements, which may escalate into violent actions (Marone, 2022; van Prooijen et al., 2022). It is, therefore, of utmost importance to focus our efforts on strengthening those skills that could prevent these undesirable outcomes.

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