

Themenheft 59: Dekonstruktion digitaler Desinformationsstrategien. Phänomene des Rechtsextremismus.

Herausgegeben von Franco Rau, Thomas Must und Michael Otten

Deconstructing Conspiracy Theories

The Role of Political Self-Efficacy and Knowledge About Conspiracy Theories in Political Participation

Jana Schneider¹  and Josephine B. Schmitt² 

¹ University of Cologne

² Center for Advanced Internet Studies (CAIS) GmbH

Abstract

At the peak of the pandemic, conspiracy theories about COVID-19 abounded on social media. Many of these were rooted in disinformation and right-wing extremist ideas that put democracy at risk. Studies have shown that conspiracy beliefs weaken intentions for normative participation (e.g., petitions, demonstrations) and increase intentions for both non-normative participation (e.g., unauthorized strikes) and violent participation (e.g., confrontations with police). The current study asks what interventions can counteract possible detrimental influences of conspiracy theories on democracy. Based on previous literature in psychology and communication studies on misinformation and disinformation beliefs, behavioral change, and political participation, we proposed two factors: (1) political self-efficacy and (2) knowledge about the mechanisms of conspiracy theories. We tested these in an online intervention during Germany's first COVID-19 lockdown in May 2020. Hypotheses and analysis plans were pre-registered. We found, when controlling for covariates, that people who learned about the mechanisms and content of conspiracy theories engaged in less non-normative political participation. This study provides practitioners in the field of media literacy education and extremist prevention with dos and don'ts for interventions against conspiracy theories.

Die Rolle von Wissen über Verschwörungserzählungen und politische Selbstwirksamkeit für die politische Partizipation

Zusammenfassung

Während der Hochphase der Pandemie verbreiteten zahlreiche Menschen in den sozialen Medien Verschwörungserzählungen über das COVID-19-Virus. Viele dieser Erzählungen beruhen auf Desinformationen – oftmals geprägt von rechtsextremen Vorstellungen – die

die Demokratie gefährden. Bisherige Studien zeigen, dass Verschwörungsglauben die Absichten für eine normative politische Partizipation schwächen, aber die Bereitschaft zu einer nicht-normativen und gewalttätigen Partizipation erhöhen. Dies stellt die demokratische Gesellschaft vor grosse Herausforderungen. Die vorliegende Studie widmet sich daher der Frage, welche Interventionen möglichen schädlichen Einflüssen von Verschwörungsmysmen auf die Demokratie entgegenwirken können. Basierend auf bestehender Literatur zu Mis- und Desinformationen, Verhaltensänderungen und politischer Partizipation werden in der vorliegenden Arbeit zwei Faktoren vorgeschlagen: (1) Politische Selbstwirksamkeit und (2) Wissen über Mechanismen von Verschwörungsmysmen. Diese wurden in einer Online-Intervention während des ersten Lockdowns in Deutschland im Mai 2020 getestet. Hypothesen und Analyseplan wurden präregistriert. Die Ergebnisse verdeutlichen, dass Personen, die über Kenntnisse über Mechanismen und Inhalte von Verschwörungserzählungen verfügen, weniger nicht-normative politische Beteiligung zeigen, sofern für bestimmte Variablen kontrolliert wird. Limitationen und die daraus resultierenden Implikationen für die medienpädagogische Praxis werden diskutiert.

1. Introduction

Many people suffered from uncertainty and confusion around the COVID-19 pandemic. Feelings of fear and anxiety provided fertile ground for conspiracy theories¹ (De Coninck et al. 2021) disseminated by various actors including right-wing extremists. Conspiracy theories are beliefs that a small group of secret actors are conspiring to manipulate events in their favor and to pursue goals that would be destructive for society (Hepfer 2021). At least superficially, these theories offer comprehensible explanations for events that seem confusing and difficult to understand (Leman and Cinnirella 2013). Conspiracy beliefs are related to negative public health attitudes (e.g., unwillingness to be vaccinated) and lower policy support (Romer and Jamieson 2020; Schernhammer et al. 2022; Allington et al. 2021; Imhoff 2021) that can undermine democratic participation.

Social media facilitates the dissemination of conspiracy theories by allowing right-wing populists and extremists to build online communities and reach wider audiences. As conspiracy theories are reinforced within online communities, conspiracy beliefs may be translated into social norms and real-world action (e.g., boycotts; Dow et al. 2021). The rapid spread of right-wing conspiracy theories on social media – and the fact that they were frequently picked up by mainstream media

¹ While we use the term conspiracy theories in line with academic conventions, the term *theory* is misleading. Unlike scientific theories, which are systematically tested and falsifiable, conspiracy theories rely on circular reasoning and lack empirical validation. More accurate terms, such as *conspiracy narrative* or *conspiracy myths*, have been suggested, but for consistency with existing literature, we retain the established term in this paper.

(Shahsavari et al. 2020) – can create the perception that they are not on the fringes but more widely accepted – especially to individuals who are already susceptible to conspiracy beliefs.

Europe saw an increasing number of non-normative and partially violent protests during the pandemic, driven in part by conspiracy theories and disinformation spread by populist and right-wing extremist actors (e.g., ZDF 2022; Commission for Countering Extremism 2021; Ministerium des Innern des Landes Nordrhein-Westfalen 2021). Although the pandemic has now been declared over and containment measures abolished, conspiracy theories still circulating in online forums are contributing to an ongoing rise in radicalization. Furthermore, the pandemic's short- and long-term impacts could create conditions conducive for extremism to spread. Prohibiting extremist content or excluding users from a social media platform can give rise to even more insular forms of echo chambers known as "echo platforms" with an even higher degree of user segregation (Cinelli et al. 2022). This underscores the need for interventions that can help people deconstruct this kind of disinformation.

To address this, we sought to identify pedagogical interventions that can counteract the detrimental influences of conspiracy theories on democracy and reduce the harm created by conspiracy-based radicalization. We tested two factors in an online intervention: (1) *political self-efficacy* and (2) *knowledge about the mechanisms of conspiracy theories*. To test our hypotheses, we conducted an online experiment with a convenience sample (N = 537) during the first COVID-19 lockdown in May 2020. This was a time when conspiracy theories regarding the COVID-19 virus seemed to fall on fertile ground and flourish. We assumed that (1) fostering people's confidence in democratic participation and (2) educating people about conspiracy theories could weaken the potential impact of these myths on non-normative and violent political participation. We further wondered which role our interventions might play on non-normative political participation.

In the following chapters, based on previous literature on mis- and disinformation, behavioral change, and political participation, we explain why we placed these two factors – knowledge and self-efficacy – at the center of our analysis. As the first to experimentally examine the joint effects of understanding mechanisms of conspiracy theories and political self-efficacy on political participation and identify possible interventions, we take an interdisciplinary perspective that combines knowledge from psychology, communication studies, and political science. Our results offer critical information for media literacy and civic education practitioners about interventions that can reduce conspiracy-based radicalization.

2. Conspiracy Theories and Political Participation

Conspiracy theories may be a vague construct for many people, as the term is used differently in academic research than in everyday speech. Conspiracy theories portray all events as intentional and interconnected in a network rather than occurring by chance, and call public figures and institutions fundamentally into question (Barkun 2013; Schneider et al. 2019). Conspiracy theories usually go hand in hand with an ignorance of scientific findings (Lewandowsky, Gignac, and Oberauer 2013). The circulation of this kind of disinformation on social media is one of the causes for the widespread and acceptance of conspiracy theories, leading to conspiracy beliefs (Enders et al. 2023; Cinelli et al. 2022). Depending on their context, target audience, and the images of an “enemy” they convey, conspiracy beliefs can influence people’s political participation. Conspiracy theories almost always serve an agenda aimed at supporting specific opinions or reaching particular target groups. Right-wing extremist ideologies, for instance, are among others linked to anti-Semitic conspiracy theories. This can pose varying dangers to society and democracy, including hatred and violent crime (Butter 2020).

Political participation generally involves the active use of opportunities to influence political decisions such as elections or boycotts (van Deth 2009). It includes not only 1) legal, normative political participation, which adheres to the norms of the prevailing social system (e.g., democracy), but also 2) unconventional, non-normative, sometimes even illegal, or even 3) violent modes of political expression (Sabucedo and Arce 1991), such as political actions that violate prevailing social norms (e.g., confrontations with the police).

Various studies have shown that conspiracy beliefs weaken intentions for normative participation and increase intentions for non-normative and violent participation (Imhoff and Lamberty 2020; Rottweiler and Gill 2022). During the COVID-19 pandemic, individuals with stronger conspiracy beliefs were more in favor of non-normative, non-government-driven measures (e.g., stopping use of public transportation) than normative, government-driven measures (e.g., wearing masks; Marinthe et al. 2020).

However, radical ideologies such as right-wing extremism are not always reflected in extreme behavior (Küpper et al. 2021), and conspiracy beliefs do not necessarily end in (violent) actions directed against the system (Teovanović et al. 2021). They can also lead to support for the status quo (Jolley, Douglas, and Sutton 2018), political apathy (Lee 2011), or a loss of faith in the political system, reducing normative political participation (Khokhlova et al. 2021). This relationship between conspiracy beliefs and political participation is contingent on individual differences. One important variable that directs the influence of conspiracy beliefs on political participation is political self-efficacy (e.g., Rottweiler and Gill 2022; Vegetti and Littvay 2022; Jolley and Douglas 2014b).

3. The Role of Political Self-Efficacy

Perceived self-efficacy can be described as the individual assessment of one's ability to plan and carry out the necessary actions to achieve a specific outcome. Self-efficacy has been explored extensively as a construct specific to particular domains (Bandura 1977). Taking part in political actions requires confidence in one's ability to understand and participate effectively in the political process (Caprara et al. 2009; Niemi, Craig, and Mattei 1991). This includes skills such as voicing one's own opinions and preferences or exerting control over one's political actions.

Over the past few years, various iterations of the concept have been developed (Niemi, Craig, and Mattei 1991). In the present article, we refer to the conceptualization of political self-efficacy by Caprara et al. (2009), which bridges social cognitive theory and the study of political efficacy (Niemi, Craig, and Mattei 1991). With their understanding, Caprara and colleagues concentrate on the skills required for citizens to play an active role in contemporary representative democracies. Individuals who perceive themselves to be politically competent feel that they understand how to take part in politics in a legal, normative way; they believe they can deal with challenges and conflicts (Valentino, Gregorowicz, and Groenendyk 2009), support democratic parties (Reichert 2016) and successfully execute normative political behavior (Hooghe and Marien 2013). Perceived political self-efficacy might therefore limit interest in conspiracy theories and reduce their impact on political participation.

3.1 Political Self-Efficacy, Political Participation, and Conspiracy Theories

For individuals with low political self-efficacy, feelings of anger about a political crisis may reduce willingness to vote and increase support for populist parties that spread conspiracy theories (Magni 2017). Low political self-efficacy and agreement with conspiracy theories correlate with higher intentions for violent political participation and lower intentions for normative political participation (Vegetti and Littvay 2022). Accordingly, heightened political self-efficacy increases the frequency of political participation in the form of, for instance, commenting on news posts, discussing political topics, or getting involved in political or social organizations (e.g., Jung et al., 2011; Schmitt 2016).

Ardèvol-Abreu et al. (2020) report a negative effect of conspiracy beliefs on non-normative (in their words "unconventional") and normative ("conventional") political participation through reduced political self-efficacy. Individuals who believe in COVID-19-related conspiracy theories also tend to show lower scores in general self-efficacy (and depending on the viewpoint, even political self-efficacy) in relation to measures to inhibit the spread of the virus (e.g., using credible information sources,

washing hands; Kucukkarapinar et al. 2022). Gorman et al. (2021) also discussed general self-efficacy as a protective measure to decrease endorsement of COVID-19-related conspiracy theories.

3.2 Interventions to Strengthen (Political) Self-Efficacy

To manipulate self-efficacy, studies have used performance-independent feedback (e.g., Bouffard-Bouchard 1990; Hutchinson et al. 2008) as well as computer games (e.g., Gao and Izadpanah 2023; Pakarinen et al. 2017), counseling (e.g., McQueen et al. 2011), therapies (e.g., Korpershoek, van der Bijl, and Hafsteinsdóttir 2011), exercise manuals (e.g., Luszczynska, Tryburcy, and Schwarzer 2007), and reward systems (e.g., Schunk 1983). General self-efficacy can also be improved by redirecting the focus from failures and difficulties to strengths and successes (Kvarme et al. 2010).

One very promising manipulation of *political* self-efficacy was conducted by Hart and Feldman (2016). In an online experiment, they demonstrated that messages containing positive information about individuals' political competencies (positive internal efficacy) increased their perceived political self-efficacy after only a single exposure.² In their experimental intervention, self-efficacy experiences were simulated by including persuasive messages in news articles with positive or negative information about participants' self-efficacy. In the experimental condition of enhanced political self-efficacy, they reported on political actions (e.g., letters/emails to parliament) by other individuals as successful and the government as responsive, suggesting that a group is able to take political action on a political issue. In the experimental condition of decreased political self-efficacy, the effectiveness of political actions undertaken by third parties was cast into doubt and the government was depicted as unresponsive. Induced political self-efficacy, in turn, increases peoples' readiness for political participation (e.g., climate activism).

The results above underscore the risks to democratic societies arising from conspiracy theories and beliefs and the importance of political self-efficacy as a protective factor. They also point to how self-efficacy can effectively be fostered. Besides increased political self-efficacy, knowledge about the mechanisms of conspiracy theories and relevant counterarguments appears to bear the potential to prevent their negative influences.

4. Fostering Knowledge about Conspiracy Theories

There are various studies underlining the importance of educating people about the mechanisms of conspiracy theories to prevent their negative impact. According to Basol et al. (2021), study participants showed greater confidence in their ability

² An example of such a message can be found here: <https://doi.org/10.1371/journal.pone.0157658.s001>.

to detect disinformation contained in conspiracy theories when they read information debunking conspiracy theories about COVID-19 before reading the conspiracy theories. Jolley and Douglas (2014a) demonstrated that presenting anti-conspiracy arguments before presenting conspiracy theories strengthened study participants' intentions to vaccinate a fictitious child. In their systematic review on the efficacy of interventions in reducing beliefs in conspiracy theories, O'Mahony et al. (2023) confirmed the effectiveness of interventions that taught critical thinking about conspiracy theories (e.g., "informational inoculations" identifying factual inaccuracies or demonstrating logical fallacies of conspiracy theories).

Although measures to increase knowledge about conspiracy theories and mechanisms might counteract the negative influence of such narratives, they do not necessarily result in a reduction of conspiracy beliefs. They are most likely to influence people who are not yet convinced of conspiracy theories or who still have doubts and are therefore likely to be classified as part of primary prevention. Such interventions are less likely, however, to reach individuals who are already radicalized or have an established conspiracy mindset. Furthermore, in attempting to explain and refute conspiracy theories, such interventions can even lead to a boomerang effect, confirming and strengthening conspiracy beliefs (Zhao and Fink 2021). Investing in primary prevention for vulnerable, not yet radicalized people and providing the necessary knowledge and the perception of political self-efficacy to resist the lure of conspiracy theories might help these individuals deconstruct the systematic deception created by (right-wing extremist) conspiracy theories online.

5. The Current Study

As elaborated on above, low political self-efficacy and high endorsement of conspiracy theories tend to lead to more violent and less normative political participation – both are direct threats to democracy. Fostering knowledge about conspiracy theories may result in the ability to deconstruct this kind of disinformation. This, in turn, may decrease the negative influence of conspiracy theories on different politically and socially relevant behaviours. Until now, little attention has been given to the question of how these constructs interact. Previous research has produced correlative, indirect, and noncausal evidence, but no experimental evidence on the joint effects of conspiracy theory knowledge and political self-efficacy on different types of political participation (van Mulukom et al. 2022).

For this purpose, we designed an experiment examining the effect of political self-efficacy and conspiracy theory knowledge on *violent*, *normative*, and *non-normative political participation*. Although interrelated, these three are theoretically distinct concepts. Therefore, each will be addressed separately in the following hypotheses and research questions.

Based on the evidence discussed above, this study asks how these factors can work together and, consequently, how effective interventions can be designed to prevent the negative effects of conspiracy theories on different democratic behaviours.

We assume the following effects of conspiracy theory knowledge and political self-efficacy on *normative* and *violent* political participation:

- Conspiracy theory knowledge (vs. no conspiracy theory knowledge) (H1a) and high political self-efficacy (vs. low political self-efficacy) (H2a) increase the intention for normative political participation.
- Conspiracy theory knowledge (vs. no conspiracy theory knowledge) (H1b) and high political self-efficacy (vs. low political self-efficacy) (H2b) decrease the intention for violent political participation.
- There is an interaction effect between conspiracy theory knowledge and political self-efficacy: Conspiracy theory knowledge increases the intention for normative political participation when political self-efficacy is high (H3a) and decreases the intention for violent political participation when political self-efficacy is high (H3b).

Studies show that conspiracy beliefs increase non-normative participation (e.g., Rottweiler and Gill 2022). However, data regarding the influence of conspiracy theory knowledge and self-efficacy on non-normative participation is scarce. Previous research (e.g., Ardèvol-Abreu et al. 2020) hints at a weak negative relationship between political self-efficacy and non-normative political participation. Due to the scarcity of studies, we do not have enough information to draw assumptions about the likely causal direction of effect between the independent variables and non-normative participation. Therefore, we ask:

- How do conspiracy theory knowledge (vs. no conspiracy theory knowledge) and high political self-efficacy (vs. low political self-efficacy) relate to non-normative political participation? (RQ1)
- Is there an interaction effect of conspiracy theory knowledge and political self-efficacy on non-normative political participation? (RQ2)

6. Method

The study was conducted as an online experiment from May 8 to 23, 2020. We employed a 2 (high vs. low political self-efficacy) x 2 (induced conspiracy theory knowledge vs. no knowledge) between-subject design. The study design, hypotheses, materials, and analysis plan were preregistered at AsPredicted.org.³ In the following, we give an overview of the study's procedure and the sample.

6.1 Sample

For this study, a convenience sample was used. This was due to the ease of reaching participants through online platforms and the lack of other possibilities (e.g., a fee-based representative panel) as the present study was part of a master's thesis.

Participants (minimum age: 18 years) were recruited via social media, mailing lists, and traditional media (e.g., the magazine *Psychologie Heute*). They could win one of three vouchers (15 Euro value) for an online shop of their choice. Five hundred thirty-seven participants remained for analysis.⁴ Of these, 72.3% were female (26.4% = male, 1.3% = non-binary); $M_{\text{age}} = 28.81$ ($SD_{\text{age}} = 9.14$). Their educational level was high (high school diploma or university degree = 90.9%, other = 9.1%). Participants' political ideologies can be classified as center-left ($M = 3.06$, $SD = 0.96$).

6.2 Study Procedure

After giving consent, participants provided their demographic data and political identity. Then they were asked whether they had tested positive for COVID-19. If they answered no, they were led to questions about their COVID-19 risk assessment and their fear of COVID-19. If they answered yes, they were not prompted to respond to the questionnaire, as in spring 2020, experts assumed people who tested positive once could not be infected again. Next, participants were randomly assigned to one of the two self-efficacy conditions. As a manipulation check, perceived political self-efficacy was measured.

Participants were randomly presented either with a text containing information about conspiracy theories or with the control condition not containing information about conspiracy theories. They completed a quiz about the text to assess their understanding. To ensure that participants did not continue without reading the texts, a ten-second timer was used for each text.

3 The preregistration and further materials related to the study can be found online: <https://doi.org/10.17605/OSF.IO/AVTCQ>.

4 Three hundred participants were excluded based on completion time (<5 minutes), completion of less than 91%, poor data quality (procedure adapted from Meade and Craig 2012), and participation in the pilot studies.

To test the impact of the manipulations with stronger reference to a realistic distribution of COVID-19 conspiracy theories, participants were presented with a social media post referring to a conspiracy theory and questions about its credibility and probability. To create this post, existing conspiracy theories in 2020 were researched on different German social media platforms (e.g., KenFM, Schrang TV, Punkt.Preradovic, Rubikon, CompactTV). The conspiracy theory perceived as most credible and probable was selected via a pretest.

In the next step, we measured conspiracy mentality, COVID-19 conspiracy beliefs, and political participation, presenting items in randomized order for each scale, and assessed trust in institutions, media use, trust in media, and alienation from society. Respondents were invited to comment on the study and were asked whether researchers should use their data or how appropriate the use of their data was due to distractions or other reasons. This was used as an exclusion criterion as described in the preregistration (procedure adapted from Meade and Craig 2012). Finally, participants were informed about the purpose of the study and conspiracy theories.

7. Measures

In the following sections, we provide an overview of the measures we used, the scale means, standard deviations, and reliability measures. Descriptive statistics, zero-order correlations, and reliabilities of all variables can be found in Table 1.

7.1 Political Participation

The 15-item Political Participation Orientation questionnaire was used (Lamberty and Leiser 2019). The questionnaire included three distinguishable subscales: 1) normative political participation (e.g., voting, $M = 2.49$ [$SD = 1.42$], $\alpha = .869$), 2) non-normative political participation (e.g., participating in unauthorized strikes, $M = 4.76$ [$SD = 1.54$], $\alpha = .863$), and 3) violent political participation (e.g., attacking police, $M = 1.18$ [$SD = 0.63$], $\alpha = .913$). Responses were given on a scale from -3 (very unlikely) to +3 (very likely). A mean score was computed for all subscales.

7.2 Political Self-Efficacy

We used the Perceived Political Self-Efficacy Scale (PPSE; $M = 3.76$ [$SD = 1.07$], $\alpha = .882$, Caprara et al. 2009) measuring respondents' belief in their ability to actively participate in ten different political activities. Participants indicated their responses on a scale ranging from 1 (not at all sure) to 7 (completely sure). A mean score was computed.

7.3 Covariates

We included covariates that might add relevant information in the context of the assumed relationships (see items in online appendix): Risk Assessment of COVID-19 Infection (five items ranging from 1 [this will not happen] to 5 [this has already happened], $M = 2.80$ [$SD = 0.61$], $\alpha = .759$), Fear of COVID-19 (seven items ranging from 1 [strongly disagree] to 5 [strongly agree], $M = 1.80$ [$SD = 0.68$], $\alpha = .848$, Ahorsu et al. 2022), Trust in Institutions (nine items ranging from 1 [do not trust at all] to 5 [trust fully], fallback option: do not know, $M = 3.88$ ($SD = 0.68$), $\alpha = .894$, GESIS Panel Team 2020), Conspiracy Mentality Scale (short version ranging from 1 [disagree] to 5 [agree], $M = 2.71$ [$SD = 0.83$], $\alpha = .826$, Bruder et al., 2013), Specific COVID-19 Conspiracy Beliefs (14 items created based on a systematic analysis of COVID-19 conspiracy theories in social media ranging from 1 [completely unlikely] to 5 extremely likely], $M = 1.59$ [$SD = 0.64$], $\alpha = .921$, adapted from Lamberty and Leiser 2019), Media Use (nine items ranging from 1 [at most once a week] to 5 [more than three times a day], $M = 2.38$ [$SD = 0.65$], $\alpha = .877$, adapted from GESIS Panel Team, 2020), Media Trust (nine items ranging from 1 [do not trust at all] to 5 [trust fully], $M = 3.15$ [$SD = 0.51$], $\alpha = .763$). For all covariates mentioned so far, mean scores were computed for further analysis. To measure alienation from society, the Identity Fusion Scale was used (Swann et al. 2009; $M = 2.67$ [$SD = 1.07$]).

	1. Gender	2. Education	3. Age	4. PPSE	5. Conspiracy mentality	6. COVID-19 conspiracy beliefs	7. Media use	8. Media trust	9. Alienation	10. Trust in institutions	11. Fear	12. Risk assessment	13. Violent participation	14. Non-normative participation	15. Normative participation	16. Political identity
<i>M (SD)</i>	-	-	28,81 (9.14)	3.76 (1.07)	2.71 (0.83)	1.59 (0.64)	2.38 (0.65)	3.15 (0.51)	2.67 (1.07)	3.88 (0.68)	1.80 (0.68)	2.80 (0.61)	1.18 (0.63)	4.76 (1.54)	2.49 (1.42)	3.06 (0.96)
1.	-	.054	.056	.145**	-.114**	-.154**	.125**	-.060	-.044	.081	-.124**	-.098*	.033	.107*	.024	.011
2.		-	-.215**	.080	-.183**	-.246**	-.039	.148**	-.195**	.214**	-.043	.092*	-.173**	.031	.166*	-.145
3.			-	-.070	.021	.103*	.238**	.010	.074	-.144**	.152**	.017	.082	-.023	-.138**	.111
4.				.882	-.124**	-.108*	.079	.107*	-.193**	.190**	-.045	.029	-.039	.199**	.281**	-.115
5.					.826	.710**	-.076	-.340**	.256**	-.533**	-.014	-.030	.119**	.110*	.046	.171
6.						.921	.003	-.338**	.337**	-.656**	.001	-.115**	.241**	.073	-.025	.279
7.							.877	.225**	-.048	.101*	.051	-.005	.069	-.012	-.072	.058
8.								.763	-.262**	.533**	.070	.046	-.101*	-.078	.028	-.144
9.									-	-.331**	.089*	-.043	.080	.034	-.099*	.026
10.										.894	.077	.153**	-.130**	-.050	.036	-.227
11.											.848	.293**	.050	-.056	-.076	-.036
12.												.759	.015	.035	.078	-.176
13.													.913	.427**	.099*	-.053
14.														.863	.681**	-.263
15.															.869	-.274

Note. Reliabilities are on the diagonal axis. Answers were given on a scale from 1 to 5. Answers for PPSE were given on a scale of 1 to 7. Gender, age, education, political identity, and alienation from society were measured with one item each. **Correlation is significant at level 0.01 (two-sided). * Correlation is significant at level 0.05 (two-sided).

Tab. 1: Descriptive Statistics, Zero-Order Correlations, and Reliabilities of All Variables Across All Conditions.

8. Experimental Manipulations

The current chapter explains the background and content of the experimental manipulations used for this study. In fields such as psychology and communication studies, experimental manipulation involves intentionally changing or controlling an independent variable in an experiment to observe its impact on a dependent variable. The primary objective is to explore causal relationships and ascertain whether alterations in the independent variable result in consistent changes in the dependent variable. Through controlled manipulation, researchers can isolate specific factors and investigate their influence on behavior, cognition, or other (psychological) phenomena.

8.1 *Political Self-Efficacy*

Following Hart and Feldman (2016), participants read an online text designed to induce either high or low political self-efficacy. The text started by instructing participants to imagine a social and political situation they would like to change (see, e.g., Gallagher et al. 2013). It described a hypothetical progression of events that might occur because of efforts to change the situation. To induce high self-efficacy, participants were made to believe in their abilities and to continue pursuing their ideas, even in the face of opposition. They were made to feel that in the end, they had succeeded in bringing about a change. In contrast, to induce low political self-efficacy, participants were told how little their efforts had paid off, implying that one should give up on one's ideas as soon as the obstacles become too great. They were made to believe that they had ultimately failed to bring about any change.

The content of the manipulation text was guided by previous findings. Bandura (1977), for example, described personal experience and model learning as the most effective ways to increase self-efficacy. Accordingly, subjects were asked to imagine a scenario in which they would act politically. Political participation often takes place not only at the individual level but also in the formation of groups or movements that represent shared values (Drury and Reicher 2005). Through shared action, a collective identity takes shape, defined by a goal of desired political change in a common direction. Additional key aspects in the design of the manipulation text were themes overcoming obstacles (Gallagher et al. 2013), achieving intermediate success (Maddux and Meier 1995), and descriptions of the effectiveness of the political movement (Tausch et al. 2011).

Both texts referred to conventional democratic means of participation, as can be seen here in the high self-efficacy condition:

Please think of a problematic condition in society and politics that you would like to change. Now please imagine the following scenario: You are fed up with this political issue, determined to change something about it and think:

That's enough! You decide to do something about this situation. You talk to your friends and look for other people who think the same way as you on this issue. But the search for allies is going slowly. You become frustrated, but you do not want to give up. You ask your friends to forward your request to their friends. Then some other people come forward. You feel proud. Now you are a small group, but nothing is moving yet. You notice a tension. Then the idea: You network your group via different media and expand it that way. After a few weeks, you start launching campaigns. Intermediate success: a few days later, there are reports on your campaigns on the Internet. However, there are also some negative comments. But your movement grows. Bigger newspapers report on your group and many people discuss it. Finally, politicians are forced to react: the problematic situation is going to be changed.

8.2 Conspiracy Theory Knowledge

In the experimental condition, participants read a text about conspiracy theories, their content and characteristics, as well as simple explanatory approaches used in conspiracy theories and the possible purposes behind them. The content of the text was derived from previous studies (e.g., Hepfer 2021; Schneider et al. 2019). This form of intervention is based on the assumption that the provision of information in a text can lead to the acquisition of knowledge about the respective subject (Hausman and Rhodes, 2018; Hinze et al., 2013). This was the text for the conspiracy theory knowledge condition:

One can roughly distinguish between conspiracy theories (e.g., “lizard people rule the world”) and real conspiracies (e.g., Edward Snowden’s finding that the US government is monitoring its citizens). Conspiracy theories are defined as the belief in a secret collaboration of a usually small group of conspirators who, first, pursue goals that are harmful for society, and, second, manipulate events in their favor. Conspiracy theories offer – at least superficially – comprehensible explanations for complex events that are difficult to explain (e.g., lizard people instead of international, complex government discussions). It is precisely determined who is good and who is evil. Coincidences do not exist. People who spread conspiracy theories purposefully use false or highly distorted information: so-called “disinformation”. They do this to manipulate, strengthen their position, and expand their social influence.

In the control condition, participants read a text that defined how a society was structured and what expectations it contained for its members. Living together in a society was depicted as a network of contacts.

8.3 Text Quality

Texts were similar in overall length, sentence length, and content structure. Key words were displayed in bold to improve reading flow and clarity. The effectiveness of the interventions was tested in two pilot studies (50 participants and 48 participants, respectively, see online appendix). No significant effects were found. Two post hoc power analyses showed that a sample of $N = 188$ would be recommended to find significant effects in case of a beta error. In our interpretation of the pretest results, we leaned toward attributing the absence of a more pronounced effect to the characteristics of our sample rather than to the content of the manipulation itself. Since the manipulations were designed based on a large body of scientific evidence and based on other successful interventions (see also Chapters 3.2 and 4), the content was not changed.

In the main study, a t -test showed a significant difference in political self-efficacy between the high ($M = 3.87$, $SD = 1.06$) and the low political self-efficacy condition ($M = 3.66$, $SD = 1.08$, $t[535] = 2.26$, $p = .012$, 95% $CI[0.02, 0.39]$, $d = .195$).

As an indicator for its protective effect, the knowledge manipulation was followed by a social media post including a conspiracy theory (see e.g., Basol et al. 2021). We found no differences in believability ($t[384.57] = -0.687$, $p = .492$, 95% $CI[-0.26, 0.13]$) or probability ($t(380) = 0.925$, $p = .356$, 95% $CI[-0.129, 0.358]$) between the two groups.

9. Results

In the following, we shed light on the results of the main study. In Chapter 9.1, we provide an overview of the effects of the experimental manipulations of political participation. In Chapter 9.2, readers can find our results based on more exploratory analyses of the data including the covariates.

9.1 Effects of Knowledge and Political Self-Efficacy on Political Participation

We conducted a MANOVA to investigate the effects of the interventions on political participation. Due to different prerequisite violations for violent political participation and a strong floor effect (for a detailed overview of assumption checks, see the online appendix), the MANOVA was computed with normative participation and non-normative participation as dependent variables. Analyses were calculated with the CAR-package for R (R Core Team 2020).

We did not find any significant effects of the manipulation on political participation (Table 2). Thus, H1a, H1b, H2a, H2b, H3a and H3b are not supported by the data.

	Df	Pillai	F	num Df	den Df	Pr(>F)
Induced Conspiracy theory knowledge (CTK) (0 = no knowledge)	1	< 0.001	0.01	2	532	.988
Induced self-efficacy (SE) (0 = low SE)	1	0.002	0.43	2	532	.651
CTK x SE	1	< 0.001	0.08	2	532	.919
Residuals	533					

Tab. 2: Multivariate Statistics MANOVA Without Violent Political Participation.

9.2 Exploratory Analyses

Research indicates a central role of various covariates that might add relevant information in the context of the assumed relationships (see, e.g., Marinthe et al. 2020; van Mulukom et al. 2022). A MANCOVA was computed with normative participation and non-normative participation as dependent variables including all covariates. Conspiracy mentality had to be excluded due to the violation of the assumption of homogeneity of the regression slopes. Again, we did not find effects of manipulations on political participation (Table 3). However, several covariates show a significant relationship with normative and non-normative participation, meaning that changes in covariates lead to changes in combined dependent variables.

	Df	Pillai	Approx. F	num Df	den Df	Pr(>F)
Age	1	0.034	61.94	2	352	.002
Gender (1 = male)	1	0.019	34.17	2	352	.033
Education	1	0.016	29.11	2	352	.055
Political ideology	1	0.105	205.68	2	352	<.001
PPSE	1	0.051	94.65	2	352	<.001
Alienation	1	0.016	29.04	2	352	.056
Specific COVID-19 conspiracy beliefs	1	0.023	40.70	2	352	.017
Trust in institutions	1	0.011	20.36	2	352	.132
Media trust	1	0.010	17.09	2	352	.182
Media use	1	0.001	0.22	2	352	.800
Risk assessment	1	0.002	0.27	2	352	.763
Fear	1	0.012	20.90	2	352	.125
CTK (0 = no knowledge)	1	0.008	13.42	2	352	.262
SE (0 = low SE)	1	0.011	20.36	2	352	.132
CTK x SE	1	0.009	15.87	2	352	.206
Residuals	353					

Tab. 3: Multivariate Statistics MANCOVA Without Violent Political Participation.

To investigate univariate results for each dependent variable, we calculated AN-COVAs for both dependent variables (Table 4). We found a significant effect of the knowledge intervention on non-normative participation. Thus, controlling for co-variables, people who read the text about the characteristics of conspiracy theories, report less non-normative participation. A readiness for normative participation is fostered by a rather left-leaning political orientation and higher self-efficacy. Male-gender, being politically rather left-oriented and with higher perceived self-efficacy increase non-normative participation. No effects of the self-efficacy manipulation nor the interaction of knowledge and self-efficacy can be found.

	Estimate	Std. Error	t-value	Pr(> t)
Normative participation				
(Intercept)	5.973.1	1.204.757	4.96	<.001
Age	-0.012	0.008	-1.39	.166
Gender (1 = male)	0.022	0.183	0.12	.904
Education	0.214	0.110	1.94	.052
Political ideology	-0.458	0.083	-5.56	<.001
PPSE	0.295	0.074	3.97	<.001
Alienation	-0.121	0.077	-1.58	.114
Specific COVID-19 conspiracy beliefs	0.141	0.162	0.87	.384
Trust in institutions	-0.195	0.169	-1.15	.250
Media trust	-0.164	0.185	-0.89	.376
Media use	-0.085	0.120	-0.71	.477
Risk assessment	0.172	0.132	1.31	.191
Fear	-0.240	0.117	-2.06	.040
CTK (0 = no knowledge)	-0.305	0.201	-1.51	.130
SE (0 = low SE)	0.072	0.205	0.35	.725
CTK x SE	0.374	0.296	1.27	.206
Residual standard error: 1.386 on 353 DF, Multiple R-squared: 0.208, Adjusted R-squared: 0.1748, F-statistic: 6.12 on 15 and 353 DF, p-value: <.001				

Non-normative Participation				
	Estimate	Std. Error	t-value	Pr(> t)
(Intercept)	29.737.919	10.624.604	2.80	.005
Age	-0.001	0.008	-0.07	.944
Gender (1 = male)	0.322	0.162	1.99	.048
Education	0.107	0.097	1.10	.273
Political ideology	-0.410	0.073	-5.63	<.001
PPSE	0.201	0.066	3.07	.002
Alienation from society	0.007	0.068	0.12	.908
Specific COVID-19 conspiracy beliefs	0.207	0.143	1.44	.150
Trust in institutions	-0.013	0.149	-0.09	.929
Media trust	-0.271	0.163	-1.66	.098
Media use	-0.107	0.106	-1.01	.313
Risk assessment	0.058	0.116	0.50	.615
Fear	-0.089	0.103	-0.86	.390
CTK (0 = no knowledge)	-0.422	0.178	-2.38	.018
SE (0 = low SE)	0.031	0.180	0.17	.862
CTKSE	0.463	0.261	1.78	.076
Residual standard error: 1.222 on 353 DF, Multiple R-squared: 0.1747, Adjusted R-squared: 0.1397, F-statistic: 4.98 on 15 and 353 DF, p-value: <.001				

Tab. 4: Coefficients of Independent Variables and Covariates (168 observations deleted due to missingness).

10. Summary and Discussion

This presents an intervention developed to counteract the negative impact of conspiracy theories and thus the potential evolution toward conspiracy-based radicalization.

Due to violations of assumptions, violent political participation had to be excluded from variance analyses. We therefore cannot provide any results for hypotheses H1b or H2b. For normative and non-normative participation, neither an effect of conspiracy theories knowledge nor an effect of induced political self-efficacy was found (H1a, H2a, RQ1). Also, no interaction effect on both combined types of political participation was found – even after controlling for covariates (H3a, H3b, RQ2). However, we found higher intentions to engage in both normative and non-normative (but not violent) participation in participants who had higher perceived self-efficacy. Thus, the importance of working on peoples' confidence in their ability

to make a real political difference while simultaneously guiding them toward democratic and normative means of political participation may be important when reflecting on the implications of this study.

Moreover, results indicate that people in the conspiracy theory knowledge condition show less non-normative participation under the condition that we control for several covariates. This partially answers our first research question: whether and how the induction of conspiracy theory knowledge is related to non-normative political participation. It is conceivable that this knowledge could be used to create learning materials (for self-directed use, e.g., online) or instructed learning arrangements for formal or informal learning settings in the context of civic education or extremism prevention. Our exploratory analyses showed that male gender, being relatively left-leaning politically, and higher perceived self-efficacy may increase non-normative participation. The propensity for normative participation is further enhanced by a relatively left-wing political orientation and higher self-efficacy. These findings are partly in line with previous research. For example, Ardèvol-Abreu et al. (2020) and Reichert (2016) have shown that people with high political self-efficacy have higher intention for non-normative participation: that is, political self-efficacy could strengthen confidence in any form of political participation. Beyond that, results by Śerek et al. (2018) indicate similar effects of gender on non-normative participation. Research results on these relationships are somewhat divided, and more studies on these aspects are needed. Several explanations for the limited effects of our study are possible. In the following, we outline limitations of the sample and theoretical and practical implications of our study.

10.1 Limitations of the Sample and Implications

One important limiting factor of this study is that participants stem from a convenience sample. It is important to note that the results may not be generalizable to the broader population, as the sample may not represent a diverse or random cross-section. In the present sample, the majority is female, young, educated, and politically center-left. This tendency for the sample to be homogeneous reduces the findings' representativeness for several reasons: (1) more educated people are less likely to agree with conspiracy beliefs (e.g., Drochon 2018), (2) young women tend to be less engaged in non-normative or violent participation (e.g., Hooghe and Stolle 2004), (3) people identifying with politically right-wing ideas – which are positively associated with conspiracy beliefs and violent participation (van Prooijen, Krouwel, and Pollet 2015) – were underrepresented in the sample. In total, descriptive data indicate a rather low level of specific conspiracy beliefs. Thus, the potentially educating effect of the conspiracy theory knowledge condition might be limited due to a sample that was – at that point in time – not interested in or prone to endorsing

COVID-19 conspiracy theories. However, it is important to note that the association between demographics and conspiracy beliefs is significant yet small across different studies.

Due to limited resources, recruitment took place through channels that were very student-centered. Even though the call was spread across different disciplines, it is possible that many participants were psychology students themselves, which could have influenced the overall composition of the sample. However, since a) most media education interventions in the primary prevention area are aimed at a young, digitally savvy, non-radicalized part of society and b) this experiment was designed to examine the effect of manipulations in the first place, the sample still might provide useful insights for those purposes. Future studies should replicate this – or similar, adapted interventions – considering a more diverse and balanced sample to provide more generalizable results.

The study was carried out in Germany, so the findings are primarily applicable to the respective societal, social, and political context. Accordingly, a broad generalization to other countries, even those with similar democratic systems, is not possible. In the discipline of psychology, findings from different contexts are regularly used to develop hypotheses for one's own context. The thought process behind this is to test whether the effects can be replicated or similar effects can be found in a different context. However, this requires a precise social analysis of cultural differences, which future studies should examine in more detail.

10.2 Limitations of the Interventions and Implications

The manipulation of conspiracy theory knowledge showed only limited effects on political participation (H1a, RQ1). There are different explanations for this. Political participation is conditioned by a relatively stable attitude (trait; M. J. Schmitt and Steyer 1993). Especially in the case of trait-related behaviors, there is little chance of a single manipulation leading to effective change (Johnson and Eagly 1989). Accordingly, for prevention work, it could be worthwhile to design interventions that exert their influence on political participation at multiple points in time (Lamberty and Leiser 2019).

The limited results can further be explained by the design of the knowledge manipulation. While a literature review by O'Mahony et al. (2023) concluded that similar interventions identifying factual inaccuracies or demonstrating logical fallacies of conspiracy theories are fruitful for the deconstruction of disinformation, the effects of these interventions ranked from very small to medium. In this study, participants were confronted with a blank page of written information with a few words emphasized. Reading information in a single text does not necessarily result in learning processes – especially compared with a variation in learning methods over a longer

period. Knowledge construction further depends of the amount of prior knowledge (e.g., Taboada and Guthrie 2006). Presenting the educational information about conspiracy theories in a video, game, or task might have increased its effect. On the other hand, in the present study, we focused on manipulating factual knowledge about conspiracy theories. However, a deeper, networked understanding might be needed for an effective impact of knowledge about conspiracy theories on political participation. Such knowledge may be better attained through interventions containing (audio-)visual (e.g., Kim and Lee 2019) or even more complex interactive elements (e.g., interpersonal exchange, immersive games; e.g., Cook et al. 2023; Kerres, Bormann, and Vervenne 2009; Schlegel 2021; Eveland and Schmitt 2015) that stimulate cognitive, motivational, and emotional levels of elaboration, processing, and understanding of information. Schlegel (2021), for instance, argues that experiencing gamified applications may lead to a greater likelihood of sustained engagement with narratives of prevention measures and, in turn, to an increasing susceptibility to extremist content – a classification that many conspiracy theories would fit. Videogames used in civic education, known as civic games, may be particularly effective in fostering democratic competencies (e.g., effectively dealing with disinformation, Dishon and Kafai 2022). Future studies should not only focus on evaluating different kinds of interventions but also test the extent to which networked knowledge can lead to more profound impacts and long-lasting learning success.

In the current study, manipulations of conspiracy theories knowledge may also have failed to produce an effect due to the control condition, where society was described as a network in which all people are directly or indirectly connected – possibly suggesting an analogy to conspiracy theories. Barkun (2013) describes conspiracy theories as the belief in an all-encompassing network that connects all events. Accordingly, future studies should include a more neutral control condition.

Even though the self-efficacy intervention had no significant effect on political participation (H1b, H2b, RQ1), the significant difference in self-efficacy between the experimental and the control group shows that the intervention basically served its purpose – but that the effect is rather small. Our results regarding the impact of the self-efficacy manipulation on self-efficacy (see Chapter 8.3.) further indicate that political self-efficacy can be influenced by emphasizing working together in a group despite various obstacles and by focusing on intermediate successes (see Chapter 3.2 for a similar manipulation by Hart and Feldmann 2016). Someone who can understand themselves as a member of a democratic community, who can participate and make a difference, might be able to feel a strong sense of political self-efficacy. This makes sense, as strong theoretical associations are found between self-efficacy, political identity, and belief in conspiracy theories.

In this study, we assumed that the participants would handle the materials in a self-directed way. This is comparable to the situation that many people are confronted with online every day: Numerous educational materials for extremist prevention are made available on social media (e.g., explanatory videos, quizzes) to reach large numbers of people with relatively limited resources. Those posting the materials also expect that users have numerous other – maybe more entertaining – videos and online content to choose from. Furthermore, the desired effects (e.g., knowledge acquisition, education about extremist ideologies, attitude change) are assumed rather than really assessed. While usage of digital education content can be measured by the number of hits or comments, the actual impact often remains unclear. Studies evaluating the effects of digital interventions in extremist prevention are rarely carried out (see, e.g., Frischlich et al. 2018; J. B. Schmitt et al. 2021). With this study, we have taken a further step in this direction. Based on an interdisciplinary body of literature, we have not only identified possible factors that can contribute to combating the effect of disinformation on democratic behaviors but have also examined these factors integrated into possible interventions. Future studies should test the findings of this study to broaden our understanding of whether strong political self-efficacy might provide fertile ground for knowledge transfer, thus enabling people to abandon an initial interest or belief in conspiracy theories.

Although the hypothesized effects do not materialize in our study (H1a/b, H2a/b, H3b), the results offer various opportunities for revisions and adjustments at the methodological level. It would also be conceivable, for instance, to replicate this study with a design that includes a pedagogically framed setting (e.g., with a teacher). This could have more profound effects (Ernst and Schmitt 2020). In this context, not only the design of the pedagogical intervention but also characteristics of the learners or learning environment are important. A successful learning process also involves constant reflection of practitioners on their own role in the process (see Torff and Sternberg 2001 for an overview). This could play a special role in the context of teaching about potentially complex and controversial issues such as disinformation and extremist ideologies (Biringer 2023). Research has shown that teachers who place importance on critical thinking and argumentation are more inclined to employ pedagogical approaches that encourage civic engagement (Reichert, Lange, and Chow 2021). Future studies should evaluate the relationship between influences inside and outside of the learning environment and their impact on political self-efficacy, conspiracy theory knowledge, and political participation. Aside from education about conspiracy theories, other aspects worth including are tolerance of ambiguity, perspective taking, media literacy skills, and education about existential uncertainties.

11. Conclusion

Although the interventions in our study showed only limited effects on political participation – which may have been a methodological and not necessarily a theoretical problem – this study adds insight into individual variables that may play a role in interventions to combat the negative influence of disinformation. In doing so, it contributes to literature on the effects of prevention measures (see, e.g., Frischlich et al. 2017; J. B. Schmitt et al. 2018; 2021).

In the light of the recent literature, we continue to argue for the potential of knowledge and self-efficacy as factors preventing against the onset of interest in conspiracy theories and the early stages of conspiracy-based radicalization. These are also important aspects of media literacy and civic education (see, e.g., our discussion of the literature on conspiracy theory knowledge and self-efficacy in Chapters 3 and 4). Given the reviewed literature from which we derived our hypotheses, we believe that the relationship between political self-efficacy, conspiracy theory knowledge, and political participation goes beyond the correlations found in previous studies. Considering the limitations of the present study (in particular, the stability of the dependent variable), future studies should further investigate the potential relationships between the proposed variables.

The more people perceive high self-efficacy in dealing with political decisions and the more they know about conspiracy theories, the less room is left for by non-democratic actors, and violent participation. Interventions to increase political self-efficacy could be used in different kinds of learning settings to spark conversations around political self-efficacy and its role in democracy. In light of the recent rise of political and societal influence of right-wing extremists (not only in Germany), building strong political self-efficacy and outlining possibilities to participate in a diverse and vibrant democracy appear urgent. Besides the call for interventions – considering various cognitive, social, and affective barriers (Ecker et al. 2022) – more complex social and political responses (e.g., a clear governmental morale against extremism) might also be necessary to empower people against the persuasive appeal of conspiracy theories.

References

- Ahorsu, Daniel Kwasi, Chung-Ying Lin, Vida Imani, Mohsen Saffari, Mark D. Griffiths, and Amir H. Pakpour. 2022. 'The Fear of COVID-19 Scale: Development and Initial Validation'. *International Journal of Mental Health and Addiction* 20 (3): 1537–45. <https://doi.org/10.1007/s11469-020-00270-8>.
- Allington, Daniel, Bobby Duffy, Simon Wessely, Nayana Dhavan, and James Rubin. 2021. 'Health-Protective Behaviour, Social Media Usage and Conspiracy Belief during the COVID-19 Public Health Emergency'. *Psychological Medicine* 51 (10): 1763–69. <https://doi.org/10.1017/S003329172000224X>.
- Ardèvol-Abreu, Alberto, Homero Gil de Zúñiga, and Elena Gámez. 2020. 'The Influence of Conspiracy Beliefs on Conventional and Unconventional Forms of Political Participation: The Mediating Role of Political Efficacy'. *The British Journal of Social Psychology* 59 (2): 549–69. <https://doi.org/10.1111/bjso.12366>.
- Bandura, Albert. 1977. 'Self-Efficacy: Toward a Unifying Theory of Behavioral Change'. *Psychological Review* 84:191–215. <https://doi.org/10.1037/0033-295X.84.2.191>.
- Barkun, Michael. 2013. *A Culture of Conspiracy: Apocalyptic Visions in Contemporary America*. University of California Press.
- Basol, Melisa, Jon Roozenbeek, Manon Berriche, Fatih Uenal, William P. McClanahan, and Sander Van Der Linden. 2021. 'Towards Psychological Herd Immunity: Cross-Cultural Evidence for Two Prebunking Interventions against COVID-19 Misinformation'. *Big Data & Society* 8 (1): 205395172110138. <https://doi.org/10.1177/20539517211013868>.
- Bouffard-Bouchard, Therese. 1990. 'Influence of Self-Efficacy on Performance in a Cognitive Task'. *The Journal of Social Psychology* 130 (3): 353–63. <https://doi.org/10.1080/00224545.1990.9924591>.
- Butter, Michael. 2020. *The Nature of Conspiracy Theories*. John Wiley & Sons.
- Caprara, Gian Vittorio, Michele Vecchione, Cristina Capanna, and Minou Mebane. 2009. 'Perceived Political Self-Efficacy: Theory, Assessment, and Applications'. *European Journal of Social Psychology* 39 (6): 1002–20. <https://doi.org/10.1002/ejsp.604>.
- Cinelli, Matteo, Gabriele Etta, Michele Avalle, Alessandro Quattrociocchi, Niccolò Di Marco, Carlo Valensise, Alessandro Galeazzi, and Walter Quattrociocchi. 2022. 'Conspiracy Theories and Social Media Platforms'. *Current Opinion in Psychology* 47 (October):101407. <https://doi.org/10.1016/j.copsyc.2022.101407>.
- Commission for Countering Extremism. 2021. 'Exploring the Intersection between Hateful Extremism and COVID-19 (Accessible Version)'. GOV.UK. 2021. <https://www.gov.uk/government/publications/exploring-the-intersection-between-hateful-extremism-and-covid-19/exploring-the-intersection-between-hateful-extremism-and-covid-19-accessible-version>.

- Cook, John, Ullrich K. H. Ecker, Melanie Trecek-King, Gunnar Schade, Karen Jeffers-Tracy, Jasper Fessmann, Sojung Claire Kim, et al. 2023. 'The Cranky Uncle Game – Combining Humor and Gamification to Build Student Resilience against Climate Misinformation'. *Environmental Education Research* 29 (4): 607–23. <https://doi.org/10.1080/13504622.2022.2085671>.
- De Coninck, David, Thomas Frissen, Koen Matthijs, Leen d'Haenens, Grégoire Lits, Olivier Champagne-Poirier, Marie-Eve Carignan, et al. 2021. 'Beliefs in Conspiracy Theories and Misinformation About COVID-19: Comparative Perspectives on the Role of Anxiety, Depression and Exposure to and Trust in Information Sources'. *Frontiers in Psychology* 12. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.646394>.
- Deth, Jan W. van. 2009. 'Politische Partizipation'. In *Politische Soziologie: Ein Studienbuch*, edited by Viktoria Kaina and Andrea Römmele, 141–61. Wiesbaden: VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-91422-0_6.
- Dishon, Gideon, and Yasmin B. Kafai. 2022. 'Connected Civic Gaming: Rethinking the Role of Video Games in Civic Education'. *Interactive Learning Environments* 30 (6): 999–1010. <https://doi.org/10.1080/10494820.2019.1704791>.
- Dow, Benjamin J., Amber L. Johnson, Cynthia S. Wang, Jennifer Whitson, and Tanya Menon. 2021. 'The COVID-19 Pandemic and the Search for Structure: Social Media and Conspiracy Theories'. *Social and Personality Psychology Compass* 15 (9): e12636. <https://doi.org/10.1111/spc3.12636>.
- Drochon, Hugo. 2018. 'Who Believes in Conspiracy Theories in Great Britain and Europe?' In *Conspiracy Theories and the People Who Believe Them*, edited by Joseph E. Uscinski, 0. Oxford University Press. <https://doi.org/10.1093/oso/9780190844073.003.0022>.
- Drury, John, and Steve Reicher. 2005. 'Explaining Enduring Empowerment: A Comparative Study of Collective Action and Psychological Outcomes'. *European Journal of Social Psychology* 35 (1): 35–58. <https://doi.org/10.1002/ejsp.231>.
- Ecker, Ullrich K H, Stephan Lewandowsky, John Cook, Philipp Schmid, Lisa K Fazio, Nadia Brashier, Panayiota Kendeou, Emily K Vraga, and Michelle A Amazeen. 2022. 'The Psychological Drivers of Misinformation Belief and Its Resistance to Correction'. *Nature Reviews Psychology* 1 (January):13-29 (2022). <https://doi.org/10.1038/s44159-021-00006-y>.
- Enders, Adam M., Joseph E. Uscinski, Michelle I. Seelig, Casey A. Klostad, Stefan Wuchty, John R. Funchion, Manohar N. Murthi, Kamal Premaratne, and Justin Stoler. 2023. 'The Relationship Between Social Media Use and Beliefs in Conspiracy Theories and Misinformation'. *Political Behavior* 45 (2): 781–804. <https://doi.org/10.1007/s11109-021-09734-6>.
- Ernst, Julian, and Josephine B. Schmitt. 2020. 'Politische Bildung für Jugendliche in oder mit digitalen Medien? Medienpädagogische Reflexionen der Strukturbedingungen von YouTube'. *MedienPädagogik: Zeitschrift für Theorie und Praxis der Medienbildung* 38 (Oktober):21–42. <https://doi.org/10.21240/mpaed/38/2020.10.02.X>.

- Eveland, William P., Jr., and Josephine B. Schmitt. 2015. 'Communication Content and Knowledge Content Matters: Integrating Manipulation and Observation in Studying News and Discussion Learning Effects'. *Journal of Communication* 65 (1): 170–91. <https://doi.org/10.1111/jcom.12138>.
- Frischlich, Lena, Diana Rieger, Anna Morten, and Gary Bente. 2017. 'Wirkung'. In *Videos Gegen Extremismus? Counter-Narrative Auf Dem Prüfstand*, edited by Lena Frischlich, Diana Rieger, Anna Morten, and Gary Bente, 81–140. Wiesbaden: Gribsch und Rochol Druck GmbH, Hamm.
- – –. 2018. 'The Power of a Good Story: Narrative Persuasion in Extremist Propaganda and Videos against Violent Extremism'. *International Journal of Conflict and Violence (IJCV)* 12:a644–a644. <https://doi.org/10.4119/ijcv-3106>.
- Gallagher, Matthew W., Laura A. Payne, Kamila S. White, Katherine M. Shear, Scott W. Woods, Jack M. Gorman, and David H. Barlow. 2013. 'Mechanisms of Change in Cognitive Behavioral Therapy for Panic Disorder: The Unique Effects of Self-Efficacy and Anxiety Sensitivity'. *Behaviour Research and Therapy* 51 (11): 767–77. <https://doi.org/10.1016/j.brat.2013.09.001>.
- Gao, Fengyan, and Siros Izadpanah. 2023. 'The Relationship between Computer Games and Computer Self-Efficacy with Academic Engagement: The Mediating Role of Students' Creativity'. *Education and Information Technologies*, April. <https://doi.org/10.1007/s10639-023-11757-x>.
- GESIS Panel Team. 2020. 'GESIS Panel Special Survey on the Coronavirus SARS-CoV-2 Outbreak in Germany'. 2020. <https://doi.org/10.4232/1.13520>.
- Gorman, Jack M., David A. Scales, and Sara E. Gorman. 2021. 'Expert Opinion in Mental Disorder: Why Is Acceptance of the COVID-19 Vaccines so Problematic?' *Personalized Medicine in Psychiatry* 25–26 (March):100072. <https://doi.org/10.1016/j.pmip.2021.100072>.
- Hart, P. Sol, and Lauren Feldman. 2016. 'The Influence of Climate Change Efficacy Messages and Efficacy Beliefs on Intended Political Participation'. *PLOS ONE* 11 (8): e0157658. <https://doi.org/10.1371/journal.pone.0157658>.
- Hepfer, Karl. 2021. 'Verschwörungstheorien: Eine philosophische Kritik der Unvernunft'. In *Verschwörungstheorien*. transcript Verlag. <https://doi.org/10.1515/97838389459317>.
- Hooghe, Marc, and Sofie Marien. 2013. 'A Comparative Analysis of the Relation Between Political Trust and Forms of Political Participation in Europe'. *European Societies* 15 (1): 131–52. <https://doi.org/10.1080/14616696.2012.692807>.
- Hooghe, Marc, and Dietlind Stolle. 2004. 'Good Girls Go to the Polling Booth, Bad Boys Go Everywhere'. *Women & Politics* 26 (3–4): 1–23. https://doi.org/10.1300/J014v26n03_01.
- Hutchinson, Jasmin C., Todd Sherman, Nevena Martinovic, and Gershon Tenenbaum. 2008. 'The Effect of Manipulated Self-Efficacy on Perceived and Sustained Effort'. *Journal of Applied Sport Psychology* 20 (4): 457–72. <https://doi.org/10.1080/10413200802351151>.
- Imhoff, Roland. 2021. 'Wie Verschwörungsglauben die Corona-Pandemiebekämpfung behindert'. *Public Health Forum* 29 (1): 36–38. <https://doi.org/10.1515/pubhef-2020-0115>.

- Imhoff, Roland, and Pia Lamberty. 2020. 'A Bioweapon or a Hoax? The Link Between Distinct Conspiracy Beliefs About the Coronavirus Disease (COVID-19) Outbreak and Pandemic Behavior'. *Social Psychological and Personality Science* 11 (8): 1110–18. <https://doi.org/10.1177/1948550620934692>.
- Johnson, Blair T., and Alice H. Eagly. 1989. 'Effects of Involvement on Persuasion: A Meta-Analysis'. *Psychological Bulletin* 106:290–314. <https://doi.org/10.1037/0033-2909.106.2.290>.
- Jolley, Daniel, and Karen M. Douglas. 2014a. 'The Effects of Anti-Vaccine Conspiracy Theories on Vaccination Intentions'. *PLOS ONE* 9 (2): e89177. <https://doi.org/10.1371/journal.pone.0089177>.
- – –. 2014b. 'The Social Consequences of Conspiracism: Exposure to Conspiracy Theories Decreases Intentions to Engage in Politics and to Reduce One's Carbon Footprint'. *British Journal of Psychology* 105 (1): 35–56. <https://doi.org/10.1111/bjop.12018>.
- Jolley, Daniel, Karen M. Douglas, and Robbie M. Sutton. 2018. 'Blaming a Few Bad Apples to Save a Threatened Barrel: The System-Justifying Function of Conspiracy Theories'. *Political Psychology* 39 (2): 465–78. <https://doi.org/10.1111/pops.12404>.
- Jung, Nakwon, Yonghwan Kim, and Homero Gil de Zúñiga. 2011. 'The Mediating Role of Knowledge and Efficacy in the Effects of Communication on Political Participation'. *Mass Communication and Society* 14 (4): 407–30. <https://doi.org/10.1080/15205436.2010.496135>.
- Kerres, Michael, Mark Bormann, and Marcel Vervenne. 2009. 'Didaktische Konzeption von Serious Games: Zur Verknüpfung von Spiel- und Lernangeboten'. *MedienPädagogik: Zeitschrift für Theorie und Praxis der Medienbildung*, August, 1–16. <https://doi.org/10.21240/mpaed/00/2009.08.25.X>.
- Khokhlova, Olga, Nishtha Lamba, Aditi Bhatia, and Marina Vinogradova. 2021. 'Biowarfare Conspiracy, Faith in Government, and Compliance with Safety Guidelines during COVID-19: An International Study'. *Mind & Society* 20 (2): 235–51. <https://doi.org/10.1007/s11299-021-00282-4>.
- Kim, Duri, and Ogcheol Lee. 2019. 'Effects of Audio-Visual Stimulation on Hand Hygiene Compliance among Family and Non-Family Visitors of Pediatric Wards: A Quasi-Experimental Pre-Post Intervention Study'. *Journal of Pediatric Nursing* 46 (May): e92–97. <https://doi.org/10.1016/j.pedn.2019.03.017>.
- Korpershoek, Corrie, Jaap van der Bijl, and Thóra B. Hafsteinsdóttir. 2011. 'Self-Efficacy and Its Influence on Recovery of Patients with Stroke: A Systematic Review'. *Journal of Advanced Nursing* 67 (9): 1876–94. <https://doi.org/10.1111/j.1365-2648.2011.05659.x>.
- Kucukkarapinar, Melike, Filiz Karadag, Irem Budakoglu, Selcuk Aslan, Onder Ucar, Aysegul Yay Pence, Utku Timurcin, Selim Tumkaya, Cicek Hocaoglu, and Ilknur Kiraz. 2022. 'The Relationship between COVID-19 Protection Behaviors and Pandemic-Related Knowledge, Perceptions, Worry Content, and Public Trust in a Turkish Sample'. *Vaccines* 10 (12): 2027. <https://doi.org/10.3390/vaccines10122027>.

- Küpper, Beate, Wilhelm Berghan, Andreas Zick, and Maike Rump. 2021. 'Volkes Stimme – Antidemokratische Und Populistische Einstellungen'. In *Die Geforderte Mitte. Rechtsextreme Und Demokratiegefährdende Einstellungen in Deutschland 2020/21*, edited by Andreas Zick and Beate Küpper, 43–74. Bonn: Verlag J.H.W. Dietz Nachf.
- Kvarme, Lisbeth Gravdal, Sølvi Helseth, Ragnhild Sørsum, Vivian Luth-Hansen, Siren Haugland, and Gerd Karin Natvig. 2010. 'The Effect of a Solution-Focused Approach to Improve Self-Efficacy in Socially Withdrawn School Children: A Non-Randomized Controlled Trial'. *International Journal of Nursing Studies* 47 (11): 1389–96. <https://doi.org/10.1016/j.ijnurstu.2010.05.001>.
- Lamberty, Pia, and David Leiser. 2019. '»Sometimes You Just Have to Go in « – The Link between Conspiracy Beliefs and Political Action'. PsyArXiv. <https://doi.org/10.31234/osf.io/bdrxc>.
- Lee, Martha. 2011. *Conspiracy Rising: Conspiracy Thinking and American Public Life*. Santa Barbara, CA: Praeger.
- Leman, Patrick, and Marco Cinnirella. 2013. 'Beliefs in Conspiracy Theories and the Need for Cognitive Closure'. *Frontiers in Psychology* 4. <https://www.frontiersin.org/articles/10.3389/fpsyg.2013.00378>.
- Lewandowsky, Stephan, Gilles E. Gignac, and Klaus Oberauer. 2013. 'The Role of Conspiracist Ideation and Worldviews in Predicting Rejection of Science'. *PLOS ONE* 8 (10): e75637. <https://doi.org/10.1371/journal.pone.0075637>.
- Luszczynska, Aleksandra, Maciej Tryburcy, and Ralf Schwarzer. 2007. 'Improving Fruit and Vegetable Consumption: A Self-Efficacy Intervention Compared with a Combined Self-Efficacy and Planning Intervention'. *Health Education Research* 22 (5): 630–38. <https://doi.org/10.1093/her/cyl133>.
- Maddux, James E., and Lisa J. Meier. 1995. 'Self-Efficacy and Depression'. In *Self-Efficacy, Adaptation, and Adjustment: Theory, Research, and Application*, 143–69. The Plenum Series in Social/Clinical Psychology. New York, NY, US: Plenum Press. https://doi.org/10.1007/978-1-4419-6868-5_5.
- Magni, Gabriele. 2017. 'It's the Emotions, Stupid! Anger about the Economic Crisis, Low Political Efficacy, and Support for Populist Parties'. *Electoral Studies* 50 (December):91–102. <https://doi.org/10.1016/j.electstud.2017.09.014>.
- Marinthe, Gaëlle, Genavee Brown, Sylvain Delouvé, and Daniel Jolley. 2020. 'Looking out for Myself: Exploring the Relationship between Conspiracy Mentality, Perceived Personal Risk, and COVID-19 Prevention Measures'. *British Journal of Health Psychology* 25 (4): 957–80. <https://doi.org/10.1111/bjhp.12449>.
- McQueen, Karen A., Cindy-Lee Dennis, Robyn Stremmler, and Cameron D. Norman. 2011. 'A Pilot Randomized Controlled Trial of a Breastfeeding Self-Efficacy Intervention With Primiparous Mothers'. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 40 (1): 35–46. <https://doi.org/10.1111/j.1552-6909.2010.01210.x>.

- Ministerium des Innern des Landes Nordrhein-Westfalen. 2021. 'Sonderbericht Zu Verschwörungsmysen Und „Corona-Leugnern“'. https://www.im.nrw/system/files/media/document/file/Sonderbericht_2021_Verschwoerungsmysen_und_Corona-Leugner.pdf.
- Mulukom, Valerie van, Lotte J. Pummerer, Sinan Alper, Hui Bai, Vladimíra Čavojová, Jessica Farias, Cameron S. Kay, et al. 2022. 'Antecedents and Consequences of COVID-19 Conspiracy Beliefs: A Systematic Review'. *Social Science & Medicine* (1982) 301 (May):114912. <https://doi.org/10.1016/j.socscimed.2022.114912>.
- Niemi, Richard G., Stephen C. Craig, and Franco Mattei. 1991. 'Measuring Internal Political Efficacy in the 1988 National Election Study'. *The American Political Science Review* 85 (4): 1407–13. <https://doi.org/10.2307/1963953>.
- O'Mahony, Cian, Maryanne Brassil, Gillian Murphy, and Conor Linehan. 2023. 'The Efficacy of Interventions in Reducing Belief in Conspiracy Theories: A Systematic Review'. *PLOS ONE* 18 (4): e0280902. <https://doi.org/10.1371/journal.pone.0280902>.
- Pakarinen, Anni, Heidi Parisod, Jouni Smed, and Sanna Salanterä. 2017. 'Health Game Interventions to Enhance Physical Activity Self-Efficacy of Children: A Quantitative Systematic Review'. *Journal of Advanced Nursing* 73 (4): 794–811. <https://doi.org/10.1111/jan.13160>.
- Prooijen, Jan-Willem van, André P. M. Krouwel, and Thomas V. Pollet. 2015. 'Political Extremism Predicts Belief in Conspiracy Theories'. *Social Psychological and Personality Science* 6 (5): 570–78. <https://doi.org/10.1177/1948550614567356>.
- Reichert, Frank. 2016. 'How Internal Political Efficacy Translates Political Knowledge Into Political Participation'. *Europe's Journal of Psychology* 12 (2): 221–41. <https://doi.org/10.5964/ejop.v12i2.1095>.
- Reichert, Frank, Dirk Lange, and Leo Chow. 2021. 'Educational Beliefs Matter for Classroom Instruction: A Comparative Analysis of Teachers' Beliefs about the Aims of Civic Education'. *Teaching and Teacher Education* 98 (February):103248. <https://doi.org/10.1016/j.tate.2020.103248>.
- Romer, Daniel, and Kathleen Hall Jamieson. 2020. 'Conspiracy Theories as Barriers to Controlling the Spread of COVID-19 in the U.S'. *Social Science & Medicine* (1982) 263 (October):113356. <https://doi.org/10.1016/j.socscimed.2020.113356>.
- Rottweiler, Bettina, and Paul Gill. 2022. 'Conspiracy Beliefs and Violent Extremist Intentions: The Contingent Effects of Self-Efficacy, Self-Control and Law-Related Morality'. *Terrorism and Political Violence* 34 (7): 1485–1504. <https://doi.org/10.1080/09546553.2020.1803288>.
- Sabucedo, Jose Manuel, and Constantino Arce. 1991. 'Types of Political Participation: A Multidimensional Analysis'. *European Journal of Political Research* 20 (1): 93–102. <https://doi.org/10.1111/j.1475-6765.1991.tb00257.x>.
- Schernhammer, Eva, Jakob Weitzer, Manfred D Laubichler, Brenda M Birmann, Martin Bertau, Lukas Zenk, Guido Caniglia, Carlo C Jäger, and Gerald Steiner. 2022. 'Correlates of COVID-19 Vaccine Hesitancy in Austria: Trust and the Government'. *Journal of Public Health* 44 (1): e106–16. <https://doi.org/10.1093/pubmed/fdab122>.

- Schlegel, Linda. 2021. 'The Role of Gamification in Radicalization Processes'. modus | zad. 2021. <https://modus-zad.de/publikation/report/working-paper-1-2021-the-role-of-gamification-in-radicalization-processes/>.
- Schmitt, Josephine B. 2016. 'Media Self-Efficacy and Internal Political Efficacy as Processes Underlying Young Adults' Political Participation Medien- Und Politikbezogene Selbstwirksamkeit Als Wegbereiter Politischer Partizipation'. *SCM Studies in Communication and Media* 5 (2): 197–222. <https://doi.org/10.5771/2192-4007-2016-2-197>.
- Schmitt, Josephine B., Claus Caspari, Tim Wulf, Carola Bloch, and Diana Rieger. 2021. 'Two Sides of the Same Coin? The Persuasiveness of One-Sided vs. Two-Sided Narratives in the Context of Radicalization Prevention'. *SCM Studies in Communication and Media* 10 (1): 48–71. <https://doi.org/10.5771/2192-4007-2021-1-48>.
- Schmitt, Josephine B., Diana Rieger, Julian Ernst, and Hans-Joachim Roth. 2018. 'Critical Media Literacy and Islamist Online Propaganda: The Feasibility, Applicability and Impact of Three Learning Arrangements'. *International Journal of Conflict and Violence (IJCV)* 12:a642–a642. <https://doi.org/10.4119/ijcv-3104>.
- Schmitt, Manfred J., and Rolf Steyer. 1993. 'A Latent State-Trait Model (Not Only) for Social Desirability'. *Personality and Individual Differences* 14:519–29. [https://doi.org/10.1016/0191-8869\(93\)90144-R](https://doi.org/10.1016/0191-8869(93)90144-R).
- Schneider, J., Josephine B. Schmitt, J. Ernst, and Diana Rieger. 2019. 'Verschwörungstheorien und Kriminalitätsfurcht in rechtsextremen und islamistischen YouTube-Videos'. *Praxis der Rechtspsychologie*, no. 1, 41–66.
- Schunk, Dale H. 1983. 'Reward Contingencies and the Development of Children's Skills and Self-Efficacy'. *Journal of Educational Psychology* 75:511–18. <https://doi.org/10.1037/0022-0663.75.4.511>.
- Šerek, Jan, Hana Machackova, and Petr Macek. 2018. 'Who Crosses the Norms? Predictors of the Readiness for Non-Normative Political Participation among Adolescents'. *Journal of Adolescence* 62 (January):18–26. <https://doi.org/10.1016/j.adolescence.2017.11.001>.
- Shahsavari, Shadi, Pavan Holur, Tianyi Wang, Timothy R. Tangherlini, and Vwani Roychowdhury. 2020. 'Conspiracy in the Time of Corona: Automatic Detection of Emerging COVID-19 Conspiracy Theories in Social Media and the News'. *Journal of Computational Social Science* 3 (2): 279–317. <https://doi.org/10.1007/s42001-020-00086-5>.
- Swann, William B., Angel Gómez, D. Conor Seyle, J. Francisco Morales, and Carmen Huici. 2009. 'Identity Fusion: The Interplay of Personal and Social Identities in Extreme Group Behavior'. *Journal of Personality and Social Psychology* 96 (5): 995–1011. <https://doi.org/10.1037/a0013668>.
- Taboada, Ana, and John T. Guthrie. 2006. 'Contributions of Student Questioning and Prior Knowledge to Construction of Knowledge from Reading Information Text'. *Journal of Literacy Research* 38 (1): 1–35. https://doi.org/10.1207/s15548430jlr3801_1.

- Tausch, Nicole, Julia C. Becker, Russell Spears, Oliver Christ, Rim Saab, Purnima Singh, and Roomana N. Siddiqui. 2011. 'Explaining Radical Group Behavior: Developing Emotion and Efficacy Routes to Normative and Nonnormative Collective Action'. *Journal of Personality and Social Psychology* 101:129–48. <https://doi.org/10.1037/a0022728>.
- Teovanović, Predrag, Petar Lukić, Zorana Zupan, Aleksandra Lazić, Milica Ninković, and Iris Žeželj. 2021. 'Irrational Beliefs Differentially Predict Adherence to Guidelines and Pseudoscientific Practices during the COVID-19 Pandemic'. *Applied Cognitive Psychology* 35 (2): 486–96. <https://doi.org/10.1002/acp.3770>.
- Valentino, Nicholas A., Krysha Gregorowicz, and Eric W. Groenendyk. 2009. 'Efficacy, Emotions and the Habit of Participation'. *Political Behavior* 31 (3): 307–30. <https://doi.org/10.1007/s11109-008-9076-7>.
- Vegetti, Federico, and Levente Littvay. 2022. 'Belief in Conspiracy Theories and Attitudes toward Political Violence'. *Italian Political Science Review / Rivista Italiana Di Scienza Politica* 52 (1): 18–32. <https://doi.org/10.1017/ipo.2021.17>.
- zdf.de. 2022. 'Corona-Proteste in Deutschland: Immer öfter, immer radikaler'. 2022. <https://www.zdf.de/uri/ecbdbdd1-b20d-46e2-9453-9348a927626b>.
- Zhao, Xinyan, and Edward L. Fink. 2021. 'Proattitudinal versus Counterattitudinal Messages: Message Discrepancy, Reactance, and the Boomerang Effect'. *Communication Monographs* 88 (3): 286–305. <https://doi.org/10.1080/03637751.2020.1813317>.