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# To What Extent Have Conspiracy Theories Undermined COVID-19: Strategic Narratives?

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## INTRODUCTION

Noting the emergence of COVID-19 conspiracy theories and acknowledging the role that official messages play in countering the spread of the virus, this article considers the extent to which conspiracies have undermined strategic narratives during the pandemic. Globally, coronavirus infection has produced widespread concern about attendant physical and psychological welfare (World Health Organization, 2020). The emergence of multiple conspiracy theories accompanied attempts to comprehend the implications of the ensuing epidemic (Georgiou et al., 2020). These, consistent with archetypal conspiratorial thinking (e.g., Denovan et al., 2020), explain COVID-19 in terms of clandestine plots, enacted by powerful actors, to achieve malevolent goals (Sibley et al., 2020). Prominent examples include claims that COVID-19 was engineered in a laboratory as a bioweapon (Lewis, 2020), and that vaccination is a pretext to implant tracking microchips into populations (Huddleston, 2021, January 12).

Endorsement of conspiracy theories occurs when individuals perceive official narratives as deficient, or an event has no conclusive explanation (Dagnall et al., 2017). A further key feature of conspiracy theories is that despite lacking a robust empirical basis, they typically cite supporting scientific evidence (Drinkwater et al., 2018). This provides an “illusion” of credibility, and in part, explains why people often wrongly perceive conspiracies as valid alternatives to mainstream explanations (Drinkwater et al., 2020). This was demonstrated in the United States by the QAnon meta-conspiracy theory (Amarasingam and Argentino, 2020). QAnon encapsulates a range of smaller conspiracies that thematically represent the notion that during his presidency there was a deep state, series of secret/unauthorized networks operating in pursuit of their own agenda and goals, which actively undermined Donald Trump. Pertinent to the COVID-19 pandemic, QAnon encouraged resistance to public health messages (Hannah, 2021; Sturgill, 2021).

## Communication and Conspiracy

From a communications perspective, COVID-19 conspiracies are problematic because their content refutes official messages and distorts societal perceptions of the pandemic. Moreover, the assertion of spurious counterarguments reduces narrative impact and potentially weakens source credibility. Illustratively, research into the effects of conspiracy on immunization has demonstrated that mere exposure to confutation reduces the likelihood of vaccination (Jolley and Douglas, 2014). This shows that conspiracy theories can adversely influence attitudes, decision-making, and behavior related to real-world situations.

Specifically, in the United Kingdom (UK) the burning of 5G masts was a reaction to false social media claims that the new technology spread the Coronavirus (Child, 2020, April 13). During the pandemic, misinformation has also directly contradicted the efficacy of key public health advice (i.e., limiting social contacts and interactions). Recently, this has extended to vaccination

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effectiveness and purpose. Explicitly, the notions that pharmaceutical companies cover up the danger of vaccines, have fabricated data, and have exaggerated the potency of immunization (Freeman et al., 2020). Conspiracies are thus most influential when they index canonical themes such as distrust of authority, alienation, and personal insecurity; directly oppose official accounts; and reference ideological beliefs and/or political affiliations (Bessi et al., 2015). For instance, anti-maskers refusing to wear face coverings because they regard them as an assault on personal freedom (Duncan, 2020, July 2020).

These instances suggest that conspiracy theories have reduced the effectiveness of key COVID-19 UK strategic narratives (e.g., *Conservatives.com*, 2020b), and “Stay alert, control the virus, save lives” (*Conservatives.com*, 2020a). These are key public messages that seek to reduce risk and enhance well-being by encouraging maximum engagement with health directives (Dagnall et al., 2020). Explicitly, strategic narratives advance public health by focusing on “scientific development, strategic dissemination, and critical evaluation of relevant, accurate, accessible, and understandable health information” (Bernhardt, 2004, p. 2051). Consistent with this classification, UK politicians and scientists have used communications as a tool to construct common understanding, and to promote and shape behaviors that reduce the spread of COVID-19 (Dagnall et al., 2020).

## DISCUSSION

The impact of conspiracy theories stems from the fact that they are often wrongly perceived as legitimate information sources. This occurs within modern technological societies because there exist multiple outlets, which rapidly transmit vast volumes of new and evolving data. In this context, it is easy for boundaries between official guidance, informed social commentary, conjecture and misinformation to become blurred. The internet plays a central role in this obfuscation, since paradoxically it is the main provider of authentic news and fact, and the primary source of conspiracy theories and misinformation. Although in some instances the distinction is evident (i.e., conspiracy websites), in others (e.g., social media platforms) it is more difficult to discern (Gretter et al., 2017). This problem is exacerbated by the existence of fake news websites that intentionally publish disinformation to drive social media traffic (e.g., *Infowars*). Hence, speculation and rumors are frequently circulated, shared, and cross-posted without reference to validity [see Knight (2000)]. For these reasons, the internet is a fertile breeding ground for conspiracy and misinformation (Del Vicario et al., 2016).

Another variable associated with the formation and endorsement of conspiracy theories is uncertainty. With reference to COVID-19, there are myriad factors that combine to heighten uncertainty (the rapidly changing nature of the pandemic, alterations to working practices, disruption to social life, etc.). Doubt creates anxiety and motivates the desire to establish personal meaning (van Prooijen, 2016). This process draws frequently on conspiracy theories because

people demonstrate a corresponding preference for external data that validates their internal beliefs and motivations (Zonis and Joseph, 1994). Hence, conspiracies are intuitively appealing since they provide congruent knowledge about the world. Explicitly, the epistemic content of conspiratorial narratives supplies details, addresses gaps in official accounts, and affords novel insights (Douglas et al., 2017). Noting these points, researchers have conceptualized conspiracies as the consequence of the sense-making process initiated to resolve ambiguity (Hofstadter, 1966; Shermer, 2012). This explicates why conspiracies are widely endorsed and habitually accompany social crises, such as infectious outbreaks (e.g., Severe Acute Respiratory Syndrome, SARS, 2002–2004; and Zika virus, 2015–2016) (Mitchell, 2019), and times of political instability (the attack on the Capitol as part of the 2020–21 United States election protests, *ABC News*, 2021). In the case of the Capitol Hill Attack, the riot and storming of Congress was also linked to the QAnon movement, which has consistently undermined COVID-19 strategic narratives.

In addition to alleviating uncertainty, conspiracies relatedly fulfill the existential need to feel safe and in control (Douglas et al., 2017). This notion concurs with the observation that people draw on conspiracy theories when they experience feelings of powerlessness, low self-esteem, political cynicism, and social alienation (Irwin et al., 2015). Collectively psychological factors such as these reflect a sense of anomie (normlessness) and societal estrangement. These characteristics are found in marginalized groups who, incidentally, are more influenced by conspiracy theories and less convinced by officialdom (Zonis and Joseph, 1994). Within disaffected sectors of society, conspiracies can enhance intra-group belonging and reinforce inter-group separation. Thus, conspiracies not only provide information and reassurance, but serve also to preserve sub-cultural identity and individual beliefs. This is consistent with authors who view conspiracies as minority theory (Moscovici, 1987; Drinkwater et al., 2012).

Accordingly, social identity is important because group membership helps to maintain positive self-image. Consistent with this supposition, individuals tend to share opinions with likeminded others, who embrace similar ideologies. This conceptualization depicts the emergence, reinforcement, and perpetuation of conspiracies as an active consequence of the assertion of self and group identity (Swire et al., 2017). In the case of COVID-19, perception of mutual sub-group beliefs provides a rationale for and validation of behaving in particular ways. At the individual level, this provides a justification for both selective adherence to (i.e., attending social gatherings with friends, whilst adhering to two meter distancing in public), and defiance of government guidelines (i.e., refusing to wear face masks).

To understand why conspiratorial beliefs facilitate social movements and anti-democratic behavior, it is necessary to acknowledge the importance of social identity and personal motivations (Sternisko et al., 2020). Sternisko et al. (2020) locates these in an overarching framework that explains associations between motivational processes, conspiracy theories, related social identities, and collective action. Two motivational allures

are central to this conceptualization (i.e., content and qualities). Social identity persuades via content, whereas uniqueness influences via qualities. This distinction is important because it elucidates the relationship between different motives and conspiracy theory beliefs. Content denotes the importance of narrative features. Thus, although conspiracies possess the same underlying structure, premises within individual theories vary as a function of group, goal, and consequence. Qualities refers to the common structural properties of conspiracies. For instance, theories are typically epistemic (i.e., explain most events), reveal secret information, and challenge agreed knowledge and beliefs (Goertzel, 1994). Depending on situation and motivational states, different contents or qualities prove more alluring. Consequently, the appeal of COVID-19 conspiracies differs because of these factors. For example, notions of government cover-ups appeal to individuals who distrust authority, and to those who draw on ideas of secrecy, intrigue, and abuse of power (Knight, 2000).

In addition to motivational factors, worldview (thinking style) is likely to influence proclivity to COVID-19 conspiracies. Generally, worldview refers to the central, overarching belief system that encompasses a set of interrelated assumptions about the nature of the world (Overton, 1991; Dagnall et al., 2015). The conspiratorial worldview is characterized by high-order beliefs (i.e., mistrust of authority, cynicism, and suspicion) that facilitate conspiratorial thinking (Goertzel, 1994). This from the viewpoint of the individual is internally coherent, but externally is rationally bounded and flawed. The cognitive style resembles the productive, positive facets of schizotypy (i.e., odd beliefs, paranoid ideation, ideas of reference, and magical thinking). Jointly, these cognitions and perceptions serve as an interpretative framework for structuring reality (Koltko-Rivera, 2004). Correspondingly, the conspiracist worldview focuses on rejection of official accounts and is less concerned with the validity and particulars of conspiracy theories (Dagnall et al., 2015). The notion of a generalized tendency to endorse conspiracies aligns with the concept of conspiracy mentality (Swami et al., 2010; Imhoff and Bruder, 2014), which expresses as a general political attitude comprising disapproval of authority and the behavioral intention to challenge the existing situation (Bessi et al., 2015).

Previous research suggests that conspiracy theories during epidemics are widespread and enduring. Moreover, exposure to misinformation can affect the reception of subsequent material. For example, Carey et al. (2020) reported that conspiracy theories about the Zika epidemic in Brazil were widely endorsed. Furthermore, corrective information was unsuccessful, and it also generally reduced the perceived accuracy of other Zika-related beliefs. Following meta-analysis of studies investigating the effectiveness of messages countering misinformation, Chan et al. (2017) concluded that the persistence of false information was stronger, and the debunking effect (i.e., presenting a corrective message) was weaker, when audiences generated reasons to support initial misinformation. Collectively, these findings indicate that although people can be inoculated against the potentially harmful effects of conspiracy

theories, misinformation is difficult to correct once established (Jolley and Douglas, 2014).

To be successful during the continuously evolving COVID-19 pandemic, strategic narratives need to focus on providing accurate data via trusted information channels. Correspondingly, information needs to adapt to changing scenarios, be supported by reputable empirical evidence, and deliver clear messages (Dagnall et al., 2015). Preceding work on conspiracies also suggests that impartial, consensually agreed communications (i.e., cross party endorsed) are most likely to successfully influence people. These recommendations are consistent with Uscinski et al. (2020), who found that the strongest predictors of COVID-19 related conspiracies in the United States were denialism (i.e., the inclination to reject expert information and explanations), tendency to endorse conspiracy theories generally, and partisan and ideological motivations (i.e., strength of affiliation). Partisanship is important because when high profile figures (e.g., prominent party members) promote conspiracy theories their rhetoric is likely to encourage likeminded individuals to adopt the same ideas (Swire et al., 2017). This is particularly important with regards to fostering conspiracy theories (Uscinski et al., 2020). Concomitantly, enhanced trust of political systems (e.g., government) and institutions (e.g., health agencies) inspires greater public faith in subsequent strategic narrative (Goertzel, 2010).

## CONCLUSION

To maximize impact and reduce the potential negative effects of conspiracy theories, strategic narratives should be accompanied by social media campaigns to correct global health misinformation (Bode and Vraga, 2018). These should encourage users to repudiate conspiracies and false information and provide appropriate supporting evidence. To diminish the potential negative consequences of emerging conspiracies, strategic narratives could also be used alongside “prebunking” (Uscinski et al., 2020). This involves warning receivers about the dangers and consequences of conspiracy theories. Roozenbeek et al. (2020) assert that this strategy cultivates “mental antibodies” against fake news. This metaphor draws on related work using inoculating messages or vaccination against misinformation [e.g., Roozenbeek and van der Linden (2019)]. Cook et al. (2017) state that two elements are required for an inoculation, an explicit warning and refutation. These measures weaken the theory and increase the likelihood that the conspiracy will be dismissed when presented alongside counterargument(s).

Accordingly, subsequent research should investigate whether communicational inoculation in the form of pre-emptive (forewarning) messages increases awareness of the dangers of conspiracy theories and protects against misinformation (inaccuracy) and disinformation (deliberately misleading Compton and Pfau, 2005). This should also determine whether this process encourages advocacy of public health messages over a sustained period. Although, previous research has demonstrated attitudinal vaccination treatments can protect individuals



from/or help them to resist negative persuasive messages, this work has focused generally on the immediate effects of immunization. Clearly, during prolonged public health crises such as the COVID-19 pandemic, it is important to establish that interventions have positive influences that endure and result in health guideline adherence and behavioral adaptation.

## REFERENCES

- ABC News (2021). *Capitol Siege Highlights Powerful Pull of Conspiracy Theories, Experts Say*. ABC News. Available online at: <https://abcnews.go.com/Health/capitol-siege-highlights-powerful-pull-conspiracy-theories-experts/story?id=75180483> (accessed February 16, 2021).
- Amarasingam, A., and Argentino, M. A. (2020). The QAnon conspiracy theory: a security threat in the making. *CTC Sentinel*. 13, 37–44.
- Bernhardt, J. M. (2004). Communication at the core of effective public health. *Am. J. Publ. Health* 94, 2051–2053. doi: 10.2105/AJPH.94.12.2051
- Bessi, A., Coletto, M., Davidescu, G. A., Scala, A., Caldarelli, G., and Quattrociocchi, W. (2015). Science vs conspiracy: collective narratives in the age of misinformation. *PLoS ONE* 10:e0118093. doi: 10.1371/journal.pone.0118093
- Bode, L., and Vraga, E. K. (2018). See something, say something: correction of global health misinformation on social media. *Health Commun.* 33, 1131–1140. doi: 10.1080/10410236.2017.1331312
- Carey, J. M., Chi, V., Flynn, D. J., Nyhan, B., and Zeitoff, T. (2020). The effects of corrective information about disease epidemics and outbreaks: evidence from Zika and yellow fever in Brazil. *Sci. Adv.* 6:eaw7449. doi: 10.1126/sciadv.aaw7449
- Chan, M. P. S., Jones, C. R., Hall Jamieson, K., and Albarracín, D. (2017). Debunking: a meta-analysis of the psychological efficacy of messages countering misinformation. *Psychol. Sci.* 28, 1531–1546. doi: 10.1177/0956797617714579
- Child, D. (2020). *Fighting Fake News: The New Front in the Coronavirus Battle*. Breaking News, World News and Video from Al Jazeera. Available online at: <https://www.aljazeera.com/news/2020/04/fighting-fake-news-front-coronavirus-battle-200413164832300.html> (accessed January 12, 2021).
- Compton, J. A., and Pfau, M. (2005). Inoculation theory of resistance to influence at maturity: recent progress in theory development and application and suggestions for future research. *Ann. Int. Commun. Assoc.* 29, 97–146. doi: 10.1080/23808985.2005.11679045
- Conservatives.com (2020a). *Stay Alert, Control the Virus, Save Lives: The Prime Minister's Update*. Available online at: <https://www.conservatives.com/news/stay-alert-control-the-virus-save-lives> (accessed June 1, 2020).
- Conservatives.com (2020b). *Stay at Home, Protect the NHS, Save Lives*. Available online at: <https://www.conservatives.com/news/stay-at-home-protect-the-nhs-save-lives> (accessed June 1, 2020).
- Cook, J., Lewandowsky, S., and Ecker, U. K. (2017). Neutralizing misinformation through inoculation: exposing misleading argumentation techniques reduces their influence. *PLoS ONE* 12:e0175799. doi: 10.1371/journal.pone.0175799
- Dagnall, N., Denovan, A., Drinkwater, K., Parker, A., and Clough, P. (2017). Statistical bias and endorsement of conspiracy theories. *Appl. Cogn. Psychol.* 31, 368–378. doi: 10.1002/acp.3331
- Dagnall, N., Drinkwater, K., Denovan, A., and Walsh, R. S. (2020). Bridging the gap between UK government strategic narratives and public opinion/behavior: lessons from COVID-19. *Front. Commun.* 5:71. doi: 10.3389/fcomm.2020.00071
- Dagnall, N., Drinkwater, K., Parker, A., Denovan, A., and Parton, M. (2015). Conspiracy theory and cognitive style: a worldview. *Front. Psychol.* 6:206. doi: 10.3389/fpsyg.2015.00206
- Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., et al. (2016). The spreading of misinformation online. *Proc. Natl. Acad. Sci. U.S.A.* 113, 554–559. doi: 10.1073/pnas.1517441113
- Denovan, A., Dagnall, N., Drinkwater, K., Parker, A., and Neave, N. (2020). Conspiracist beliefs, intuitive thinking, and schizotypal facets: a further evaluation. *Appl. Cogn. Psychol.* 34, 1394–1405. doi: 10.1002/acp.3716
- Douglas, K. M., Sutton, R. M., and Cichocka, A. (2017). The psychology of conspiracy theories. *Curr. Dir. Psychol. Sci.* 26, 538–542. doi: 10.1177/0963721417718261
- Drinkwater, K., Dagnall, N., Denovan, A., and Neave, N. (2020). Psychometric assessment of the generic conspiracist beliefs scale. *PLoS ONE* 15:e230365. doi: 10.1371/journal.pone.0230365
- Drinkwater, K., Dagnall, N., Denovan, A., Parker, A., and Clough, P. (2018). Predictors and associates of problem–reaction–solution: statistical bias, emotion-based reasoning, and belief in the paranormal. *SAGE Open* 8:2158244018762999. doi: 10.1177/2158244018762999
- Drinkwater, K., Dagnall, N., and Parker, A. (2012). Reality testing, conspiracy theories, and paranormal beliefs. *J. Parapsychol.* 76, 57–77.
- Duncan, C. (2020). *Anti-mask Demonstrators Protest Mandatory Face Coverings in Shops*. Available online at: <https://www.independent.co.uk/news/uk/home-news/face-masks-coverings-mandatory-protest-keep-britain-free-hyde-park-a9627446.html> (accessed January 12, 2021).
- Freeman, D., Loe, B. S., Chadwick, A., Vaccari, C., Waite, F., Rosebrock, L., et al. (2020). COVID-19 vaccine hesitancy in the UK: the Oxford coronavirus explanations, attitudes, and narratives survey (Oceans) II. *Psychol. Med.* 1–15. doi: 10.1017/S0033291720005188
- Georgiou, N., Delfabbro, P., and Balzan, R. (2020). COVID-19-related conspiracy beliefs and their relationship with perceived stress and pre-existing conspiracy beliefs. *Pers. Individ. Diff.* 166:110201. doi: 10.1016/j.paid.2020.110201
- Goertzel, T. (1994). Belief in conspiracy theories. *Polit. Psychol.* 15, 731–742. doi: 10.2307/3791630
- Goertzel, T. (2010). Conspiracy theories in science: conspiracy theories that target specific research can have serious consequences for public health and environmental policies. *EMBO Rep.* 11, 493–499. doi: 10.1038/embor.2010.84
- Gretter, S., Yadav, A., and Gleason, B. W. (2017). Walking the line between reality and fiction in online spaces: understanding the effects of narrative transportation. *J. Media Lit. Educ.* 9, 1–21. doi: 10.23860/JMLE-2017-9-1-2
- Hannah, M. (2021). *QAnon and the Information Dark Age*. First Monday. doi: 10.5210/fm.v26i2.10868
- Hofstadter, R. (1966). “The paranoid style in American politics,” in *The Paranoid Style in American Politics and Other Essays*, ed R. Hofstadter (New York, NY: Knopf), 3–40.
- Huddleston, T. (2021). *Here's What Bill Gates Has to Say About Those Covid-19 Vaccine Conspiracy Theories He's Pegged to*. CNBC. Available online at: <https://www.cnbc.com/2020/06/05/bill-gates-responds-to-bizarre-covid-19-vaccine-conspiracy-theories.html> (accessed January 12, 2021).
- Imhoff, R., and Bruder, M. (2014). Speaking (un-) truth to power: conspiracy mentality as a generalised political attitude. *Eur. J. Pers.* 28, 25–43. doi: 10.1002/per.1930
- Irwin, H. J., Dagnall, N., and Drinkwater, K. (2015). Belief inconsistency in conspiracy theorists. *Compr. Psychol.* 4:19. doi: 10.2466/17.CP.4.19
- Jolley, D., and Douglas, K. M. (2014). The effects of anti-vaccine conspiracy theories on vaccination intentions. *PLoS ONE* 9:e89177. doi: 10.1371/journal.pone.0089177
- Knight, P. (2000). *Conspiracy Culture: From the Kennedy assassination to the X-Files*. London: Routledge.
- Koltko-Rivera, M. E. (2004). The psychology of worldviews. *Rev. General Psychol.* 8, 3–58. doi: 10.1037/1089-2680.8.1.3
- Lewis, T. (2020). *Nine COVID-19 Myths that Just Won't Go Away*. Scientific American. Available online at: <https://www.scientificamerican.com/article/nine-covid-19-myths-that-just-wont-go-away/> (accessed January 12, 2021).
- Mitchell, S. S. (2019). Population control, deadly vaccines, and mutant mosquitoes: the construction and circulation of Zika virus conspiracy theories online. *Can. J. Commun.* 44, 211–237. doi: 10.22230/cjc.2019v44n2a3329

## AUTHOR CONTRIBUTIONS

KD: The overall article development and composition, draft review, and creative oversight. ND and AD: draft review and creative oversight. All authors contributed to the article and approved the submitted version.

- Moscovici, S. (1987). "The conspiracy mentality," in *Changing Conceptions of Conspiracy*, eds C. F. Graumann, and S. Moscovici (New York, NY: Springer), 151–169. doi: 10.1007/978-1-4612-4618-3\_9
- Overton, W. F. (1991). "Historical and contemporary perspectives on developmental theory and research strategies," in *Visions of Aesthetics, the Environment and Development*, eds R. M. Downs, L. S. Liben, and D. S. Palermo (Hillsdale, NJ: Erlbaum), 263–311.
- Roozenbeek, J., and van der Linden, S. (2019). The fake news game: actively inoculating against the risk of misinformation. *J. Risk Res.* 22, 570–580. doi: 10.1080/13669877.2018.1443491
- Roozenbeek, J., van der Linden, S., and Nygren, T. (2020). Prebunking interventions based on "inoculation" theory can reduce susceptibility to misinformation across cultures. *Harvard Kennedy Sch. Misinformation Rev.* 1, 1–23. doi: 10.37016/mr-2020-008
- Shermer, M. (2012). *The Believing Brain: From Spiritual Faiths to Political Convictions—How We Construct Beliefs and Reinforce Them As Truths*. London: Robinson.
- Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H., et al. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *Am. Psychol.* 75, 618–630. doi: 10.1037/amp0000662
- Sternisko, A., Cichocka, A., and Van Bavel, J. J. (2020). The dark side of social movements: social identity, non-conformity, and the lure of conspiracy theories. *Curr. Opin. Psychol.* 35, 1–6. doi: 10.1016/j.copsyc.2020.02.007
- Sturgill, A. (2021). Health care providers can help combat harmful misinformation about the pandemic. *N. C. Med. J.* 82, 68–70. doi: 10.18043/ncm.82.1.68
- Swami, V., Chamorro-Premuzic, T., and Furnham, A. (2010). Unanswered questions: a preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Appl. Cogn. Psychol.* 24, 749–761. doi: 10.1002/acp.1583
- Swire, B., Berinsky, A. J., Lewandowsky, S., and Ecker, U. K. (2017). Processing political misinformation: comprehending the Trump phenomenon. *Royal Soc. Open Sci.* 4:160802. doi: 10.1098/rsos.160802
- Uscinski, J. E., Enders, A. M., Klofstad, C., Seelig, M., Funchion, J., Everett, C., et al. (2020). Why do people believe COVID-19 conspiracy theories? *Harvard Kennedy Sch. Misinf. Rev.* 1, 1–12. doi: 10.37016/mr-2020-015
- van Prooijen, J. W. (2016). Sometimes inclusion breeds suspicion: self-uncertainty and belongingness predict belief in conspiracy theories. *Eur. J. Soc. Psychol.* 46, 267–279. doi: 10.1002/ejsp.2157
- World Health Organization (2020). *Mental Health And Psychosocial Considerations During the COVID-19 Outbreak, 18 March 2020* (No. WHO/2019-nCoV/MentalHealth/2020.1).
- Zonis, M., and Joseph, C. M. (1994). Conspiracy thinking in the Middle East. *Polit. Psychol.* 15, 443–459. doi: 10.2307/3791566

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