COVID-19 Conspiracy Beliefs and Government Rule Compliance

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Conspiratorial thinking and belief in conspiracy theories are related to multiple constructs tapped by the ESS. These include social and institutional trust, trust in government, political efficacy, attitudes towards democracy, life satisfaction, populist attitudes, and one's approval of technocratic governance. Conspiracy beliefs can be a major hindrance to policy implementation through a lack of public compliance with government-prescribed or government-mandated programs. The state of the art lacks the follow-through from the listed ESS attitudes, through conspiratorial thinking, to consequential rule compliance. COVID-19 provides a case study where, in addition to the general attitudes already tapped by the ESS, COVID-19-specific policy attitudes and conspiratorial beliefs can be connected with the potential for consequential rule compliance.

With COVID-19, non-compliance with set policies, such as not following social distancing guidelines or not using masks, costs lives. For the ESS, we sought government guidelines that are expected to be more in line with the data collection timeline. To measure compliance with government guidelines, we propose to ask a question that is somewhat tangled up in a conspiracy of its own: Would people get vaccinated? (Q1) This decision will depend on one's beliefs about COVID-19 conspiracies (Q2), their general conspiratorial thinking (Q3a and/or Q3b), and attitudes towards policies implemented earlier in the pandemic (Q4). Underlying all of these is trust, mainly in government and its institutions (existing ESS questions), but also in scientists (Q5).

From the point of view of political attitudes, the proposed constructs are connected closely with ESS questions on political efficacy, attitudes towards democracy, technocratic governance, populism, and authoritarianism. Potentially important controls include general fear and health status.

The questions we are proposing allow for a comparative test of all these relationships offering a better understanding of the main drivers of potential conspiracy-driven rule non-compliance. This would help produce tailor-made programs, interventions that mitigate the ills of conspiratorial thinking in this specific case, and also in general. The structure of the ESS allows for the cross-national test of how these mechanisms are moderated by macro-political processes such as who is in government, the administrative handling of the outbreak, including health care expenditure and capacity, or non-political factors like national disease prevalence. We also plan to explore the variation in the data collection timeline (both within and across countries) and other metadata for causal inference purposes. To improve causal inference, we also hope to suggest additional interviewer-recorded information, if possible, such as distancing behavior of the respondent or other immediately observable exogenous characteristics.

The survey items were selected to also allow for general conspiratorial attitude research (Q3a and/or Q3b), in addition to the specific COVID-19 conspiracy question (Q2). Q5 is proposed for quick and easy inclusion (through an addition to the institutional trust module). Both the trust in scientists and the general conspiracy questions will also be valuable for those researching attitudes towards climate change. The COVID-19 policy attitude question was written to tap one's view of the restrictions implemented by governments, but at the same time it taps general libertarian and civil liberties attitudes through the case of COVID-19. It is our hope that these items will enjoy broad adoption even beyond conspiracy and COVID-19 research.

The proposed analysis will rely mostly on multilevel structural equation models (MSEM, see Castanho Silva, Bosancianu, and Littvay 2019) to be able to test indirect effects of social and political attitudes on rule compliance through conspiratorial thinking while testing the moderating

impact of country-level contextual factors. For potential causal inference we envision instrumental variable extensions of MSEM or the use of a (regression) discontinuity design.

The authors are ready to devote their primary research agenda to these ESS additions. We hope to write multiple journal articles (on trust, the political factors, potential causal inference pieces, replication of populism-conspiracy piece comparatively), which we also hope to organize in a book for a more complete picture. We plan to invite the broader ESS research community to join us in a workshop at the ECPR Joint Sessions. These studies we may develop into a journal special issue or an edited book. Through Team Populism we have experience, support and infrastructure for converting research findings into policy briefs (Team Populism 2018) and working with think tanks actualizing the basic research findings into political action and dissemination to the general public.

Justification for Item Selection

Q1: The vaccine hesitancy item is chosen as the most consequential rule (or recommendation) compliance issue. As the lockdowns are gradually eased around European countries, the public debate is shifting from social distancing and the use of masks towards long-term policies. In this context, rolling out a vaccine against COVID-19 to the general population will be likely the most relevant policy intervention in 2020/2021, which is the expected time of the ESS fieldwork. The item has been worded to be directly comparable across countries by referencing the national regulatory authority and can be easily adapted should a vaccine become available. Moreover, the literature has linked vaccine hesitancy to conspiratorial beliefs and many other constructs tapped by the ESS (e.g. trust, political ideology, social media use). We therefore expect this item to have broad relevance (for both science and policy in different fields) and societal importance.

Q2: The belief in COVID-19 conspiracy item refers to the earliest conspiracy theory around COVID-19. The wording of the item includes a reference to the virus being a biological weapon in order to exclude those who believe that the virus may have been created for medical research but was subsequently released accidentally (and therefore do not view the laboratory origin as a particular conspiracy plot). This item has been shown to correlate highly with many other items tapping COVID-19-related conspiracies (e.g. belief that 5G networks are accelerating the transmission of the virus or that COVID-19 is related to a plot to implant tracking microchips in people, see: https://osf.io/sg97n), but as it refers to the earliest conspiracy theory around COVID-19, it is the most likely item to be directly comparable across all countries in the ESS.

Q3: Generic conspiracist beliefs items are borrowed from Brotherton, French, and Pickering (2013), who came up with a five-dimensional 15-item conspiracy beliefs scale. Here we propose two items (a and b) with different strengths and weaknesses. Q3a is the highest loading item in the original article's psychometrics. It broadly taps general conspiracy items. If both items cannot be included (since Q5 is not a full item proposal), we would have a preference for this item. But this item is somewhat distant from a COVID-19-specific question that the invitation called for. If this is seen as a weakness (it could be a strength due to broader applicability), we propose the alternative item, which is specific to scientists though still general enough by not mentioning COVID-19 directly. Ideally both items should be included and Q5 should not count as an inclusion.

Q4: Alternative items inquiring about wearing masks or social distancing rules were considered. We opted for this item due to its dual use nature of also tapping libertarian attitudes and since the other policies varied greatly across countries, which could lead to non-comparable responses.

Q5: The importance of trust in explaining rule compliance and the relevance of trust for attitudes towards COVID-19 policies cannot be understated. But the picture is incomplete without asking about scientists who took center stage during the crisis. Understanding trust in scientists will also be invaluable for anyone working on the climate change items.

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Citations (removed for flow and brevity with the exception of direct quotes and supporting materials highlighting the authors' expertise. Supporting materials are available upon request).

Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: The generic conspiracist beliefs scale. *Frontiers in Psychology*, *4*, 279. doi: 10.3389/fpsyg.2013.00279

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Proposed Survey Items

(in theoretical order, question order TBD in line of the other winning proposal):

Q1. *Government-prescribed COVID-19 rule compliance/COVID-19 vaccine hesitancy*

		Yes, I would	No, I would not	(Refusal)	(Don't know)
Q1	If a vaccine against the coronavirus (COVID-19) is approved by [insert national regulatory authority here],* would you get vaccinated?	1	2	77	88

*List of national regulatory authorities:
https://www.raps.org/news-and-articles/news-articles/2020/1/the-essential-list-of-regulatory-authorities-in-eu

Q2. *Belief in COVID-19 conspiracy*

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Refusal)	(Don't know)
Q2	The coronavirus (COVID-19) was created in a laboratory as a biological weapon.	1	2	3	4	5	77	88

Q3a. *Generic conspiracist beliefs item*

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Refusal)	(Don't know)
Q3a	Certain significant events have been the result of the activity of a small group who secretly manipulate world events.	1	2	3	4	5	77	88

Q3b. *Alternative/Additional generic conspiracist beliefs item*

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Refusal)	(Don't know)
Q3b	Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public.	1	2	3	4	5	77	88

Q4. *Attitudes towards COVID-19 outbreak countermeasures*

		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Refusal)	(Don't know)
Q4	Governments should let people make their own decisions about how to best protect themselves and their loved ones from the COVID-19 virus.	1	2	3	4	5	77	88

Q5: *Trust in scientists. We propose an addition to the Wave 9 B6 to B12 list:*

		No trust at all										Complete trust	(Refusal)	(Don't know)
Q5	...scientists	0	1	2	3	4	5	6	7	8	9	10	77	88