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Creating compliance in crisis: messages, messengers, and masking up in Britain

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ABSTRACT

How do governments ensure public compliance with protective policies that restrict individual liberties during a crisis? In this article, the British public's reaction to mask mandates during the Covid-19 pandemic is examined. We argue that providing information about health risks makes people more willing to comply and that the effectiveness of the information depends on the source. This argument is tested with the help of aggregate public opinion and individual-level experimental data collected in the UK in 2020 and we find that the British public adapted its willingness to wear a mask rapidly and in line with government regulation. Moreover, results from a survey experiment show that simply providing information about risk is sufficient to elevate people's willingness to wear masks. Interestingly, there is no clear partisan divide in the willingness to comply, suggesting that government messages about risk and responsibility encourage individuals to make sacrifices in times of crisis regardless of which party they support.

KEYWORDS Compliance; Covid-19; public health; public opinion; Britain

Natural disasters, terrorist attacks and pandemics have the potential to test and redefine the relationship between citizens and the state (Davis and Silver 2004; Merolla and Zechmeister 2009). On one hand, times of severe risk and uncertainty focus citizens' attention on their governments – hungry for guidance but also sensitive to the power of the state to control their lives. On the other hand, governments depend on high levels of cooperation from citizens to manage the fallout of unexpected negative events. The dual needs of citizens to make the right choices for themselves and others and of states to activate compliance are even more urgent in times of acute crisis. The Covid-19 pandemic is a prime example of such a crisis, as governments needed to find ways to engineer public cooperation with government guidance to contain the spread of the virus (Altiparmakis *et al.* 2021; Engler *et al.* 2021).

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How then can governments bring about cooperation and ultimately compliance during crisis? We investigate this question with the help of a case study of the link between public health information and people's willingness to wear masks in Great Britain.¹ The UK is a particularly apposite case, not only because mask wearing was highly unusual prior to the pandemic, but also because of the British government's notable shifts in messaging about the utility of wearing of masks over the course of the pandemic, veering from masks being declared unhelpful to being deemed essential for containing the virus. Building on theories of obedience (Levi 1997) and on elite influence on citizen preferences and behaviour (e.g. Broockman and Butler 2017; Lenz 2013; Zaller 1992), we argue that governments are able to engineer mass compliance on short notice and manage to do so effectively: providing citizens with information about the risks of non-compliance makes them more willing to comply, especially if the information comes from a trusted source.

Analysing aggregate opinion dynamics as well as data from a vignette experiment embedded in a nationally representative survey, we demonstrate that information about risk indeed influences people's willingness to wear masks. The speed with which levels of compliance ramped up among the British public and the effectiveness of simply providing information are noteworthy, given that people were asked to adjust their behaviours significantly and on short notice. Interestingly, and in contrast to findings in the United States (see Allcott *et al.* 2020; Gadarian *et al.* 2021; Grossman *et al.* 2020), we find no large differences in people's willingness to comply across voters supporting different political parties. However, vote choice does influence how receptive people are to different messengers, with Conservative voters more receptive to messages from Conservative ministers compared to opposition voters.

Taken together, our results indicate that providing information about individual risk and collective responsibility induces people to develop new behavioural routines in times of crisis. They suggest that governments are able to persuade the public to make significant changes to daily behaviours, that they are able to do so on short notice and with simple prompts, and that these new customs and practices can then be sustained over time. These findings have significant implications for understanding the importance and effectiveness of government messaging during the Covid-19 pandemic and beyond.

Creating compliance during crises

In moments of crisis, governments typically take strong executive action to achieve specific public policy ends – be they a restoration of public order, the proper functioning of markets, or the management of imminent

physical risks. To achieve these goals, states frequently need to move mass behaviour expeditiously and effectively. Governments have a diverse arsenal of tools available to them to do so, ranging from information and persuasion to formal powers of coercion. This has been the case during the Covid-19 pandemic too, as democratic governments around the world faced difficult choices about restricting citizens' liberties through regulations and sanctions or using public health messages to communicate the most desirable behaviours while leaving it to citizens to decide whether or how to engage in them (Bolleyer and Salát 2021; Engler *et al.* 2021).

The Covid-19 pandemic allows us to examine how government messaging shapes compliance in a crisis (Anderson 2022). A number of studies have examined governments' policy responses to the pandemic and shown the considerable variation in policies to contain the spread of the virus (Altiparmakis *et al.* 2021; Bolleyer and Salát 2021; Engler *et al.* 2021; Greitens 2020; Hale *et al.* 2021). Despite this variance in actual policy responses, several studies have demonstrated that, at least in the early part of the pandemic, public reactions were fairly uniform, with citizens rallying around political leaders and institutions, and governments generally becoming more popular and institutions more trusted in the short run (Bol *et al.* 2021; De Vries *et al.* 2021; Schraff 2021). Yet, less is known about how compliant citizens have been with specific government policies, and why, during the pandemic.

In order to understand better the connection between government messaging and compliant behaviour, we build on the political psychology literature on elite cueing (e.g. Broockman and Butler 2017; Lenz 2013; Nicholson 2012; Westwood *et al.* 2018; Zaller 1992) and on Levi's canonical work on citizen compliance with and obedience to government demands. Levi (1997) spells out that compliant behaviour can result from several different motivations, even if the observed behaviour will be the same. These motivations can range from obeying as a matter of habit or following the dominant state ideology to so-called opportunistic obedience and contingent consent.² Because the compliance behaviours solicited from citizens during the early acute phases of the Covid-19 pandemic were anything but routine and unrelated to state ideologies, opportunistic and contingent consent are likely to provide the most promising ways to theorise the link between citizens and the state during this time.

In the case of 'opportunistic obedience', people are expected to rely on a simple cost-benefit calculus and will comply when the benefits or doing so outweigh the costs. Thus, opportunistic compliance should be activated by self-interest, which predisposes people to comply with public authorities' advice about public health risks during times of high uncertainty around the true nature of the threat to health and safety.

By highlighting the risks of the virus and the benefits of compliance, democratic governments' messages often focussed on producing a kind of opportunistic obedience from the mass public where the marginal benefits of following the requirement to wear masks and follow other restrictions outweigh the marginal cost of doing so in people's minds. Moreover, in line with the elevated levels of public trust in government during the early phase of the pandemic (Bol *et al.* 2021; Schraff 2021), government should have been able to elicit some degree of contingent consent rooted in people's trust in political authorities rather than pure self-interest.³

We therefore expect that government messaging and messages that prime risks and benefits should increase compliance with government advice, including wearing face coverings. This also follows from the literature on the effects of elite cueing on public opinion and behaviours. There is a rich literature showing that the public relies on cues and position-taking by politicians to inform their own opinions on policies (Berelson *et al.* 1954; Zaller 1992; Lenz 2013). In a pandemic, where most people lack information about the risks and possible policy solutions, we would expect citizens to be even more willing to rely on the recommendations and information provided by the government and other trusted elites, especially when such messaging is clear and consensual. However, not all elite cues are treated equally by the public. We also know that people are generally more receptive to information from politicians belonging to parties they support, whereas opposition supporters may be more reluctant to follow government advice (Broockman and Butler 2017; Lenz 2013; Westwood *et al.* 2018). We therefore expect that government messaging is crucial in engineering compliance during a crisis, but that the effectiveness of such messaging may depend on the combination of message and messenger.

Mask wearing in the UK during the Covid-19 pandemic

We examine the effectiveness of government messaging to create compliance by leveraging the specific case of wearing face masks in the UK, which constitutes a 'hard case' for understanding how governments can change norms of behaviour during crisis. To begin, there is no cultural norm among most of the British mass public for wearing face coverings. That is, it was not customary for people in the UK (pre-pandemic) to wear masks and doing so affects people's level of comfort as well as their ease of interactions with others. Moreover, the UK government's and scientists' advice on mask wearing, as well as its enforcement by public authorities, evolved significantly and rapidly over the course of the

pandemic. Thus, people were asked to adjust their behaviours on short notice and following months of shifting and occasionally inconsistent advice. Recommendations to wear masks did not feature prominently or positively in health messages from the government during the early months of the pandemic.⁴ In fact, in March 2020, the government insisted that wearing masks did not stop the virus, even though governments in other countries had advised their citizens that it was a good idea. In April the country's Deputy Chief Medical Officer Jonathan Van Tam declared during the daily Downing Street press conference that there was 'no evidence the general wearing of face masks by the public who are well affects the spread of the disease', adding 'we do not recommend face masks for general wearing by the public.'⁵

Following these initial guidelines, there continued to be a debate about the efficacy of wearing masks. While the government eventually started informing people on 10 May that wearing masks was 'advisable', it waited until 15 June 2020 to introduce a mask mandate, but only on public transport. As this new mask mandate on public transport was announced, the government minister Grant Shapps was cautious in his assessment of the effectiveness of masks: 'the evidence suggests that wearing a face covering offers some – albeit limited – protection against the spread of the virus' (see Online appendix A). The government waited until the second half of July to finally announce a more stringent mask mandate. Yet, again, the advice was less than crystal clear about whether this mandatory requirement would be enforced. While face coverings were now officially required in enclosed public spaces, and potential rule breakers were told they could face a fine of up to £100, police forces around the country announced pre-emptively that they would be enforcing the rules, including the issuing of fines, only as a last resort and only if called (see Online appendix A for further information on the government's advice on masks).

The government's decision came on the heels of weeks of debate over the merits of a mask mandate. Experts groups like the British Medical Association had called for stringent mask mandates for many weeks.⁶ Similarly, a labour union official was quoted as saying that the UK 'was late to the table on face coverings and now people don't know what they should do', given that rules on face coverings were in place for shops and public transport but not for some other enclosed spaces such as libraries, register offices, and civic centres: 'The public needs clarity to end the muddle', he said.⁷

Taken together, then, the UK context provides a rich context for examining the effects of (changing) government messages on citizen behaviour.

Messages, messengers and compliance: hypotheses

In order to understand better the effectiveness of government messaging in creating compliance during times of crisis, our theoretical argument contains three basic components: the messages public authorities use to activate compliance, the carriers of those messages, as well as the attitudes people have that can act as filters for activating obedient behaviours. We hypothesise that information on risk and risk reduction are important drivers of compliance, but that people respond to public health information and elite cues differently, depending on their political predispositions and risk profiles as well as the source of the information.

Firstly, we expect the content of public *messages* to matter. Specifically, we hypothesise that messages about risk will shape people's understanding of the public health problem at hand and the right behaviour to tackle it. Risk combines the likelihood of an aversive event happening – in this case, for the virus to be transmitted – and the gravity of its consequence – here, the severity of the illness and its consequence or the number of people falling ill or dying. People's perceptions of risk therefore typically carry considerations of costs and benefits associated with an action (risk reduction), as well as the odds of either of them coming to pass (Paek and Hove 2017). Just as risk perceptions are known to be important antecedents of health-related behaviours, we expect that information about how mask wearing can reduce risk will increase compliance.

Hypothesis 1. Individuals exposed to clear public health messages on how mask wearing can reduce the risk of infection will report higher levels of compliance with such recommendations than individuals not exposed to them.

In the specific case of messaging during the first wave of the pandemic in the UK, we thus expect the trajectory of mask wearing to trend sharply upward after the introduction of a mask mandate in mid-June and then increasingly so following the most stringent mask requirement in July. But this raises the question about what *types of messages* are more effective. A contagious virus poses both an individual risk and a social dilemma. As a result, we hypothesise that types of risks matter, too. Specifically, we expect people to be receptive to and consider messages about individual (self-focussed) as well as the social (other-focussed) risks of non-compliance with government regulations to contain the virus. Thus, mask wearing should have two broad underlying motivations: a self-interested motivation, where people's perceptions of their personal risk drives behaviour related to the pandemic (personal-level risk perception); and a collective motivation, where people's consideration of the wellbeing of the country as a whole or of social others more generally shapes people's individual choices and attitudes (societal-level risk perceptions) (Tyler 1980; Tyler and Cook 1984). Both types of motivations

have been shown to move behaviour. For example, a survey experiment by Van der Linden and Savoie (2020) shows that Canadians are significantly more likely to adopt mask-wearing in public when doing so is seen as a means to protect others from Covid-19 rather than as a means to protect themselves. Other studies, however, have shown that personal risk perceptions are more powerful for shaping health-related behaviours (Paek and Hove 2017). Overall, we expect that individuals will respond more to information about risks to their personal safety.

Hypothesis 2. Messages about risk make people more willing to wear masks. However, messages about personal risks have a stronger effect on the willingness to wear masks than messages about social risks.

The second component of our theoretical model of compliance is the *messenger*. Absent direct experience with the virus via an infection, individuals have to rely on mediated information to construct an assessment of their personal and the country's health risks. This information is conveyed by different messengers, most prominently governments and public health experts. As we have discussed above, we expect elite messages to play an important role in encouraging compliance. Speaking generally, research on cue-taking suggests that source credibility is a key ingredient in whether people accept messages and therefore whether messages are effective at moving attitudes and behaviours (Druckman 2001). Such credibility requires two features: First, that citizens believe the messenger possesses knowledge about relevant information; and second, that citizens believe messengers can be trusted to share that knowledge (Lupia and McCubbins 1998).

In the case of public health crises like the Covid-19 pandemic and especially its early days, government officials as well as health and scientific experts were both likely to be seen as authoritative and possessing relevant and important information. However, they also may carry different kinds of credibility, depending on how citizens view their levels of expertise and potential for bias (Birnbaum and Stegner 1979; Lupia and McCubbins 1998). While both politicians and experts are a priori likely to be seen as possessing access to relevant information, public health experts are generally regarded as more non-partisan and technocratic compared to government ministers. Whether this translates into more or less credibility as a source of information about norms of behaviour during a pandemic depends on whether people's views about technocratic expertise carries positive or negative connotations.⁸

The third element of theoretical argument is how people's attitudes and identities shape how they receive the public health messages and perceive the messengers who carry them. We expect that individual attributes influence how people respond to different messengers. We know that people rely on their political predispositions to judge the credibility of messages

from government and thus their suitability as guides to the correct behaviour (Gilens and Murakawa 2002). Consequently, we expect citizens' perceptions of and compliance with government directives to be shaped by whether they perceive the cue giver as like-minded. Specifically, we expect voters' own past behaviour to act as a screen for processing information about government regulations, and it should matter whether people voted for and thus helped put into office the incumbent authorities. Critical for our purposes is the idea that a choice for or against the government in the last election shapes the interpretation of new political information and the credibility of the source providing it. In this way, past vote choice provides a powerful psychological mechanism to avoid cognitive dissonance, and we expect it to act as a heuristic that motivates citizens to think of government directives as being in their interest, depending on whether they supported the party or parties in government. This is in line with the literature on partisanship which has shown that individuals are generally more receptive to information from politicians belonging to parties they identify with (Bisgaard and Slothuus 2018; Broockman and Butler 2017; Campbell *et al.* 1960; Lenz 2013; Westwood *et al.* 2018).⁹

Hypothesis 3. Messages about masks wearing by government ministers have a greater effect on reported compliance of government supporters compared to supporters of opposition parties.

This expectation dovetails research showing that past vote choice has the potential to affect a wide variety of cognitions, including views of the economy for instance (Anderson *et al.* 2004; Bailey 2019; De Vries *et al.* 2018; Evans and Andersen 2006), such that people see what they want to see in ways that maintain a balance between behaviour (in this case, vote choice) and attitudes. Along similar lines, evidence from the US suggests that opinions about government's handling of the Covid-19 pandemic have been highly partisan, documenting strong differences across Democrats and Republicans in people's responses to the pandemic – in particular, their perceptions of the severity of the crisis and whether it has led them to adjust their personal behaviour or willingness to engage in social distancing, for instance (Allcott *et al.* 2020; Gadarian *et al.* 2021). However, to date, this pattern has not been replicated clearly elsewhere, with a Canadian survey finding little evidence of partisan divisions (Merkley *et al.* 2020), suggesting the US may be a unique case.

Analysing attitudes about masks and mask policies

In order to examine the British public's patterns of mask wearing and the effects of information on compliance with government advice, we undertake several analyses. First, we scrutinise the trends in compliance

since the onset of the pandemic as reported in public opinion surveys. Second, we test our hypotheses with the help of a vignette experiment embedded in a nationally representative survey conducted in the fall of 2020.

Aggregate trends in reported compliance

To examine aggregate mask wearing patterns, we rely on survey data collected in the United Kingdom at regular intervals since March 2020.¹⁰ Specifically, respondents were asked whether they engaged in a variety of protective behaviours, including ‘wearing a face mask when in public places’. **Figure 1** below shows the percentage of people who report doing so between March 2020 and March 2021.

Recall that, unlike countries like Italy or the United States, the British government and its scientific advisors did not mandate or even recommend masks during the early weeks of the pandemic. And indeed, as the graph shows, the British public was slow to report wearing masks as a way to contain the spread of the virus. In fact, the UK public initially lagged behind Italy, Taiwan, the USA, and Germany when it came to face coverings. However, as the government’s advice changed, Brits, too, became increasingly willing to wear masks. While only slightly more than a third of the British public reported wearing masks in public in

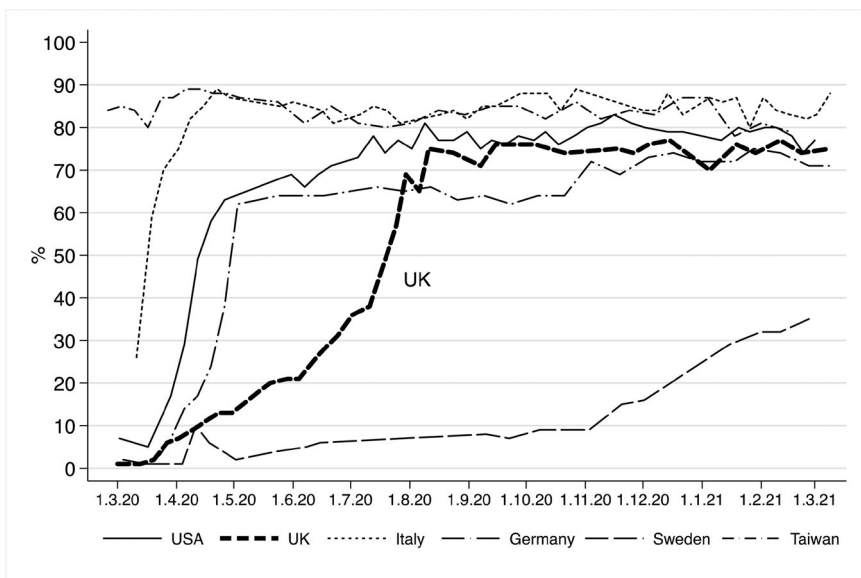


Figure 1. Trends in reported mask wearing.

Note: Percentage of people saying they wear masks in public spaces. Data collected by YouGov. See Online appendix B for further details.

early summer, by early September and all the way into November, more than three-quarters said that they did.

These survey responses are not designed to provide proof of a causal link and they may also overstate people's willingness to wear masks. The tendency to report compliance in line with messages from public authorities can stem from a variety of sources, including an information effect, as citizens learn about the personal and collective risks of non-compliance, and a form of social desirability bias, which may result in respondents reporting compliant behaviours but failing to adhere to them in their actual behaviour. The existing evidence of an over-reporting response bias is mixed. While Daoust *et al.* (2021b) report an increase in respondents' likelihood of reporting non-compliance of 9 to 16 percent across 12 countries when using a "guilt-free strategy tool" to reduce response bias (see also Daoust *et al.* 2021a), Larsen *et al.* (2020) find no evidence of bias in Denmark. Importantly, even if social desirability bias leads to considerable over-reporting of mask wearing, it is still highly likely that survey responses and actual behaviours are strongly correlated.

Figure 2, which shows the responses of the British public alongside approval of the government's handling of the pandemic, reveals that reports of mask wearing increased steadily from virtually zero in March to around seventy-five percent by the beginning of August. Notably, reported mask wearing changed drastically and predictably as well as in line with the timing of government messages, especially after the strict government mandate was imposed in the second half

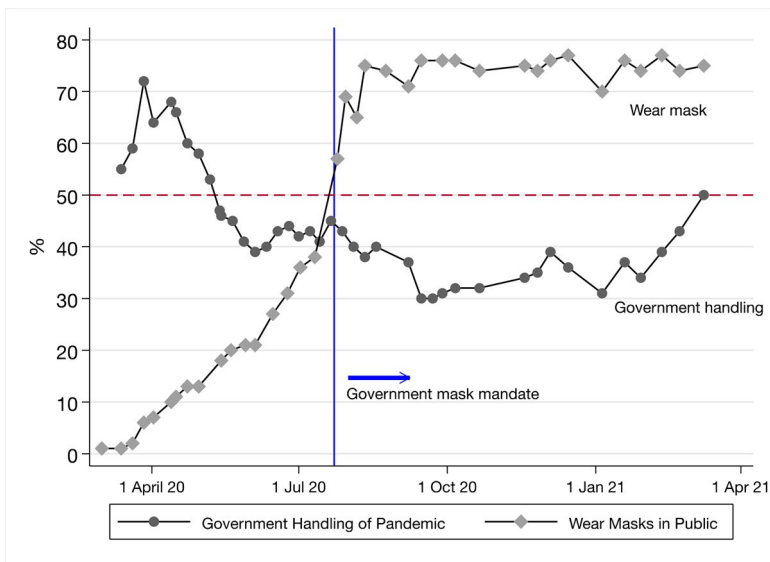


Figure 2. Mask wearing and government approval in the UK.

of July.¹¹ By including a measure of people's views of the government's handling of the pandemic in [Figure 2](#), we can also see that this increased compliance was not driven by (or correlated with) an increase in the approval of the government (for full details, see [Online appendix B](#)).

Interestingly and importantly, mask wearing increased sharply, even after approval of the government's handling of the pandemic had undergone a notable decline from more than two thirds of the public expressing approval to only around 4 in 10 by the time the government's stricter mask mandates became law. Taken together, then, the survey data show that mask uptake was rapid, though not perfect, with roughly a quarter of survey respondents indicating they did not wear masks in public even after a stricter mask mandate came into force.

This raises the question of what drives such a rapid uptake in mask wearing. We have argued that government messaging about the importance of wearing masks in reducing risk is an important driver in changing behaviours. One might also make a case that increased mask wearing was driven as much by social norms, as people increasingly feared the social sanction of others if they were seen not to wear masks ([Ellickson 2001](#)). Indeed, we do not argue that social norms played no role in individuals' willingness to wear masks. Instead, the argument put forward here is that change in government messaging is likely to have played significant role in the public developing social norms around mask wearing in the first place – by emphasising the role of masks in reducing risks, individuals are more likely to fear the social sanctions of others if they do not comply, as well as potentially formal sanctions by the state. In the next section, we discuss how to test the effect of government messaging on behaviour.

Experimental evidence on mask wearing

While the aggregate data on reported mask wearing suggest that the government's guidance and regulations had an impact on people's behaviour, they are not designed to establish causal relationships between what government says and the public does. To test the causal effect of public health messages and messengers on compliance, we therefore designed and conducted a vignette experiment embedded in an online survey of a nationally representative sample of the adult British population. By manipulating both the message (individual risk versus collective risk) and the messenger (government minister or public health expert), this experiment examines potential mechanisms that allow governments to influence the public's willingness to comply with public health messages during a crisis.

Specifically, our survey-based experiment was fielded during the tail-end of the first wave of the pandemic between September 9 and 11, 2020, again by YouGov. 3,276 UK citizens above the age of 18 took part and were randomly exposed to four experimental and one control condition. In each of the four experimental treatments, respondents received a short public health message about why they should wear masks. The treatments varied on two dimensions: the message varied according to whether the emphasis was on individual risk or collective risk and the messenger was either ‘Conservative government ministers’ or ‘public health experts’.¹² The respondents in the control group did not receive a public health message and were simply asked about their willingness to wear masks. Balance tests (shown in the Online appendices) demonstrate that randomised experimental groups do not differ in key demographic and attitudinal variables.

Starting with the content of the message, we expect that messages about risk will shape people’s understanding of the public health problem at hand and the right behaviour to tackle it (H1). Recall that we expected appeals to individual risk and to collective responsibility and health to make people more willing to wear masks but for individual-risk appeal to have a greater effect (H2). Moreover, we expected the response to depend on the messenger delivering the message. Specifically, we hypothesise that the effectiveness of messengers matters differently, depending on people’s allegiance to the government of the day: for government supporters, we expected a greater effect of messages from government ministers than for opposition supporters (H3), while we expected no such effect for the effectiveness of messages from public health experts.

In [Table 1](#), we show the collective and individual risk messages from a public health official and government ministers that were used to test these expectations about the mechanisms driving public compliance. After respondents were presented with one of these vignettes (or none in the control group), they were asked about their willingness to wear masks: ‘In general, how willing or not are you to wear a face mask or covering in public settings?’ with a 5-point Likert-scale of answers from ‘very unwilling’ to ‘very willing’. This is our main outcome variable, as it taps into the willingness to comply with public health guidance (rather than past behaviour).

As [Figure 3](#) shows, 68% of respondents reported that they were very willing to wear masks, and only about 7% were quite or very unwilling. Given the skew in the responses, a first look at the data simply focuses on differences in the percentage of responses ‘very willing’ to wear masks across treatment groups. The data reported in [Figure 4](#) clearly illustrate a greater willingness to wear masks among respondents who were presented with a public health message by either a minister or a public health expert compared to those in the control group.

Table 1. Experimental vignettes.

Public health message: Collective risk	Public health message: Individual risk
<p>To protect others from coronavirus, public health experts have urged citizens to wear a face covering in public settings, especially when other social distancing measures are difficult to maintain.</p> <p>Public health experts stress that the virus is highly contagious and that you can be a carrier and infect others even when you do not have any symptoms. People infected by the virus are at significant risk of severe disease from COVID-19, with many requiring intensive care. Over 40,000 people with coronavirus have died in the UK.</p> <p>Scientific evidence indicates that face masks may help prevent people who have COVID-19 from spreading the virus to those most vulnerable in our communities.</p>	<p>To protect yourself from coronavirus, public health experts have urged citizens to wear a face covering in public settings, especially when other social distancing measures are difficult to maintain.</p> <p>Public health experts stress that the virus is highly contagious and can affect people of all age groups. If you become infected by the virus, you will be at significant risk of severe disease from COVID-19 and may require intensive care. Over 40,000 people with coronavirus have died in the UK.</p> <p>Scientific evidence indicates that the use of face masks may help reduce the risk of infection for the people wearing them.</p>
Government minister message: Collective risk	Government minister message: Individual risk
<p>To protect others from coronavirus, Conservative government ministers have urged citizens to wear a face covering in public settings, especially when other social distancing measures are difficult to maintain.</p> <p>Ministers stress that the virus is highly contagious and that you can be a carrier and infect others even when you do not have any symptoms. People infected by the virus are at significant risk of severe disease from COVID-19, with many requiring intensive care. Over 40,000 people with coronavirus have died in the UK.</p> <p>The government says that face masks may help prevent people who have COVID-19 from spreading the virus to those most vulnerable in our communities.</p>	<p>To protect yourself from coronavirus, Conservative government ministers have urged citizens to wear a face covering in public settings, especially when other social distancing measures are difficult to maintain.</p> <p>Ministers stress that the virus is highly contagious and can affect people of all age groups. If you become infected by the virus, you will be at significant risk of severe disease from COVID-19 and may require intensive care. Over 40,000 people with coronavirus have died in the UK.</p> <p>The government says that the use of face masks may help reduce the risk of infection for the people wearing them.</p>

Given the brevity of the vignette and the fact that the British public had already been heavily ‘pre-treated’ by the time of the survey with messages about mask wearing for more than six months, this constitutes a very conservative test of whether public health messages have an effect on the willingness to wear masks. Yet, we still find that the inclination to comply is substantively higher among the groups of respondents who received a public health message compared to those who did not. As an example, over 70% of those who were told about mask wearing reducing individual risk of being infected with Covid-19 were ‘very willing’ to wear a mask compared to just under 64% of those who did not receive any message.

In order to examine the treatment effects more rigorously, we estimated an ordered logistic regression of willingness to wear masks with the treatments as the main explanatory factors. The results are shown in [Table 2](#).

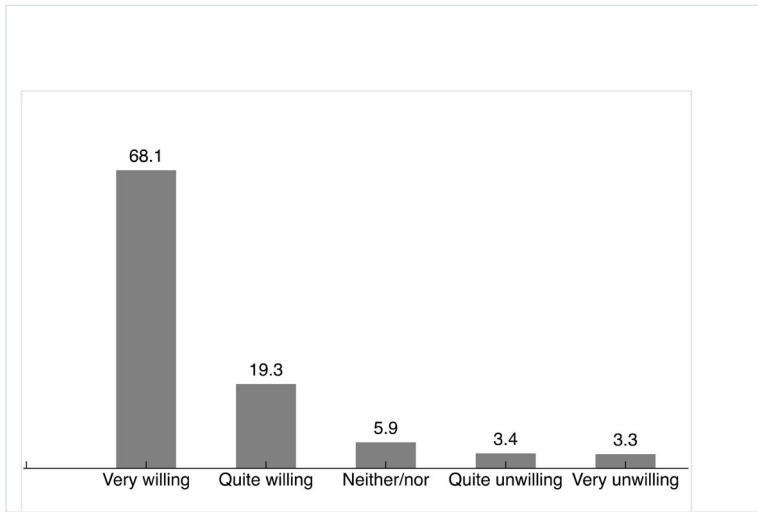


Figure 3. Willingness to wear a mask (%) (In general, how willing or not are you to wear a face mask or covering in public settings?).

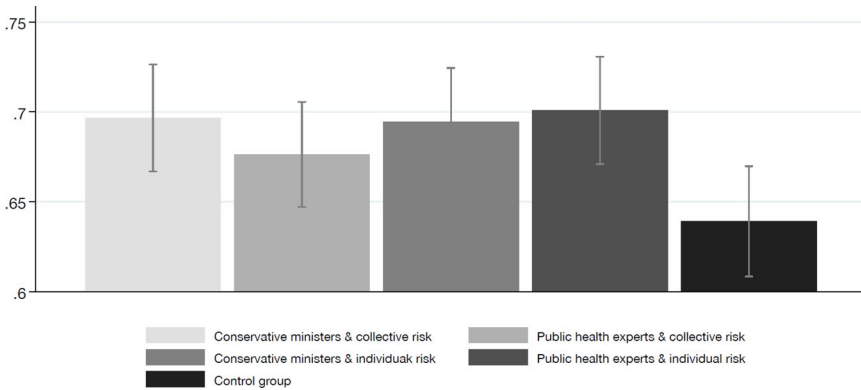


Figure 4. Willingness to wear masks across experimental conditions (Very willing to wear a mask).

Model 1 in Table 2 shows that three of the four treatment conditions lead to a statistically significant increase in the willingness to wear masks, in line with Hypothesis 1, compared with respondents who received no vignette. Only the public health message from experts emphasising the benefits to others from wearing masks falls just below conventional significance levels when pre-treatment covariates are not included in the model. When we group treatments according to ‘message’, i.e. individual risk versus collective risk, in supplemental analyses, we find that both sets of treatments have a significant, and positive, effect on willingness to wear a mask (H1). While the effect of the ‘individual risk’ treatments

Table 2. Effects of experimental treatments on willingness to wear a mask.

	Model 1		Model 2	
	Coef	SE	Coef	SE
Treatment groups:				
Conservative ministers & collective risk	0.27	(0.12)**	0.28	(0.12)**
Public health experts & collective risk	0.17	(0.11)	0.20	(0.11)*
Conservative ministers & individual risk	0.23	(0.12)**	0.25	(0.12)**
Public health experts & individual risk	0.26	(0.12)**	0.27	(0.12)**
Age			0.01	(0.00)**
Gender (female)			0.29	(0.08)**
Education (age at leaving)			-0.04	(0.03)
Social class ABC1			0.06	(0.08)
Subjective Covid-19 risk			0.67	(0.06)**
Conservative voter			-0.23	(0.09)**
Leave voter			-0.29	(0.09)**
Cut 1	-3.21	(0.12)	-1.1	(0.25)
Cut 2	-2.46	(0.10)	-0.32	(0.24)
Cut 3	-1.75	(0.09)	0.4	(0.23)
Cut 4	-0.58	(0.08)	1.64	(0.24)
N	3276		3276	

Note: Ordered logistic regression model. ** p -value < 0.05, two tailed. * p -value < 0.05, one tailed test of significance.

is a little stronger in magnitude the difference between them is not statistically significant. Hence, we do not find strong support for our expectation that messages about individual-level risks have a greater effect than collective risk (H2).

Since the treatments are randomised and the groups are balanced, we would not expect the inclusion of additional variables to change the size of the treatment effects (see the balance check in Online appendix C in the [Supplementary Information](#)). We show this is Model 2, where the treatment effects remain almost identical when we include control variables. Nonetheless, it is interesting to explore the effects of other variables that have been shown to influence compliance during the Covid-19 pandemic. Consistent with other studies, older people and women are more likely to comply (Galasso *et al.* 2020; Wenham *et al.* 2020), whereas class and education make no difference.¹³ We also include a pre-treatment measure of risk perceptions, captured by responses to the question: ‘In your view, how likely is it that you will become infected with the coronavirus (COVID-19)?’. Unsurprisingly, risk perceptions have a substantial and significant effect on willingness to wear masks. It is noteworthy government supporters are *less* likely to comply. Measuring support as a simple binary variable (Conservative voters vs. others), our results suggest that having voted for the Conservatives in 2019 reduced the likelihood of being ‘very willing’ to wear a mask by about 5%, all other things being equal. However, when we look across all voter groups in [Figure 5](#), we find that this difference in the willingness to wear masks across any of the groups

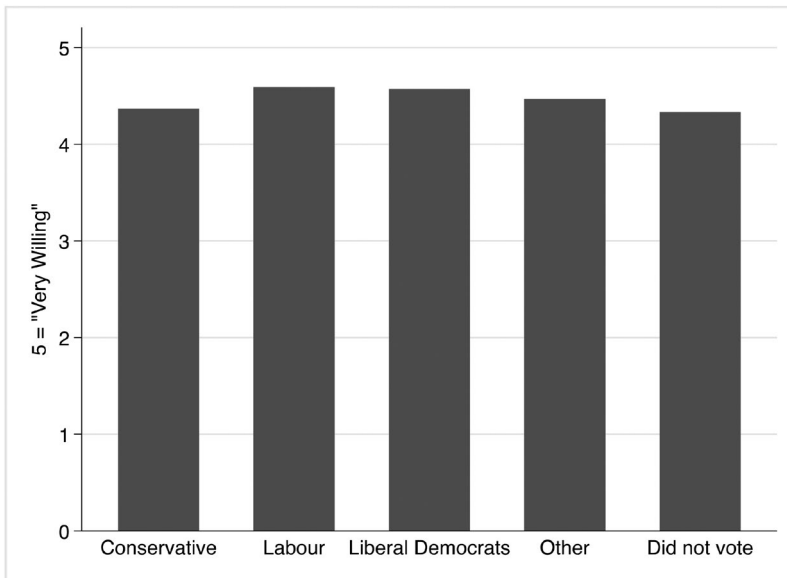


Figure 5. Willingness to wear masks, by 2019 vote choice.

In general, how willing or not are you to wear a face mask or covering in public settings? (5= very willing/1=very unwilling).

is substantively very small. We speculate that this may be due to the rather consensual elite positions on the Covid-19 crisis in the UK where the main opposition party supported the vast majority of government-initiated public health measures, including guidance on wearing masks.¹⁴

In post-Brexit Britain, one possibility for the absence of strong partisan effects is that support for governing parties is not the relevant political identity shaping receptiveness to government messages. Another key political divide that has emerged in recent years in the UK, has been that between ‘Leavers’ and ‘Remainers’ in the debate over Brexit, i.e. exiting the European Union (Hobolt *et al.* 2021). Specifically, Prime Minister Boris Johnson campaigned heavily in favour of leaving the EU, and ‘Brexiters’ have constituted the core of his government. And indeed, results from Model 2 show that Leavers (identified by reported vote in the 2016 referendum) are significantly less likely to express willingness to wear masks than Remainers.

Next, we examine whether support for the governing party moderates people’s responses to the government’s messages. While we do not find overly strong differences in the willingness to wear masks, we still expect Conservative voters to be more likely to respond to the advice of in-group politicians – that is, Conservative ministers – than opposition voters.

Table 3. Heterogeneous treatment effects: government support.

	Model 3	
	Coef	SE
Treatment groups:		
Government minister	0.11	(0.12)
Public health expert	0.23	(0.10)**
Government voter	-0.38	(0.11)**
Government minister treatment x Government voter	0.40	(0.16)**
Age	0.01	(0.00)**
Gender (female)	0.29	(0.08)**
Education (age at leaving)	-0.04	(0.03)
Social class ABC1	0.08	(0.08)
Subjective COVID risk	0.67	(0.06)**
Leave voter	-0.43	(0.09)**
Cut 1	-1.12	(0.25)
Cut 2	-0.40	(0.24)
Cut 3	0.34	(0.24)
Cut 4	1.58	(0.24)
N	3276	

Note: Ordered logistic regression model. ***p*-value < 0.05.

Hence, we hypothesise a heterogeneous treatment effect when it comes to the responses to the messengers. We test this hypothesis with the help of an interaction between the ‘messenger’ treatments (Government minister or public health official) and government support. The results are shown in [Table 3](#).

In line with our expectation, we find that Conservative voters respond more readily to Conservative ministers compared to opposition voters.¹⁵ In other words, party support shapes how receptive citizens are to public health messages, depending on who the messenger is. To put these effects in relief, we calculated the changing probabilities of respondents being ‘very willing’ to wear a mask, conditional on past vote for the incumbent Tory government and receiving the ‘Conservative minister’ prompt. These results are shown in [Figure 6](#). They demonstrate that the impact of a politically congenial messenger is substantively meaningful, with the probabilities of expressing a willingness to wear masks among Conservative voters shifting from around 60% absent the minister treatment to around 68%.

This effect is also meaningful in the context of the specific case of the UK, where the major political parties were largely unified in their response to the Covid-19 pandemic and the degree to which government ministers and public health officials presented a united front when introducing new Covid-related restrictions. One visible example of this unified front were daily press conferences during the height of the first wave of the pandemic that saw government ministers (including the Prime Minister) brief the public, usually flanked by two public health officials (the Chief Medical Adviser and the Chief Scientific Adviser to the UK Government).

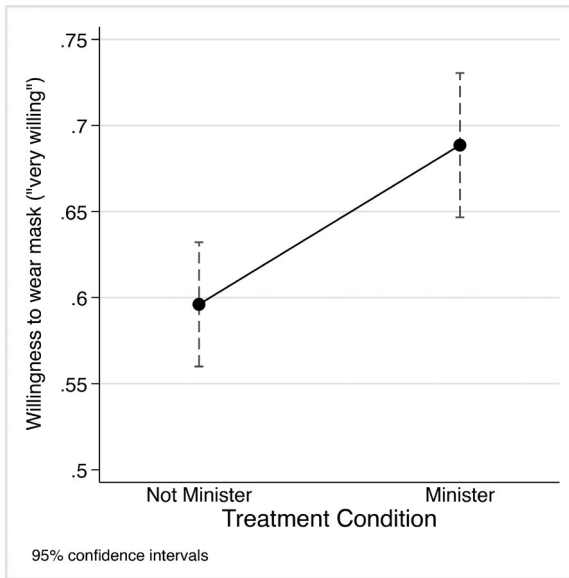


Figure 6. Conservative voters' willingness to wear mask, by minister treatment.

Overall, then, results from the experiment suggest that government and public health messages about risk are likely important when it comes to ensuring public compliance with drastic new public health measures, such as mask wearing, and that there are only small differences across different types of messages and messengers. Furthermore, they indicate that in the context of a united elite, partisan divisions in the responses to such messages do exist but are substantively modest.

Conclusion

'If everyone stays alert and follows the rules, we can control coronavirus,' announced Prime Minister Boris Johnson on 11 May 2020. Staying alert involved wearing a face covering in enclosed spaces 'where it's difficult to be socially distant,' according to the Prime Minister.¹⁶ At this point in the pandemic, mask wearing was not yet central to government messaging. In fact, the government was reluctant to recommend that people wear masks, communicating instead and repeatedly that there was insufficient evidence to prove they worked. Not surprisingly, the UK had one of the lowest rates of mask wearing in the world during the initial phase of the pandemic. However, after a sharp U-turn in summer 2020, with the government recommending, and then regulating, mask wearing, rates of mask wearing increased rapidly in the UK.

This raises a question of how government can persuade citizens to comply with their public health recommendations, such as mask wearing,

during a crisis. In this paper, we have investigated this phenomenon in the British context where the government's advice shifted drastically during the first phase pandemic, albeit with limited polarisation of elite messages. This allows us to explore how malleable and sustainable compliance with Covid-19 related measures is in a context with limited polarisation in public health messaging. Moreover, to better understand what motivates people in the UK to wear a mask and the role that governments play in communicating the benefits of and need to do so, we fielded a nationally representative survey of the British public in September 2020. In particular, we examined the impact of different messages related to risk and the effect of different kinds of messengers on people's willingness to wear masks.

In line with our expectations, the data on public opinion dynamics show that, as public health messaging about the benefits about mask wearing became unequivocal and as government regulation on indoor mask wearing in indoor public spaces was introduced, there was a steep increase in report mask wearing in the UK. Furthermore, the experimental data show that public health messaging positively influences people's willingness to wear masks.¹⁷ Moreover, we find that appeals to both individual and collective risk facts shape individuals' reported willingness to wear masks. Thus, our results support the idea that governments are able to engineer opportunistic obedience and do so on short notice.

In contrast to the data from the US, we do not find a strong divide in the level of reported mask wearing across supporters of different parties (although Conservative voters and 'Leavers' were slightly less willing to wear masks). One may, of course, speculate about the counterfactual: how Conservative supporters might have reacted to mask mandates had they come from a labour-led government instead. Importantly, there is evidence that contingent consent is at work: we do observe that government supporters are more receptive to government messages than opposition voters, suggesting that faith in or support for incumbent authorities does matter. Consistent with our expectation, Conservative voters responded more positively to public health advice that came from government ministers. This effect is perhaps at the lower end of the spectrum, given that the treatment did not explicitly remind them that the Conservative Party was in power (only that the message came from 'Conservative government ministers').

Thus, it appears that information about personal and societal risk both help induce people to express a greater willingness to wear masks across the board, and this information is more powerful when it comes from a co-partisan. Further research could explore whether we see similar dynamics at work in other countries and whether different kinds of risk messages are equally effective at shaping other health-related behaviours.

More generally, the findings from this study contribute to our understanding of how citizens respond in times of acute crisis and, importantly, of the ability of governments to change behavioural norms quickly and drastically. The evidence shows that the British public shifted its position from extremely reluctant mask-wearers to a strong positive norm of wearing masks, and did so rapidly, in line with changing government messaging. The findings also suggest that both appeals to individual risk and collective responsibility were effective in changing attitudes and behaviours.

While the British public's response to the pandemic thus illustrates that government appeals to ensure compliance were successful, the normative implication of these results is less straightforward. On the one hand, it is reassuring that norms and behaviours can change so quickly in response to a public health crisis, and that governments have access to powerful tools to move democratic publics. On the other hand, our results also indicate that these tools are especially potent because they do not even require the full force of coercion to be highly effective. As a consequence, incumbents who wish to exploit a crisis may be tempted to make use of them for less benign ends, especially when met with limited opposition.

Notes

1. We use the term 'face mask' to refer to face coverings of all kinds that aim to limit the spread of the virus.
2. Levi argues that compliant behaviour can be driven by a range of motivations, including habitual obedience or disobedience to authority, espousing a supportive ideology consistent with the state's rules, to trust in government (contingent consent) or cost-benefit calculations (opportunistic obedience) (Levi 1997).
3. Given that these various regulations were new and unusual, it is difficult to see how messages about staying alert and saving lives, for instance, were designed to invoke habitual obedience to wearing masks, an entirely new type of health-related behaviour.
4. See Figure A1 in Online appendix A. This shows that masks and face covering were only rarely mentioned and that it was not until 10 May 2020 that a government minister first mentioned that ordinary people should consider wearing face coverings in public enclosed spaces.
5. <https://inews.co.uk/news/politics/face-masks-advice-timeline-uk-government-coronavirus-coverings-change-explained-452602>
6. <https://www.bma.org.uk/news-and-opinion/government-makes-wearing-face-masks-mandatory>
7. <https://www.bbc.co.uk/news/uk-53513026>
8. The extent to which this is the case may depend on whether the public views experts – who represent a kind of technocratic elite – to be trustworthy and desirable intermediaries. There is significant variation across countries and cultures when it comes to people's faith in technocratic expertise, with Britain falling in the middle in international comparison on how favourably democratic publics view technocratic influence on government decision making (Bertsou and Pastorella 2017).

9. Our theoretical expectations do not specify whether the lens that citizens use to make sense of messages about masking up is more identity-based or perhaps more instrumental in nature. Because vote choice captures respondents' actual political choice and measures the political affiliations of a greater number of respondents than partisanship (since many people do not identify as partisans), it facilitates the robustness of the estimations.
10. Data were collected by YouGov, an international polling organisation. Since March 2020, YouGov surveys have tracked a variety of responses people have had to the pandemic around the world, including people's changes in behaviour and their judgments about the government's handling of the crisis.
11. Formal tests of statistical significance show that the introduction of a mask mandate has a highly significant and substantial effect on mask wearing when included as a dummy variable in a simple time-series regression that also controls for the passage of time (coef = 41.5; $p < 0.001$).
12. While the vignette does not explicitly mention that Conservatives are in government, its mention of 'Conservative ministers' implies as much.
13. We investigated whether age potentially has a curvilinear effect, with compliance behaviour reduced among the oldest respondents (Daoust 2020), but we found no such effect.
14. We conducted additional analyses that distinguished between government voters, opposition voters, and citizens who had not voted in the 2019 election. We found that abstainers, like Conservative voters, were also less likely to wear a mask.
15. We estimated an additional model that also included the interaction between the public health messenger and government supporter. Results show that this interaction is not significant, as expected.
16. <https://www.gov.uk/government/speeches/pm-statement-on-coronaviruses-11-may-2020>
17. This contrasts with some experimental evidence from the US, which has found limited evidence that public health advice influences people's responses to questions about COVID-19 policies (Case et al. 2021), but this may be related to the greater partisan divide in the COVID debate in the US.

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References

- Allcott, Hunt, Levi Boxell, Jacob C. Conway, Matthew Gentzkow, Michael Thaler, and David Y. Yang (2020). 'Polarization and Public Health: Partisan Differences in Social Distancing during the Coronavirus Pandemic', NBER Working Paper 26946.
- Altiparmakis, Argyrios, Abel Bojar, Sylvain Brouard, Martial Foucault, Hanspeter Kriesi, and Richard Nadeau (2021). 'Pandemic Politics: Policy Evaluations of Government Responses to COVID-19', *West European Politics*, 44:5-6, 1159–79.
- Anderson, Christopher J. (2022). 'Citizens and the State during Crisis: Public Authority, Private Behavior, and the Covid-19 Pandemic in France', *European Journal of Political Research*. doi:10.1111/1475-6765.12524
- Anderson, Christopher J., Silvia M. Mendes, and Yuliya V. Tverdova (2004). 'Endogenous Economic Voting: Evidence from the 1997 British Election', *Electoral Studies*, 23:4, 683–708.
- Bailey, Jack (2019). 'The Fact Remains: Party ID Moderates How Voters Respond to Economic Change', *Electoral Studies*, 61.
- Bertsou, Eri, and Giulia Pastorella (2017). 'Technocratic Attitudes: A Citizens' Perspective of Expert Decision-Making', *West European Politics*, 40:2, 430–58.
- Birnbaum, Michael H., and Steven E. Stegner (1979). 'Source Credibility in Social Judgment: Bias, Expertise, and the Judge's Point of View', *Journal of Personality and Social Psychology*, 37:1, 48–74.
- Bisgaard, Martin, and Rune Slothuus (2018). 'Partisan Elites as Culprits? How Party Cues Shape Partisan Perceptual Gaps', *American Journal of Political Science*, 62:2, 456–69.
- Bol, Damien, Marco Giani, André Blais, and Peter John Loewen (2021). 'The Effect of COVID-19 Lockdowns on Political Support: Some Good News for Democracy?', *European Journal of Political Research*, 60:2, 497–505.
- Bolleyer, Nicole, and Orsolya Salát (2021). 'Parliaments in Times of Crisis: COVID-19, Populism and Executive Dominance', *West European Politics*, 44:5-6, 1103–28.

- Broockman, David E., and Daniel M. Butler (2017). 'The Causal Effects of Elite Position-Taking on Voter Attitudes: Field Experiments with Elite Communication', *American Journal of Political Science*, 61:1, 208–21.
- Case, Chandler, Christopher Eddy, Rahul Hemrajani, Christopher Howell, Daniel Lyons, Yu-Hsien Sung, and Elizabeth C. Connors (2021). 'The Effects of Source Cues and Issue Frames during COVID-19', *Journal of Experimental Political Science*, 1–10. doi:10.1017/XPS.2021.3
- Daoust, Jean-François (2020). 'Elderly People and Responses to COVID-19 in 27 Countries', *PLoS One*, 15:7, e0235590.
- Daoust, Jean-François, Richard Nadeau, Ruth Dassonneville, Erick Lachapelle, Éric Bélanger, Justin Savoie, and Clifton van der Linden (2021a). 'How to Survey Citizens' Compliance with COVID-19 Public Health Measures? Evidence from Three Survey Experiments', *Journal of Experimental Political Science*, 8:3, 310–7.
- Daoust, Jean-François, Éric Bélanger, Ruth Dassonneville, Erick Lachapelle, Richard Nadeau, Michael Becher, Sylvain Brouard, Martial Foucault, Christoph Hönnige, and Daniel Stegmüller (2021b). 'A Guilt-Free Strategy Increases Self-Reported Non-Compliance with COVID-19 Preventive Measures: Experimental Evidence from 12 Countries', *PLoS One*, 16:4, e0249914.
- Davis, Darren W., and Brian D. Silver (2004). 'Civil Liberties vs. Security: Public Opinion in the Context of the Terrorist Attacks on America', *American Journal of Political Science*, 48:1, 28–46.
- De Vries, Catherine E., Bert N. Bakker, Sara Hobolt, and Kevin Arceneaux (2021). 'Crisis Signaling: How Italy's Coronavirus Lockdown Affected Incumbent Support in Other European Countries', *Political Science Research and Methods*, 9:3, 451–67.
- De Vries, Catherine E., Sara B. Hobolt, and James Tilley (2018). 'Facing up to the Facts: What Causes Economic Perceptions?', *Electoral Studies*, 51, 115–22.
- Druckman, James N., (2001). 'On the limits of framing effects: Who can frame?', *The Journal of Politics*, 63:4, 1041–1066.
- Ellickson, Robert C (2001). 'The Market for Social Norms', *American Law and Economics Review*, 3:1, 1–49.
- Engler, Sarah, Palmo Brunner, Romane Loviat, Tarik Abou-Chadi, Lucas Leemann, Andreas Glaser, and Daniel Kübler (2021). 'Democracy in Times of the Pandemic: Explaining the Variation of COVID-19 Policies across European Democracies', *West European Politics*, 44:5-6, 1077–1102.
- Evans, Geoffrey, and Robert Andersen (2006). 'The Political Conditioning of Economic Perceptions', *Journal of Politics*, 68:1, 194–207.
- Gadarian, Shana Kushner, Sara Wallace Goodman, and Thomas B. Pepinsky (2021). 'Partisanship, Health Behavior, and Policy Attitudes in the Early Stages of the COVID-19 Pandemic', *PLoS One*, 16:4, e0249596.
- Galasso, Vincenzo, Vincent Pons, Paola Profeta, Michael Becher, Sylvain Brouard, and Martial Foucault (2020). 'Gender Differences in COVID-19 Attitudes and Behavior: Panel Evidence from Eight Countries', *Proceedings of the National Academy of Sciences of the United States of America*, 117:44, 27285–27291.
- Gilens, Martin, and Naomi Murakawa (2002). 'Elite Cues and Political Decision-Making', *Research in Micropolitics*, 6, 15–49.
- Greitens, Sheena Chestnut. (2020). 'Surveillance, security, and liberal democracy in the post-COVID world', *International Organization*, 74:1, 169–190.
- Grossman, Guy, Soojong Kim, Jonah M. Rexer, and Harsha Thirumurthy (2020). 'Political Partisanship Influences Behavioral Responses to Governors'

- Recommendations for Covid-19 Prevention in the United States', Available at SSRN 3578695.
- Hale, Thomas, Noam Angrist, Rafael Goldszmidt, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster et al. (2021). 'A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)', *Nature Human Behaviour*, 5:4, 529–538.
- Hobolt, Sara B., Thomas J. Leeper, and James Tilley (2021). 'Divided by the Vote: Affective Polarization in the Wake of the Brexit Referendum', *British Journal of Political Science*, 51:4, 1476–93.
- Larsen, Martin, Michael Bang Petersen, and Jacob Nyrup (2020). 'Do Survey Estimates of the Public's Compliance with COVID-19 Regulations Suffer from Social Desirability Bias?', *Journal of Behavioral Public Administration*, 3:2, 1–9.
- Lenz, Gabriel S. (2013). *Follow the Leader? How Voters Respond to Politicians' Policies and Performance*. Chicago: University of Chicago Press.
- Levi, Margaret (1997). *Consent, Dissent and Patriotism*. New York: Cambridge University Press.
- Lupia, Arthur, and Mathew D. McCubbins (1998). *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* New York: Cambridge University Press.
- Merkley, Eric, Aengus Bridgman, Peter John Loewen, Taylor Owen, Derek Ruths, and Oleg Zhilin (2020). 'A Rare Moment of Cross-Partisan Consensus: Elite and Public Response to the COVID-19 Pandemic in Canada', *Canadian Journal of Political Science*, 53:2, 311–8.
- Merolla, Jennifer L., and Elizabeth J. Zechmeister (2009). *Democracy at Risk: How Terrorist Threats Affect the Public*. Chicago: University of Chicago Press.
- Nicholson, Stephen P. (2012). 'Polarizing Cues', *American Journal of Political Science*, 56:1, 52–66.
- Paek, Hye-Jin, and Thomas Hove (2017). 'Risk Perceptions and Risk Characteristics', In *Oxford Research Encyclopedia of Communication*. Oxford: Oxford University Press.
- Schraff, Dominik (2021). 'Political Trust during the Covid-19 Pandemic: Rally around the Flag or Lockdown Effects?', *European Journal of Political Research*, 60:4, 1007–17.
- Tyler, Tom R. (1980). 'Impact of Directly and Indirectly Experienced Events: The Origin of Crime-Related Judgments and Behaviors', *Journal of Personality and Social Psychology*, 39:1, 13–28.
- Tyler, Tom R., and Fay L. Cook (1984). 'The Mass Media and Judgments of Risk: Distinguishing Impact on Personal and Societal Level Judgments', *Journal of Personality and Social Psychology*, 47:4, 693–708.
- Tyler, Tom R., and Yuen J. Huo (2002). *Trust in the Law: Encouraging Public Cooperation with the Police and Courts*. New York: Russell Sage.
- Van Der Linden, Clifton, and Justin Savoie (2020). 'Does Collective Interest or Self-Interest Motivate Mask Usage as a Preventive Measure against COVID-19?', *Canadian Journal of Political Science*, 53:2, 391–7.
- Wenham, Clare, Julia Smith, and Rosemary Morgan (2020). 'COVID-19: The Gendered Impacts of the Outbreak', *The Lancet*, 395:10227, 846–8.
- Westwood, Sean J., Shanto Iyengar, Stefaan Walgrave, Rafael Leonisio, Luis Miller, and Oliver Strijbis (2018). 'The Tie That Divides: Cross-National Evidence of the Primacy of Partisanship', *European Journal of Political Research*, 57:2, 333–54.
- Zaller, John R. (1992). *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.