

Economic Analysis of Law in European Legal Scholarship 13

Klaus Mathis  
Avishalom Tor *Editors*

# Law and Economics of the Coronavirus Crisis



Springer

# **Economic Analysis of Law in European Legal Scholarship**

Volume 13

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Klaus Mathis • Avishalom Tor  
Editors

# Law and Economics of the Coronavirus Crisis

 Springer

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# Preface

This edited volume “Law and Economics of the Coronavirus Crisis” is a collection of papers, which were due to be presented at the annual Law and Economics Conference in Lucerne on the 16th and 17th of April 2021, co-organised by the University of Lucerne, Institute for Economy and Regulation, and the Notre Dame Research Program on Law and Market Behaviour (ND LAMB). Unfortunately, due to the global COVID-19 pandemic, the conference could not take place. Irrespective of these unfortunate circumstances, the editors and authors have created and edited a volume on the current issues associated with the economic analysis of the Coronavirus Crisis.

The main focus of this volume lies in presenting European legal scholars’ perspectives on the issues surrounding the Law and Economics of the Coronavirus Crisis. These are complemented by insights from distinguished scholars from the USA, Israel, and Australia in order to foster the international dialogue among the different legal cultures. The thematic scope of this volume spans both the theoretical foundations and specific practical applications of the Law and Economics of the Coronavirus Crisis.

The authors examine the Law and Economics of the Coronavirus Crisis from behavioural economics, regulatory, technological, and various other perspectives. They do not only deal with the Law and Economics of the immediate impacts of and responses to the Coronavirus Crisis, but also highlight opportunities and propose new approaches that open up future possibilities because of the scholarly analysis of the current crisis.

On the one hand, already existing problems from different areas are placed in the current context of the Coronavirus Crisis and critically examined with a Law and Economics approach. On the other hand, new and unforeseeable challenges that have arisen as a result of the Coronavirus Crisis are addressed from a Law and Economics point of view.

We take this opportunity to thank all those who have contributed to the successful completion of this volume. Therefore, we would like to thank Lyanne Elsener, BLaw and Philipp Gisler for their reviewing and diligent proofreading. We are also grateful to Kay Stoll and Anja Trautmann at Springer International Publishing for overseeing the publishing process.

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Avishalom Tor

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**Part I**  
**Immediate Impact and Responses**

# Law, Economics, and Compliance in the Times of COVID-19: A Behavioural Perspective



Doron Teichman

**Abstract** This Article explores which tools the legal system should use to promote pro-social behaviour in the face of the COVID-19 pandemic. More specifically, the Article compares nudges (i.e., choice-preserving, behaviourally informed tools that encourage people to behave as desired) and mandates (i.e., obligations backed by sanctions that dictate to people how they must behave), and it argues that mandates rather than nudges should serve in most cases as the primary legal tool used to promote risk reduction during a pandemic. The Article nonetheless highlights the role nudges can play as complements to mandates, and surveys numerous nudges that were used by regulators around the world.

## 1 Introduction

In December 2019, a novel coronavirus (SARS-CoV-2) causing an acute respiratory syndrome (COVID-19) appeared in the Chinese province of Wuhan.<sup>1</sup> The virus quickly spread across the world, triggering an unprecedented global public-health crisis. At the time of writing of this chapter, the global death toll of the pandemic has surpassed three million lives.<sup>2</sup>

Since the outset of the pandemic, policymakers around the world have recognized that as long as a treatment or vaccine for COVID-19 is not widely available, the main policy goal is to slow the rate of transmission of the virus by changing human behaviour. That means promoting social distancing, minimizing face-to-face interactions, and when these occur, using precautions such as face masks. Applying an economic framework to this goal suggests that the law should incentivize desirable behaviour through positive and negative payoffs. This chapter shifts the focus away

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<sup>1</sup>Zhou et al. (2020), p. 270.

<sup>2</sup>See Abraham and Mann (2021).

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from incentives, and highlights the contributions of the behavioural analysis of the law to achieving this policy goal.<sup>3</sup>

Needless to say, this proposed focus on the role of behavioural insights does not suggest that the basic tenets of traditional models of deterrence and compliance should be ignored. The Israeli experience appears to suggest that in communities where the police refrained from enforcing public-health rules, wide violations were prevalent, and consequently, transmission rates were extremely high.<sup>4</sup> Effective enforcement of mandates clearly plays a key role in compliance decisions. Nonetheless, as this chapter will show, behavioural insights can also help policymakers who wish to bolster compliance. Simple interventions in the decision-making environment may make compliance easier, and prove to be an effective complement to enforcement efforts.

The chapter unfolds as follows: after this brief introduction, Sect. 2 examines the proper role of nudges within the legal response to the COVID-19 pandemic. As the analysis will demonstrate, nudges can play a constructive role within this response, but their choice-preserving nature makes them inadequate in regulating human behaviour during an infectious and deadly pandemic. Section 3 highlights concrete examples of nudges that have been used during the pandemic, and shows how insights from behavioural economics can guide both public messaging regarding the required behaviour, and the design of the decision-making environment. Section 4 turns from the individual to the community, by analyzing the effect of social norms on individual decision-making, and examining how the law can harness such norms to bolster compliance. Finally, Sect 5 shows how people's tendency to interpret reality to suit their self-interest and their cultural priors may hinder compliance with legal rules. It then reviews findings from the area of behavioural ethics, and demonstrates their applicability in the context of the pandemic.

## 2 Choosing the Means to Promote the Goal: Nudges v. Mandates

This section presents a general theoretical framework that defines the desirable role of behaviourally informed modes of regulation—commonly referred to as *nudges*—within the regulatory response to the pandemic.<sup>5</sup> It will do so while comparing nudges to the main alternative tool that regulators might opt for—namely, *mandates* that are backed by sanctions.<sup>6</sup>

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<sup>3</sup>For previous contributions, see Teichman and Underhill (2021); Bonell et al. (2020); Van Bavel et al. (2020); Lunn et al. (2020a); Soofi et al. (2020).

<sup>4</sup>See Yoffie (2021).

<sup>5</sup>The term nudge was popularized by Thaler and Sunstein (2009).

<sup>6</sup>Policymakers could also use positive incentives (such as rewards, and subsidies) to encourage desired behaviour. For example, policymakers seeking to encourage the use of face masks might

Broadly defined, nudges are “low-cost, choice-preserving, behaviourally informed approaches to regulatory problems.”<sup>7</sup> They do not “significantly change [e] economic incentives”, but rather affect behaviour without modifying prices, fines, or subsidies.<sup>8</sup> A key aspect of nudges is that they preserve individual liberty<sup>9</sup>—that is, they seek to guide and help people make their decisions, but do not remove any options from the choice set.

As research has demonstrated, regulators can often change people’s decisions through nudges. Examples of such policies include defaults that steer people toward the desired choice;<sup>10</sup> decision menus that control the order in which options are presented;<sup>11</sup> sensory cues (such as pictures or ambiance) that prime people to choose certain options;<sup>12</sup> and smart disclosures that help people make decisions that best serve their long-term interests.<sup>13</sup> Over the past few decades, nudges have had a profound impact on public policy around the world, and various countries have even created special “Nudge Units” with the specific task of promoting the use of behaviourally informed regulation.<sup>14</sup>

Numerous jurisdictions have examined the possibility of placing nudges at the forefront of their regulatory response to the pandemic. Such regulation would focus on providing people with clear and simple information that can help foster social distancing, while retaining individual choice. Governments following this approach published recommendations to stay at home or self-isolate, sought to inculcate hand-washing habits, and issued advice regarding social (and even sexual) interactions.<sup>15</sup> Salient examples include Sweden (throughout the pandemic), and the United Kingdom (briefly, at the outset of the crisis).<sup>16</sup>

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provide them free of charge. However, this tool seems ill-suited for dealing with a pandemic, given the likely costs of rewarding everyone who takes part in routine activities. On the role of positive incentives, see Galle (2012); De Geest and Dari-Mattiacci (2013).

<sup>7</sup>See Sunstein (2014), p. 719.

<sup>8</sup>Thaler and Sunstein (2009), p. 6.

<sup>9</sup>Thaler and Sunstein (2009), p. 5.

<sup>10</sup>See, e.g., Johnson and Goldstein (2003).

<sup>11</sup>See, e.g., Bucher et al. (2016).

<sup>12</sup>See, e.g., Wilson et al. (2016), pp. 51–52.

<sup>13</sup>See, e.g., Newell and Siikamäki (2014).

<sup>14</sup>For an overview, see Zamir and Teichman (2018), pp. 177–185.

<sup>15</sup>See e.g., Hutton, Bloomberg, 11 March 2020 (hand washing); Secretary of State, Health and Social Care (2020) Controlling the Spread of COVID-19: Health Secretary’s Statement to Parliament. <https://www.gov.uk/government/speeches/controlling-the-spread-of-covid-19-health-secretarys-statement-to-parliament> (social interactions and travel) (last access 11 September 2021); Public Health Agency of Sweden (2020) Public Gatherings. <https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/communicable-disease-control/covid-19/public-gatherings/> (public gatherings including weddings and graduation parties) (last access 11 September 2021); Buffy, The Guardian, 15 May 2020 (sexual interactions).

<sup>16</sup>See Pierre (2020) (describing Swedish policies); Sibony (2020) (examining the early British response).

While countries adopted a wide range of legal responses to the pandemic, most developed economies relied primarily on mandates, rather than on nudges:<sup>17</sup> they shut down significant sectors of their economies, and limited public gatherings. In addition, broad travel restrictions were implemented—including curfews, and rules restricting people’s movement from their homes to certain limited purposes. International travel was curtailed to an even greater degree, and many countries chose to close their borders entirely. Individuals infected by the virus were placed in isolation, and those who were exposed to it were required to enter quarantine. These mandates were backed by significant penalties, and vigorously enforced.<sup>18</sup>

There are several reasons why nudges could not serve as the backbone of the legal response to the pandemic. One problem is the lack of relevant knowledge necessary to craft effective nudges. The situation faced by regulators in late 2019 and early 2020 was unprecedented, and the ability to extrapolate policies from existing research was extremely limited. Policymakers who sought to make people wear face masks in public, or to avoid large gatherings, simply did not know which nudge could achieve this goal. Mandates, on the other hand, require less information from the policymakers’ viewpoint, who only need to specify the behaviour that is required or prohibited and implement an enforcement strategy.

However, even if behavioural scientists had provided policymakers with timely proposals for concrete nudges, it is unlikely that these interventions would have sufficed as the primary response to the pandemic. The key issue in this regard is the *effect size* associated with most nudges. While nudges may be able to change the behaviour of some of the population enough to create a statistically significant effect when examined experimentally, the scope of the behavioural change is often quite modest—either because they cause a large change among only a small subset of the population, or because they bring about an infinitesimal change among a very large group of people.

A recent systematic review of 100 studies and 317 effect sizes showed that nudges have a median relative effect size of 21%<sup>19</sup>—which is typically thought to be small.<sup>20</sup> This figure probably overstates the actual number, given a well-known publication bias in academic journals in favor of studies in which a given effect is documented.<sup>21</sup> A study into the effect size of nudges implemented in the field by various “Nudge Units” documented an average effect size of only 1.4%.<sup>22</sup> Moreover, the most effective nudge that pushes the median upward is the *default effect*<sup>23</sup>—which does not appear to be relevant to the COVID-19 context. While the modest effect size of many nudges may not undermine their efficacy, given the

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<sup>17</sup>For an overview of the common measures used, see Hale et al. (2020).

<sup>18</sup>See White and Fradella (2020).

<sup>19</sup>See Hummel and Maedche (2019), pp. 48, 53.

<sup>20</sup>Cohen (1988), p. 25.

<sup>21</sup>See Hummel and Maedche (2019), p. 54.

<sup>22</sup>See DellaVigna and Linos (2020), pp. 2–3.

<sup>23</sup>See DellaVigna and Linos (2020), pp. 54–55.

low costs that many of them entail, it does suggest that nudges are insufficient, in and of themselves, to bring about a broad shift in behaviour in the context of a deadly pandemic.<sup>24</sup>

Finally, there is a more fundamental reason to believe that, however expertly behavioural scientists design nudges, such interventions are unlikely to suffice as the main regulatory response to a deadly infectious disease. In a pandemic, individual choices entail significant *negative externalities*—namely, individuals carrying the virus pose a risk not only to themselves, but also to those whom they might infect, and other people who are consequently infected further downstream. Furthermore, when the healthcare system reaches capacity, every additional sick patient reduces the level of care received by other patients (and in extreme situations, may result in scarcity, and denials of care). One study estimated the social cost associated with each additional COVID-19 infection to be possibly as high as \$576,000—whereas the private cost internalized by decision-makers is only \$80,000.<sup>25</sup>

Choice-preserving regulation may be useful in instances where the regulator wishes to help people make choices that are in their own best interests. In areas such as dieting, saving for retirement, or choosing financial products, a nudge may improve the choices that people make, thereby making it more likely to be adopted. The response to an infectious disease, however, is a *collective action* problem: many people may decide that it is in their best interest to ignore that nudge—creating negative externalities that, in this case, may prove fatal. Consequently, the likelihood that such nudges will prevail over time—certainly within the population as a whole—is low. Even Cass Sunstein—a devout proponent of nudges—acknowledges that in cases involving negative externalities “choice-preserving approaches might well prove inadequate.”<sup>26</sup>

While mandates, rather than nudges, should probably be the primary legal tool used in the face of a major pandemic, nudges can still make useful contributions to the legal response to COVID-19. At times, nudges might *substitute* mandates. Policymakers may opt to use a nudge even though welfare could be enhanced by using mandates because there are constraints that limit their ability to put an effective mandate in place. This may arise, for example, in situations when constitutional rules prohibit certain types of legislation. Substitution may also occur due to political constraints, even when policymakers are legally allowed to enact mandates: for example, if a given mandate generates significant opposition, a nudge may be a useful compromise, which may be better than doing nothing.<sup>27</sup> It should be noted, however, that the availability of nudges on the political menu may undermine policymakers’ ability or motivation to promote the first-best necessary regulation (i.e., mandates).<sup>28</sup> In such cases, low-cost and choice-preserving nudges may end up

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<sup>24</sup>See Bubb and Pildes (2014), pp. 1597–1598.

<sup>25</sup>See Bethune and Korinek (2020), p. 33.

<sup>26</sup>See Sunstein (2017), p. 7.

<sup>27</sup>See Sunstein (2017), p. 19.

<sup>28</sup>See Hagmann et al. (2019), p. 488.

substituting much needed and more effective mandates, simply because they are an easier option, politically speaking.<sup>29</sup>

In the context of COVID-19, nudges have occasionally functioned as a substitute for mandates in situations where legislatures were constrained. In Japan, for example, much of the country's response to the pandemic was driven by strict constitutional restrictions, that limited the government's ability to enact key mandates—such as business closures, or shelter-in-place orders.<sup>30</sup> Consequently, the Japanese government put in place a framework of soft regulation, based on nudges and requests.<sup>31</sup> The regulation of places of worship is another case in point: while religious institutions pose a significant transmission risk,<sup>32</sup> they also play a critical role in the lives of many communities. In the United States, for example, the Supreme Court has struck down numerous limitations imposed by states on religious gatherings.<sup>33</sup> In such situations, guidelines and nudges may serve as a useful substitute for mandates, thereby helping to lower the risk of transmission.<sup>34</sup> Finally, the issue of vaccination appears to be particularly well suited for the use of nudges: countries that respect individual autonomy over medical procedures might be reluctant to mandate vaccination. In these circumstances, nudging may be one of the few tools available to policymakers.

Alternatively, nudges may serve as *complements* to a regulatory regime that is based on mandates. The traditional rational-choice model predicts that punishing violators creates specific and general deterrence, which reduces the level of undesirable activity. Based on this model, sanctions and enforcement efforts geared toward detecting violations are the key tools that policymakers have at their disposal.<sup>35</sup> However, a rich body of behavioural research suggests that peoples' decisions on whether or not to obey the law are governed by a wide range of additional factors<sup>36</sup>—such as social norms, subjective perceptions of probabilities, and the fairness of the legal system.<sup>37</sup> Building on this body of research, behavioural scientists can guide policymakers to the tools that may enhance compliance.

In the context of COVID-19, many public-health mandates imposed by regulators are self-enforcing or very simple to enforce: when countries close their borders, public schools, or other governmental services, non-compliance is generally not an option. Similarly, enforcing a lockdown of major business is relatively

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<sup>29</sup> See Zamir and Teichman (2018), p. 177.

<sup>30</sup> See Cato et al. (2020), p. 2.

<sup>31</sup> See Cato et al. (2020), p. 2.

<sup>32</sup> See Quadri (2020).

<sup>33</sup> See, e.g., *Robinson v. Murphy*, 141 S. Ct. 972, 972 (2020) (suspending a capacity limit on houses of worship in New Jersey).

<sup>34</sup> See Villa, Pew Research Center, 27 April 2020.

<sup>35</sup> See Becker (1968), p. 169; For a later review, see Shavell (2004), pp. 473–530.

<sup>36</sup> For an overview of the literature, see Zamir and Teichman (2018), pp. 433–455.

<sup>37</sup> See, e.g., Nolan et al. (2008) (social norms); Guttel and Harel (2008) (probability estimates); Nadler (2005) (fairness of the law).



straightforward—since deviations are easily detected, and sanctions can be swiftly applied. This has been borne out by the aggressive measures taken by governments to quickly shut down the occasional rogue private school that opens,<sup>38</sup> or the defiant restaurant that has decided to open for in-house dining.<sup>39</sup>

Other public-health rules, however, are harder to enforce. Mandates concerning behaviours such as wearing face masks in public are much more difficult to implement. When limitations apply to behaviour within the home (such as limiting the number of house guests), enforcement may be possible only in cases of exceptionally flagrant violations. And some very important forms of behaviour, such as hand-washing, simply cannot be regulated by the state. To help bolster voluntary compliance in such settings, policymakers may wish to make use of insights from behavioural economics to complement mandates.

### **3 Nudges: Behaviourally Informed Messaging, and Choice Architecture**

This section reviews several prominent examples of nudges during the pandemic, in two contexts. One is public messaging that may boost compliance, and the other is interventions in the decision-making environment that make compliance easier. In both these contexts, the policies in question did not limit people's choice set in any meaningful way, nor did they change the incentive structure that people faced.

#### ***3.1 Behaviourally Informed Messaging***

Public messaging is one way of promoting compliance using psychological mechanisms, rather than incentives. Behavioural insights can help policymakers communicate their message more effectively. Just as firms competing in the marketplace, or rival political candidates running for office, use psychological insights when designing their messages, regulators can, and should, do the same in times of a pandemic. Fields such as marketing, communications, and organizational behaviour have made great strides in this area.

Since human attention is a scarce resource, policymakers face a challenge if they want their messages to be noticed, understood, and elicit the desired response. At the broadest level, much as in other contexts of mass communication, effective messages must be “concrete, straightforward, simple, meaningful, timely, and salient.”<sup>40</sup>

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<sup>38</sup>See Kenton, Daily Mail, 19 May 2020.

<sup>39</sup>See Evans, Desert News, 17 May 2020.

<sup>40</sup>Sunstein (2014), p. 729. See also, Kahneman (2013), p. 63.

This very general framework has been successfully applied in areas such as energy efficiency and preventive health care.<sup>41</sup>

Numerous leaders have used behaviourally informed messaging during the pandemic. In New York State, for example, the message: “*Stay Home. Stop the Spread. Save Lives*” was used consistently during the early stages of the pandemic.<sup>42</sup> In the United Kingdom, a similar message that included a reference to the nationally cherished institution of the national health service—“*Stay Home, Protect the NHS, Save Lives*”—was the centerpiece of governmental communications, and has been described as “one of the most successful communications in modern political history.”<sup>43</sup> These messages are simple and short, and convey in concrete terms what is required of people (i.e., stay home), and why it is required (namely, to support health care workers, and save lives). Furthermore, this simple wording was often coupled with a visual design that was geared to make it more vivid—which likely bolstered the impact of the message.<sup>44</sup> In the United Kingdom, for example, the message was blazoned on the front of the Prime Minister’s podium during his press briefings, and the eye-catching design included a yellow background, black lettering, and red arrows.<sup>45</sup> According to one public-relations expert, this visual design “helped to drive the message home and create a sense of urgency.”<sup>46</sup>

Behavioural insights may also offer guidance about how the nuanced content of governmental messages is aimed at boosting compliance. A key example from the COVID-19 response is whether to emphasize people’s self-interest, or societal interests, when trying to promote compliance with self-distancing rules. From a rational-choice perspective, people are expected to care foremost about themselves rather than about others. Thus, the most effective message should focus on the benefits associated with not catching the virus, rather than the benefits of not spreading it to others. A large body of behavioural studies, however, has demonstrated that people’s behaviour is influenced by pro-social motivations.<sup>47</sup> People cooperate with others voluntarily in non-cooperative games such as Prisoner’s Dilemma;<sup>48</sup> they choose to share resources with others in an egalitarian fashion;<sup>49</sup> and they are willing to forgo income to punish people who deviate from such pro-social norms.<sup>50</sup> This body of work suggests that using pro-social messaging may be an effective way of promoting compliance with COVID-19 restrictions—

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<sup>41</sup> See, e.g., Schubert (2017), p. 332 (on the matter of eco-labeling); Blumenthal-Barby and Burroughs (2012), p. 4 (on salience in the context of health care).

<sup>42</sup> See Gallo (2020).

<sup>43</sup> See Hope and Dixon, The Telegraph, 1 May 2020.

<sup>44</sup> See Zamir and Teichman (2018), pp. 34–36.

<sup>45</sup> See Hope and Dixon, The Telegraph, 1 May 2020.

<sup>46</sup> See Hope and Dixon, The Telegraph, 1 May 2020.

<sup>47</sup> For a review, see Gächter (2014).

<sup>48</sup> See, e.g., Van den Assem et al. (2012).

<sup>49</sup> See Engel (2011).

<sup>50</sup> See Fehr and Gächter (2002).

particularly among the younger population, who face a significantly lower personal risk in the case of illness.<sup>51</sup>

Preliminary studies have confirmed the effectiveness of pro-social messaging in promoting precautions against COVID-19.<sup>52</sup> One such study found that in the early stages of the pandemic, a public-service announcement focusing on public (i.e., other-regarding) benefits was more effective than a message focused on personal benefits—and no less effective than a message focusing on both.<sup>53</sup> A second, identical, experiment conducted at a later stage of the pandemic showed that the different messages had similar effects—but still suggested that the perceived threat of COVID-19 to the public was more successful at predicting preventive behaviour than perceived threats to the individual decision-maker.<sup>54</sup> Governments around the world took note of these insights, and used messages such as “*Do It for Them*” and “*We Must Keep On Protecting Each Other*.”<sup>55</sup>

Another psychological dimension that may help bolster compliance with public-health regulation is the *identifiability* of the victims. A wide body of psychological literature shows that people value the life of an identifiable person more than that of an unidentifiable, statistical individual.<sup>56</sup> Experimental studies have shown that merely adding a picture and a name to a message can significantly enhance people’s willingness to respond in a prosocial manner.<sup>57</sup> This is why people agree to spend tremendous amounts of money to save an identifiable person in peril, but fail to invest in preventive measures that would save many more (unknown) lives.<sup>58</sup> Charities routinely construct their messaging based on this insight, and focus their fundraising campaign on an individual story, rather than on the broader picture.<sup>59</sup>

These findings suggest that humanizing the messages calling for public-health precautions may increase peoples’ willingness to comply. Thus, the effectiveness of messages about protecting healthcare workers, or saving the lives of at-risk populations, can be bolstered by incorporating names and pictures of individual members of those groups. One preliminary study conducted in Ireland found that when experimenters led subjects to think of specific individuals as potential victims of a coronavirus infection, subjects were more willing to adopt some types of

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<sup>51</sup> See Bonell et al. (2020).

<sup>52</sup> See, e.g., Pfattheicher et al. (2020); Gouin et al. (2020).

<sup>53</sup> See Jordan et al. (2020), pp. 3–11.

<sup>54</sup> See Jordan et al. (2020), pp. 12–17.

<sup>55</sup> See New York City Twitter Account, Feb 4, 2020; <https://twitter.com/nycgov/status/1357174048132849668> (“Do it for Them”) (last access 22 September 2021); Milton Keynes Council Twitter Account, Oct. 17, 2020; <https://twitter.com/mkcouncil/status/1317359927623622657> (“We Must Keep On Protecting Each Other”) (last access 20 September 2021).

<sup>56</sup> For an overview, see Lewinsohn-Zamir et al. (2017), pp. 509–519.

<sup>57</sup> See, e.g., Kogut and Ritov (2005), p. 109.

<sup>58</sup> See Jenni and Loewenstein (1997), p. 235.

<sup>59</sup> See Lewinsohn-Zamir et al. (2017), p. 537.

precautions.<sup>60</sup> Following this insight, public-health agencies in the United Kingdom published posters including close-up facial pictures of COVID-19 patients identified by name, with a message such as “*Look Her in the Eyes and Tell Her You Never Bend the Rules.*”<sup>61</sup>

Beyond simply naming individuals, *narrative framing* approaches—i.e., telling stories with identifiable characters to illustrate important information—function by eliciting the feeling of relationships with characters, reducing negative cognitive reactions by eliciting a “pleasurable mental state,” and increasing the realism of information.<sup>62</sup> These mechanisms suggest that more detailed individual stories, with real or relatable characters, may be effective at communicating COVID-19 public-health information. Narrative approaches may also reduce culturally polarized responses among listeners.<sup>63</sup>

Finally, policymakers in later stages of the pandemic may adopt messages that capitalize on the *sunk costs effect*—a phenomenon that stems from *loss aversion*.<sup>64</sup> The sunk costs effect occurs when people who have made past investments in a project are biased toward investing more (even if the project is no longer worthwhile).<sup>65</sup> The larger the sacrifices that people believe that they have made, the stronger this effect becomes.

Large-scale lockdowns entail enormous costs, and policymakers may choose to emphasize these costs when further costly measures are needed. More specifically, arguments that invoke the public’s fear of losing or wasting the progress they have made during the lockdown may prove persuasive. In fact, paradoxically, the *costlier* lockdowns have been, the *more persuasive* sunk-costs arguments are likely to be in maintaining them over a long period of time. It is for this reason that leaders across the globe have echoed the message that “[t]he sacrifices made to protect people during the coronavirus pandemic must not be squandered” when advocating for further preventive measures.<sup>66</sup>

### 3.2 *Choice Architecture*

Aside from informing messaging, behavioural research may also be instrumental in the design of the decision-making environment to promote compliance. *Choice architecture* studies have demonstrated that subtle changes in the decision-making

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<sup>60</sup> See Lunn et al. (2020b).

<sup>61</sup> See Magee (2021).

<sup>62</sup> See Harrington et al. (2015), p. 386.

<sup>63</sup> See Kahan et al. (2011), p. 170.

<sup>64</sup> For an overview of the findings, see Zamir and Teichman (2018), pp. 56–57.

<sup>65</sup> Arkes and Blumer (1985).

<sup>66</sup> France-Presse (2020); See also, Hagemann (2020), (quoting Scotland’s first minister, Nicola Sturgeon); Chaffin (2020) (quoting New York Governor Andrew Cuomo).

environment can significantly sway subjects' decisions. Thus, the order in which different kinds of food are presented in cafeterias, the layout of forms, and the design of highways, have all been guided by behavioural insights with a view to bringing about desirable outcomes.<sup>67</sup>

Similarly, policymakers can use choice-architecture nudges to facilitate compliance with COVID-19 rules. One example of such a nudge is floor markings that indicate to people where they should stand in a crowded area, to maintain proper social distance. Numerous regulators have mandated such markings as part of the safety measures required of businesses that are open to the public (such as drugstores and supermarkets).<sup>68</sup> Others have used similar methods to promote social distancing in public parks. In response to growing evidence of social distancing non-compliance in popular public parks, New York and San Francisco began drawing circles on the grass, to mark boundaries between park-goers.<sup>69</sup> This method has even been used to facilitate safe demonstrations during the pandemic. In Tel Aviv, the city marked its entire central square—which is often used for large demonstrations—with markers indicating where people may stand while maintaining social distance (with the words “*Protecting Democracy – Protecting Health*” on each one).<sup>70</sup> This allowed for demonstrations with thousands of people to proceed safely during the pandemic.<sup>71</sup>

From a behavioural perspective, incorporating social distancing into the physical landscape has two major advantages. The first, and perhaps most obvious, is that it makes compliance easier for those who already wish to obey the law: the markings function as a simple instruction that all people can follow. This matters, since studies have indicated that ease of compliance is a key factor in compliance decisions.<sup>72</sup>

Space markers can also bolster the informal enforcement of social-distancing norms by peers. Someone sitting in the park may feel uncomfortable confronting someone else who sits down next to them—but once a circle is drawn on the ground, it marks a notional territory, and whoever is in the circle first may view themselves as its “possessor.” A broad body of game-theoretical literature, supported by experimental studies, has demonstrated that possession plays a central role in people's willingness to confront others with regard to protecting assets (and in the tendency of

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<sup>67</sup> See Thaler et al. (2013), pp. 433–434.

<sup>68</sup> See, e.g., Roy Cooper, State of North Carolina (2020) Executive Order No. 131 §1(B). <https://files.nc.gov/governor/documents/files/EO131-Retail-Long-Term-Care-Unemployment-Insurance.pdf> (last accessed 09 April 2020); State of Michigan, The Office of Governor Gretchen Whitmer (2020) Executive Order No. 2020–114 § 8(f). [https://www.michigan.gov/whitmer/0,9309,7-387-90499\\_90705-531123%2D%2D,00.html](https://www.michigan.gov/whitmer/0,9309,7-387-90499_90705-531123%2D%2D,00.html) (last access 05 June 2021).

<sup>69</sup> See Wigglesworth (2020); Whiteman (2020).

<sup>70</sup> A description of the initiative, along with the process-relevant legal procedures, was publicized on the city's website, see Digitel (2020).

<sup>71</sup> See Serhan (2020).

<sup>72</sup> See Kooistra et al. (2020).

non-possessors to avoid such confrontations).<sup>73</sup> Thus, creating areas of possession within the public space may encourage private enforcement of social distancing, which in turn will reinforce the social norm.

Behavioural insights can also be used to increase compliance among businesses. As various sectors of the economy reopen (or, in the case of essential businesses, remain open), they are often subject to new regulations, that minimize the risk of transmission. Consequently, business owners may find themselves facing a host of intricate new rules on issues such as the distance between tables at restaurants; the installation of protective equipment at cash registers; cleaning protocols; maximal capacity; and employee screening.<sup>74</sup> Even for business owners with the best intentions, adhering to these new regulations can pose a serious challenge.

One measure from the choice-architecture toolkit that can help boost business compliance with COVID-19 regulations is checklists.<sup>75</sup> Mostly studied in the context of medical decisions, checklists have been shown to be an effective tool that help decision-makers.<sup>76</sup> By breaking down a complex decision into smaller, simpler steps, and by reminding decision-makers of the steps they are required to take, checklists can improve the quality of decisions.<sup>77</sup> Checklists that enumerate all the measures that a business must adopt (either daily, or upon reopening, depending on the context), can help business owners deal with an unfamiliar and complex situation.<sup>78</sup> In California, for example, regulators have published numerous industry-specific checklists that are geared to easing compliance.<sup>79</sup>

The measures reviewed in this subsection are not meant to be an exhaustive list of the behaviourally informed interventions that can support the regulatory response to a pandemic. Rather, they merely illustrate the constructive role that behavioural science can play in designing a regulatory environment that fosters compliance. Numerous further measures—ranging from putting up posters with stern-looking

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<sup>73</sup>See, e.g., Krier and Serkin (2015), pp. 150–152 (reviewing the game-theoretical literature); DeScioli and Wilson (2011) (experimental findings on human protection of territory).

<sup>74</sup>See, e.g., Ned Lamont, State of Connecticut (2020) Reopen Connecticut: Safer. Stronger. Together. [https://portal.ct.gov/-/media/DECD/Covid\\_Business\\_Recovery-Phase-2/0617CTReopens\\_IndoorDining\\_C4\\_V1.pdf](https://portal.ct.gov/-/media/DECD/Covid_Business_Recovery-Phase-2/0617CTReopens_IndoorDining_C4_V1.pdf) (last access 06 June 2020) (review of rules applying to restaurants in Connecticut); State of California, Department of Industrial Relations (2020) COVID-19 Industry Guidance: Retail. <https://files.covid19.ca.gov/pdf/guidance-retail.pdf> (last access 02 July 2020) (review of rules applying to retail in California).

<sup>75</sup>See Thaler et al. (2013), p. 433.

<sup>76</sup>For recent systematic reviews and meta analyses, see Lau and Chamberlain (2016); Gillespie et al. (2014).

<sup>77</sup>See Thaler et al. (2013), p. 433.

<sup>78</sup>Of course, checklists come with problems of their own. For example, they can lead to technocratic compliance that does not truly aim at reducing risk. See Ho et al. (2018), p. 243.

<sup>79</sup>See, for example, State of California, Department of Industrial Relations (2020) COVID-19 General Checklist for Construction Employers. <https://files.covid19.ca.gov/pdf/checklist-construction.pdf> (last access 02 July 2020); State of California, Department of Industrial Relations (2020) Cal/OSHA COVID-19 General Checklist for Day Camps, <https://files.covid19.ca.gov/pdf/checklist-daycamps%2D%2Den.pdf> (last access 17 July 2020).

middle-aged male eyes where people are expected to wash their hands to highlighting the explanations for various regulations—can positively affect peoples’ choices, and induce them to behave more cautiously.<sup>80</sup>

## 4 Harnessing Social Norms

So far, the analysis has focused on individual decision-making. Another aspect of human decision-making that may bolster compliance is that of *social norms*. A large body of research has shown that people’s behaviour is unconsciously but strongly influenced by what they believe others are doing—even more so than by other factors, such as their own opinion about the desirability of a given behaviour.<sup>81</sup> For example, people tend to contribute more to charity,<sup>82</sup> conserve energy,<sup>83</sup> and pay taxes,<sup>84</sup> because of the social factors at play, rather than due to material factors (e.g., fines).<sup>85</sup>

A key finding in the social-norms literature is that people are *conditional cooperators*.<sup>86</sup> That is to say, people are willing to engage in costly prosocial behaviour if they know that other members of the community are reciprocating. This insight has highlighted two dimensions that affect social interventions. First, behaviour should be *observable*—so that people know that others are cooperating, so they themselves may sanction those who do not.<sup>87</sup> For example, listing the names of those who contribute to the public good (rather than listing anonymous ID numbers) has been shown to promote cooperation.<sup>88</sup> Second, providing people with information about a given compliance norm will boost their willingness to comply.<sup>89</sup> For instance, hotel guests were 9% more likely to reuse their towel if told “*Almost 75% of guests who are asked to participate in our new resource savings program do help by using their towels more than once*” as opposed to the generic message, “*Help Save the Environment.*”<sup>90</sup>

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<sup>80</sup> See King et al. (2016) (experiment with a stern-eye image). Judah et al. (2009) (experiment using various messages in a public restroom).

<sup>81</sup> See, e.g., Nolan et al. (2008); Goldstein et al. (2008).

<sup>82</sup> See, e.g., Frey and Meier (2004).

<sup>83</sup> See, e.g., Ayres et al. (2013).

<sup>84</sup> See, e.g., Frey and Torgler (2007).

<sup>85</sup> See Kraft-Todd et al. (2015), p. 98.

<sup>86</sup> For a notable early contribution, see Fischbacher et al. (2001). For a later review, see Thöni and Volk (2018).

<sup>87</sup> See Kraft-Todd et al. (2015), p. 98.

<sup>88</sup> See Yoeli et al. (2013).

<sup>89</sup> See Kraft-Todd et al. (2015), p. 98.

<sup>90</sup> See Goldstein et al. (2008), pp. 473–475.

Social norms can also play a role in promoting compliance with COVID-19 precautions.<sup>91</sup> Preliminary empirical findings from several countries suggest that perceived compliance by others corresponds with greater self-reported compliance with COVID-19 prevention rules.<sup>92</sup> These studies further show that the traditional factors of deterrence theory—the probability of detection and the sanction if caught—may not play a significant role in people’s compliance decisions.<sup>93</sup> These findings suggest that policymakers should convey the message that compliance with precautions is already widespread.<sup>94</sup> This message can be conveyed by disseminating images of compliance (such as social distancing at a local grocery store) and data (such as public transportation statistics) that demonstrate conformity with the norm.<sup>95</sup> Conversely, when facing flagrant violations of the rules, policymakers should attempt to contain these violations quietly,<sup>96</sup> rather than expressing their outrage on social media, as some have done.<sup>97</sup> In Japan, for example, an initiative to shame *pachinko parlors* (shops that offer a form of gambling that is a mixture of pinball and slots, and tend to draw large crowds), which remained open despite a non-binding call to close, proved to be counterproductive, because it gave publicity to the violators, and attracted more consumers to them.<sup>98</sup>

Social norms and conditional cooperation can also guide the strategic decision as to whether or not to lock down the economy. The pandemic has required radical changes in multiple behaviours—including washing hands, maintaining distance from others, and wearing face masks. Policymakers’ goal was not to achieve this change in slow incremental steps, but to bring it about swiftly and immediately. To that end, the lockdown itself, with its attendant imagery, may have facilitated a quick shift in norms. The sight of famous landmarks such as Times Square, the Trevi Fountain, the Eiffel Tower, and the Great Wall of China standing empty of crowds, projects a powerful message that business is not as usual. This, in turn, could help facilitate a speedy shift in social norms, by vividly (and saliently) illustrating that the vast majority of the public is adhering to a new set of pandemic-related rules. The Dutch Prime Minister explicitly made this point when, in March 2020, he stated that:

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<sup>91</sup> See Van Bavel et al. (2020), p. 463.

<sup>92</sup> See Van Rooij et al. (2020); Kuiper et al. (2020); Bogg and Milad (2020). But see, Kooistra et al. (2020) (finding no association between compliance with COVID-19 related measures in the United Kingdom and perceived social norms).

<sup>93</sup> See Van Rooij et al. (2020), p. 26; Kuiper et al. (2020), p. 25; Kooistra et al. (2020), p. 25.

<sup>94</sup> This may be less effective, however, in subgroups with countervailing norms (such as norms against mask-wearing), in situations where actual compliance is low, or where people already believe that overall compliance is high. See, e.g., Thombs and Hamilton (2002); Carter and Kahnweiler (2010).

<sup>95</sup> See Bonell et al. (2020), p. 617.

<sup>96</sup> See Bonell et al. (2020), p. 617.

<sup>97</sup> New York’s Mayor, De Blasio, offered some vivid examples of such reactions. See Stack, N.Y. Times, 28 April 2020.

<sup>98</sup> See Sposato (2020).



[m]ost of us comply with the measures, almost all do so . . . [W]hen you see the empty streets, the empty offices, the empty highways, the empty train platforms, I think the message has landed with many people in the country, and many comply with the measures.<sup>99</sup>

Finally, leaders (both political and social) can play a key role in fostering (or, regrettably, in some cases, undermining) cooperative norms. Social norms scholarship often alludes to *norm entrepreneurs*<sup>100</sup>—individuals who function as social focal points, and are therefore capable of powerfully shifting social norms.<sup>101</sup> More specifically, they can do so by: “(a) signalling their own commitment to change, (b) creating coalitions, (c) making defiance of the norms seem or be less [or more] costly, and (d) making compliance with new norms seem or be more [or less] beneficial.”<sup>102</sup>

In recent years, behavioural economists have developed this concept, and empirically documented how leadership can raise the level of cooperation in public-good games.<sup>103</sup> The paradigmatic design of such studies requires designated leaders to contribute to the public good before other players in the game—thereby leading by example.<sup>104</sup> In one such study, conducted in rural Bolivia, local leaders exerted a significant influence over voluntary contributions to a public resource, even without the ability to monitor, sanction, or coerce.<sup>105</sup> More concretely, the mere addition of an elected leader to the group increased total contributions by approximately 20%.<sup>106</sup> Apparently, by setting a positive example, leaders can reassure members of the community that others will cooperate, thereby facilitating conditional cooperation.

In the COVID-19 context, several high-ranking leaders have conspicuously violated social distancing norms. In the United States, President Trump repeatedly refused to wear a face mask,<sup>107</sup> and Vice President Pence similarly visited patients, and was photographed with campaign staff, without one.<sup>108</sup> In Israel, Prime Minister Netanyahu violated public-health directives, and hosted his son at his home.<sup>109</sup> In the United Kingdom, Professor Ferguson—one of the nation’s leading

<sup>99</sup> See Kuiper (2020), pp. 6–7.

<sup>100</sup> For an overview, see Pozen (2008), pp. 305–310.

<sup>101</sup> See Sunstein (1996), p. 929.

<sup>102</sup> See Sunstein (1996), p. 929.

<sup>103</sup> See, e.g., Jack and Recalde (2015) (field experiment); Simon Gächter et al. (2012) (lab study).

<sup>104</sup> See Eichenseer (2019).

<sup>105</sup> See Jack and Recalde (2015), p. 92.

<sup>106</sup> See Jack and Recalde (2015), p. 92. For a meta-analysis, see Eichenseer (2019).

<sup>107</sup> See Krisher and Eggert (2020). In fact, President Trump went beyond mere non-compliance, by seemingly encouraging defiance in some of his messages on social media. See Shear and Mervosh (2020).

<sup>108</sup> Klar (2020).

<sup>109</sup> See Breiner (2020).

epidemiologists, who had taken part in crafting the nation’s COVID-19 policies—was caught violating the lockdown to meet with his lover.<sup>110</sup> The list goes on.<sup>111</sup>

The behavioural findings on social norms and conditional cooperation suggest that such behaviour may undermine compliance with COVID-19 related regulations. One study in Brazil, for example, estimates that President Jair Bolsonaro’s participation at a demonstration against public-health regulations in March 2020 brought about a decrease in social distancing, and a rise in COVID-19 cases, in municipalities where he had a big following.<sup>112</sup> Given the seemingly diminished impact of deterrence considerations on people’s pandemic-preventive behaviour, social norms may be acutely important for compliance. Global leaders should realize that with great power comes great responsibility to lead by example—and to adhere to the new norms.<sup>113</sup>

## 5 Behavioural Ethics: Addressing Motivated Reasoning and Partisanship

Research on compliance suggests that when people contemplate whether or not to obey the law, they often engage in *motivated reasoning*.<sup>114</sup> That is to say, they do not frame their decision as a rational cost-benefit analysis, that weighs their own self-interest against the cost of a potential sanction. Rather, they perceive the decision in a self-serving manner, and attempt to justify to themselves why they decided to behave selfishly and violate the norm.

Motivated reasoning is driven by a host of underlying mechanisms, some of which are subconscious.<sup>115</sup> *Biased assimilation* is the process by which people tend to believe new information that validates their prior beliefs, and to dismiss new information that challenges their priors.<sup>116</sup> This is one reason why people tend to grow more polarized, not less so, after reading balanced information about a topic.<sup>117</sup> *Confirmation bias* is a similar process, whereby people tend to seek out and process new information in ways that are favorable to their own prior beliefs.<sup>118</sup>

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<sup>110</sup> See Cowburn (2021).

<sup>111</sup> See O’Grady (2020).

<sup>112</sup> See Mariani et al. (2020).

<sup>113</sup> See van Bavel et al. (2020), p. 466 (arguing that, in the context of COVID-19, leaders’ “exemplary behaviour and sacrifice could help promote prosocial behaviour and cooperation”).

<sup>114</sup> For an overview of the behavioural findings, see Zamir and Teichman (2018), pp. 58–76.

<sup>115</sup> Kahan (2011), p. 1.

<sup>116</sup> In a foundational study of biased assimilation, people with strong prior beliefs in favor or against the death penalty rated research as more convincing when it confirmed their beliefs about deterrence. Lord et al. (1979).

<sup>117</sup> Lord et al. (1979).

<sup>118</sup> See Nickerson (1998).

*The credibility heuristic* also shapes information-processing: people tend to accept or dismiss experts based on their perception of whether the expert is part of their ingroup, or an outgroup.<sup>119</sup> Similarly, people tend to overestimate the likelihood of scientific consensus on their own position<sup>120</sup> and to overestimate the likelihood that others agree with them (i.e., the *false consensus effect*).<sup>121</sup>

A specific aspect of motivated reasoning that has been shown to play a role in numerous contexts, some of which are highly related to the pandemic, is *cultural cognition*. Cultural cognition models of risk perception suggest that people's beliefs about what is threatening or non-threatening depend, in part, on their cultural priors—specifically, whether they are more hierarchical or egalitarian, and more individualistic or solidaristic.<sup>122</sup> Although cultural orientation is not a perfect match for conservative vs. liberal political affiliation, research has shown that conservatives are more likely to endorse hierarchical and individualistic values, while liberals are more likely to endorse egalitarian and solidaristic ones.<sup>123</sup> Hierarchical and individualistic individuals tend to be less concerned about environmental and technological risks (such as climate change), and more concerned about risks to individual autonomy, or social roles (such as gun control).<sup>124</sup> Egalitarian and solidaristic individuals, on the other hand, tend to worry more about threats to the environment and the collective (such as the human papilloma virus), and less about relinquishing individual autonomy to benefit the group (such as mandatory vaccination).<sup>125</sup>

In the context of COVID-19, preliminary evidence suggests that motivated reasoning plays a significant role in people's compliance decisions. Anecdotal examples show that people routinely justify violations by interpreting the situation in self-serving fashion. For instance, people often presume that their activity poses less of a risk than that of others, and therefore it is less necessary for them to comply with regulations.<sup>126</sup> More methodical studies have documented the key role of cultural cognition in compliance decisions in the United States. In particular, individuals who are comparatively hierarchical and individualistic tend to perceive the virus as less dangerous, and tend to comply less with public-health regulations.<sup>127</sup>

Behavioural research can help policymakers address motivated reasoning. One aspect of specific importance is the degree of ambiguity generated by legal rules.

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<sup>119</sup> Pornpitakpan (2004).

<sup>120</sup> Kahan et al. (2011).

<sup>121</sup> Ross et al. (1977).

<sup>122</sup> Kahan and Braman (2006).

<sup>123</sup> Wildavsky and Dake (1990). Notably, however, these cultural values are more predictive of risk perception than party identity alone—and also more predictive than gender or race. See Michaud et al. (2009).

<sup>124</sup> Kahan and Braman (2006).

<sup>125</sup> Kahan and Braman (2006), pp. 158–159; Kahan et al. (2010a).

<sup>126</sup> For example, in Israel participants in religious services and in demonstrations routinely compared themselves with each other to justify their choices. See Teichman and Zamir (2021).

<sup>127</sup> For an overview of the findings, see Teichman and Underhill (2021), pp. 222–230.

Existing research has shown that people tend to use legal ambiguity, and interpret the law in a self-serving manner.<sup>128</sup> This, in turn, enables them to justify in their own eyes decisions that promote their own interests.

At first glance, there was very little ambiguity about the public-health rules that were put in place in response to the pandemic: governments around the world followed the behavioural prescription, and enacted highly detailed rules that specified precisely on matters such as the number of people allowed to gather, the distance from home one is permitted to travel, etc.<sup>129</sup> However, even such highly specific rules might generate ambiguity that can foster motivated reasoning, given the complexity of an intricate web of finely tuned rules. In Israel, for example, the rules governing places of worship during the High Holidays were based on a convoluted formula based on the square footage of the venue, the number of entrances, and its location in the country. That last point alone—rules that varied from region to the next, based on epidemiological criteria—while potentially sound from a public-health perspective, generated tremendous legal complexity: once people are subject to different rules at the places where they live, work, and recreate, confusion is likely to ensue, and self-serving deduction is quite likely.

Aside from the structure of legal rules, specially crafted *ethical nudges* can also help public-health regulators deal with motivated reasoning. Such nudges can clarify the choice faced by the decision-maker, and render the decision to violate the norm more explicit and salient. This, in turn, may hinder people's ability to interpret their behaviour in a self-serving manner.

A case in point is that of *compliance pledges*. Research in behavioural ethics has demonstrated that oaths and pledges tend to reduce people's tendency to cheat.<sup>130</sup> Recently, Pe'er and Feldman extended this finding to a regulatory setting involving mandates.<sup>131</sup> More specifically, they found that pledges can complement fines: while fines and pledges were found to reduce cheating individually, together they reduced cheating even more.<sup>132</sup> Thus, adding a personal declaration in which the business owner declares they are complying with the rules required for opening, may be a simple and cost-effective method of promoting compliance.<sup>133</sup>

Declarations may also help discourage people from engaging in social interactions when they suspect that they have contracted the virus. When people only suspect that they are infected, they might interpret their condition as one that allows them to continue with their planned activities. Requiring them to actively declare

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<sup>128</sup> See Feldman and Teichman (2009).

<sup>129</sup> See Teichman and Underhill (2021), p. 231.

<sup>130</sup> See, e.g., Beck et al. (2018), p. 476; Jacquemet et al. (2019), p. 432.

<sup>131</sup> See Pe'er and Feldman (2020).

<sup>132</sup> Pe'er and Feldman (2020), pp. 12–13.

<sup>133</sup> For examples of mandatory self-certification programs, see Connecticut's Official State Website (2020) Self-Certify Your Business. [https://service.ct.gov/recovery/s/?language=en\\_US](https://service.ct.gov/recovery/s/?language=en_US) (last access 22 July 2020); Municipality of Jerusalem (2020) The Purple Badge for Business – Guidelines for Routine During Corona. <https://www.jerusalem.muni.il/he/newsandarticles/businessmessages/online-affidavit/> (last access 09 July 2020).

that they do not have any COVID-19 symptoms may mitigate this tendency, as it minimizes the moral ambiguity of the situation. Furthermore, such a declaration renders an act that could be perceived as a mere omission (i.e., not reporting symptoms), to the commission of actively lying—and studies suggest that people feel a greater sense of responsibility in cases involving commissions.<sup>134</sup> Examples of such declarations can be found in many contexts. At universities, for instance, members of the community are asked to declare their health status (i.e., lack of COVID-19 symptoms) daily before entering the campus,<sup>135</sup> while at daycare centers and schools, parents are required to declare the health status of their children.<sup>136</sup>

Finally, research on cultural cognition has yielded insights that can further guide public messaging. One strategy is to increase the public's exposure not just to information in general, but to information from *speakers* who are perceived to share the listeners' values. When people see their *disfavored* arguments expressed by someone who shares their values, and their *favoured* arguments expressed by someone who does not share their values, they exhibit far less group polarization in their responses.<sup>137</sup> Kahan and colleagues have referred to this phenomenon as a *genuinely pluralistic-argument environment*.<sup>138</sup> Although speakers with such mismatched views may be difficult to identify, research suggests that they may be effective conduits for information in a culturally polarized environment.<sup>139</sup>

Studies conducted in the COVID-19 context bear out this insight. One striking example comes from US cable news. Early in the pandemic, Fox News host Sean Hannity tended to downplay the threat, while host Tucker Carlson (also on Fox News) described it as serious, and lethal.<sup>140</sup> Subsequent analyses showed that Hannity's viewers were slower to adopt precautionary measures than Carlson's viewers, and that this likely produced differential disease transmission rates (and, likely, death rates) among viewers: viewing Hannity was associated with 32% more COVID-19 cases by March 14, 2020, and 23% more COVID-19 deaths by March 28, 2020.<sup>141</sup> Similarly, an analysis of US governors' messaging on social media found that stay-at-home cues from Republican governors (a policy unpopular among national Republican leaders) were significantly more effective than cues from Democratic governors—largely because of an “especially responsive” effect in

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<sup>134</sup> Emma Levine et al. (2018).

<sup>135</sup> See e.g., Resource Guide for the Columbia Community (2021).

<sup>136</sup> See State of Israel, Ministry of Education (2020) Digital Health Declaration. <https://parents.education.gov.il/prhnet/gov-education/corona/daily-health-statement> (last access 11 September 2021).

<sup>137</sup> Kahan et al. (2010b), p. 511.

<sup>138</sup> Kahan et al. (2010b), p. 513.

<sup>139</sup> Kahan et al. (2010b), p. 512.

<sup>140</sup> Bursztyn et al. (2020).

<sup>141</sup> Bursztyn et al. (2020). Other studies have documented the independent impact of watching Fox News on people's behaviour. See Simonov et al. (2020); Ash et al. (2020).

Democratic-leaning counties.<sup>142</sup> By the same token, as the public’s perception of Anthony Fauci shifted to align him with more Democratic-linked values, he became a less effective source of information for conservative communities.<sup>143</sup>

Another strategy that may make people more responsive to unwelcome information is the use of arguments that affirm, or align, with people’s cultural identities.<sup>144</sup> For example, the long-running “*Don’t Mess with Texas*” campaign for reducing litter was successful, because it presented non-littering as congruent with Texans’ well-known pride in their state (and reinforced through social norms messages featuring images of popular cultural figures).<sup>145</sup> Some COVID-19 response efforts have harnessed similar messaging—such as the #MaskUpHoosiers advertising and social campaign in Indiana, which also appeals to state membership and pride.<sup>146</sup> But when policymakers seek to persuade people who particularly value *individualism*, which is associated with lower risk perceptions of COVID-19,<sup>147</sup> arguments that emphasize the protection of self and one’s own family—such as arguing that your own family members will ultimately benefit from a costly policy of school closures—may be more effective than arguments emphasizing the protection of others.<sup>148</sup> Messaging campaigns can combine these with images that have cultural resonance. Thus, the Oregon mask PSA contains language such as “*A Mask Should Not Be a Sign of Weakness*” and displays the words “*A Barrier to Protect You*”, with images of a mask in a camouflage pattern.<sup>149</sup>

## 6 Conclusion

This chapter reviewed the potential contribution of behavioural economics to promoting public health during the COVID-19 pandemic. The analysis showed that given the practical limitations of behavioural interventions on the one hand, and the

<sup>142</sup>Grossman et al. (2020), The authors, however, also suggested that there may have been “backlash effects” in the most conservative Republican counties, where stay-at-home tweets from Republican governors may have produced “either indifference or outright hostility” for contradictory national-level party messaging (p. 15).

<sup>143</sup>For media polls suggesting this, see Khanna and Backus (2020); Sanger-Katz (2020).

<sup>144</sup>Kahan et al. (2011), p. 169; See also Cohen et al. (2007); Kahan et al. (2010a), p. 135.

<sup>145</sup>Thaler and Sunstein (2009), p. 60.

<sup>146</sup>State of Indiana (2020) We Need You to #MaskUpHoosiers. <https://www.coronavirus.in.gov/maskuphoosiers/> (last access 23 July 2020).

<sup>147</sup>See Dryhurst et al. (2020), This recommendation is at odds with the earlier discussion of pro-social messaging. See supra notes 47–55, and accompanying text. But one size need not fit all: campaigns can be tailored differently for different groups.

<sup>148</sup>These messages may also be effective among communitarians in times of crisis. See Leder (2020).

<sup>149</sup>Governor Kate Brown (2020) PSA: A Mask is Just a Mask. <https://www.youtube.com/watch?v=tWpnX-fEq2U> (last access 02 July 2020).