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Original Research: Philosophical Perspectives on Covid-19

Experts, Democracy, and Covid-19

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Abstract

Two challenges have faced policymakers during the Covid-19 pandemic: First, they must determine the reliability of expert testimony in the face of uncertainty; second, they must determine the relevance of different kinds of expertise with regard to particular decisions. I argue that both these problems can be fruitfully analyzed through the lens of *trust* by introducing an in-depth case study of Iceland's handling of the first wave of the Covid-19 pandemic. I contend that the problem of relevance highlights the limited appeal of a thoroughly technocratic society. Value judgments, best realized through democratic processes, are always lurking in the background.

1. Introduction

"Listen to the experts" has been a common battle cry heard from those who would urge their governments to let science, not politics, steer their response to the Covid-19 pandemic. The idea is appealing. Indeed, few would disagree with the claim that serious policymakers should take the advice of relevant experts as the starting point and/or basis for fashioning measures meant to combat the spread of the novel coronavirus. The argument goes that just as we let a mechanic fix our car, or as we allow a dentist to fix our teeth, so we should trust the epidemiologists, virologists, biostatisticians, public health experts, and the myriad of other professionals who have the understanding, experience, and know-how about pandemics, viruses, and public health emergencies to tell us what to do in situations like the Covid-19 pandemic. In other words, we should listen to the experts and we should *trust the experts*.

While this might be a good rule of thumb, it is not always very informative. An analysis of the various challenges faced by policymakers around the world during the Covid-19 pandemic consisting in the slogan "Just listen to the experts" is too vague. The reason for this is that the problems and crises the Covid-19 pandemic has induced are complex and multifaceted. Indeed, there is no single type of "expert" when it comes to dealing with everything related to Covid-19, precisely because the effects of the pandemic are so widespread. We need doctors, virologists, and epidemiologists to help us understand the virus's nature, structure, and behavior; how it might be treated; and how its spread might

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be contained. We also need, as has become clear, experts from the social sciences to analyze the social, economic, and political upheavals many countries have experienced in these unprecedented times of lockdowns, social distancing, and travel controls.

Thus, two problems have faced policymakers fashioning responses to the Covid-19 pandemic: First, they must ascertain what kind of expertise is *relevant* to a given decision; that is, they must weigh the importance of different expert perspectives and decide which experts to bring to the table. To take a simple example, an epidemiologist might recommend closing a school in a given situation to minimize risks of infection while a psychologist or sociologist might disagree and cite the negative effects school closures can have on the mental and social well-being of children, especially those living in precarious domestic situations. How is the policymaker to respond rationally to such a situation? This will, of course, depend on the details of every case and the strength of the relevant evidence. However, what is often required in situations where experts from different fields voice opposing views is a *value-judgement* by the policymaker, or a *prioritization* of needs.

The second major problem faced by policymakers during the Covid-19 pandemic is to ascertain the *reliability* of particular expert testimony. This challenge was made acute during the first wave of the pandemic due to uncertainty regarding the virus's behavior and the need to react quickly. Under such conditions, disagreement between experts can be expected because of factors such as the undervaluation of hypotheses by evidence and differing risk assessments. The policymaker, who is a non-expert, must in these circumstances rationally determine which expert analysis is the most promising or trustworthy on the basis of certain heuristics. The closely related "novice-expert" problem has been widely discussed in the philosophical literature, especially in social epistemology (Goldman 2001; De Cruz 2020; Frances and Matheson 2019; Dellsén 2018). This literature has identified sets of criteria that non-experts can apply to evaluate the credibility of expert testimony. These criteria include looking for incentives that might affect an expert's position, determining whether there is a consensus among other experts about the position, and so forth.

In this paper, I argue that the problems of reliability and relevance are crucial to understanding the relationship between experts, policymakers, and the public during the Covid-19 pandemic. In section 2, I show how these two problems can be fruitfully analyzed in terms of *trust-relations*. The notion of trust is of philosophical interest and lies close to the heart of numerous issues pertaining to the pandemic and public health interventions in general (Nuffield Council of Bioethics 2007; Baier 1986; Childress and Bernheim 2008). I show why this was indeed the case during the Covid-19 pandemic by invoking Matthew Bennett's (2020) distinction between *epistemic trust* and *recommendation trust*. I argue that these two notions of trust can be viewed as key ingredients in establishing the *legitimacy* of mitigation policies against the novel coronavirus. In particular, I claim that epistemic trust and recommendation trust can ground the epistemic authority of experts and the political authority of public health officials (Zagzebski 2012; Raz 1986). Establishing such legitimate authority, moreover, is a necessary condition for tackling the problems of reliability and relevance.

I then introduce a case study of Iceland's handling of the first wave of the Covid-19 pandemic in section 3 by drawing on research conducted in the summer of 2020, including interviews with major decision makers in the Icelandic pandemic response (Garðarsdóttir et al. 2021). I explain how the problems of reliability and relevance were addressed by

Icelandic policymakers and show how this relates to my philosophical analysis of trust. Finally, in section 4, I argue that my analysis of the relevance problem and the Icelandic case study speaks against purely technocratic decision making, thus bringing my arguments into conversation with wider philosophical debates on the merits of democracy.

2. Trust in Pandemic Times

A fruitful way of analyzing the problems faced by policymakers during the Covid-19 pandemic is in terms of *trust*. Consider the problems of relevance and reliability, discussed in the previous section. The problem of relevance has to do with selecting the kinds of expertise needed to find a satisfactory solution to a given problem. The problem of reliability has to do with evaluating how reliable the advice of a single type of expert is, given uncertainty and time constraints. Both these problems can be understood through the lens of trust. The problem of relevance can be viewed as the question of *which* experts a policymaker should trust, and the problem of reliability can be understood as the question of *when* to trust the advice of a particular expert, given certain constraints.

To make this more precise, note that trust is typically considered to be a tripartite relation (McLeod 2020; D'Cruz 2019) consisting of: (1) a trustor; (2) a trustee; and (3) an object; that is, we say that *X* trusts *Y* for *Z*, where *X* and *Y* can be individuals, groups, or institutions, and *Z* refers to the object of trust in the given circumstance (what action the trustee is being trusted to carry out, which proposition is to be believed, and so on). Formulating the problem of relevance within this framework, we have *X* as the policymaker and *Z* as a given decision relevant to the Covid-19 pandemic (say, whether to close a certain school) and thus understand the problem as selecting an appropriate trustee, *Y*. Similarly, for the problem of reliability, we fix *X* as a policymaker, *Y* as a particular expert adviser, and *Z* as experts' input toward a policy decision. The problem can thus be construed as evaluating the rationality of *X* extending trust to *Y* with regard to *Z*. Specifying objects of trust relations also highlights a crucial fact—that trust is domain restricted. What that means is that we rarely exhibit general trust toward someone. Rather, we trust certain individuals or groups for a particular action or range of actions.

Understanding trust as a tripartite relation allows us to formulate a host of interesting questions relevant to the Covid-19 pandemic within a common framework. We can describe different relations of trust relevant to the dynamics of the pandemic in terms of trustors, trustees, and objects (see Table 1).

Table 1. Trust relations relevant to the Covid-19 pandemic

***X* trusts**	***Y* for**	***Z***
Policymakers	Experts	Information
Policymakers	Public	Following rules
Public	Policymakers	Sense of rules
Public	Experts	Vaccine safety
Public	Public	Not freeloading
Experts	Experts	Sharing data

The difference between descriptive and normative analyses of trust can also be expressed in terms of trust and *trustworthiness*. Determining whether someone is trusted is an empirical matter whereas determining whether someone is worthy of trust requires normative input. Ideally, those who are trusted should also be trustworthy. However, this need not be the case. Trust and trustworthiness can (and often do) come apart in two ways. First, someone who is not trustworthy might, in fact, be trusted. This is a problem of misplaced trust, which might, for example, explain situations where influential political figures radically downplayed the dangers of Covid-19. Second, someone who is trustworthy might fail to receive trust from others. This is a problem of failure of trust, which might, for example, explain the public anger and unwillingness to comply with government policies that has been evident in many countries during the pandemic.

These preliminary remarks show that the concept of trust can be used to frame certain questions about the Covid-19 pandemic in a useful way. This should not be surprising, given that trust has long been recognized as an important factor in grounding the legitimacy of public health interventions (Nuffield Council of Bioethics 2007; Childress and Bernheim 2008). However, there are two arguments that suggest trust is *especially* relevant to understanding the Covid-19 pandemic. The first argument concerns the invasive nature of mitigation strategies such as lockdowns and bans on social gatherings. These curtailments of civil liberties are in many places unprecedented outside of wartime and entail such major disruptions of people's lives that government decisions on these matters demand an unusually high threshold of justification and legitimacy. In order for these standards to be met, it seems that a great deal of public trust is warranted. People need to understand and believe that extreme measures like lockdowns are necessary and not arbitrary, and that their civil liberties will eventually be regained.

The second argument, which highlights the crucial role trust has played during the Covid-19 pandemic, concerns the *cooperative* nature of most mitigation policies. Strategies meant to contain the spread of the SARS-CoV-2 virus depend on the engagement of the public in ways that other government policies do not. If, for example, a government decides to change the standard curriculum for its school system, this policy will take effect on the basis of the government's authority alone and the cooperation of a small subset of the population; namely, educators. By contrast, it is not enough for a government to simply *announce* that people should use face masks and avoid gatherings to limit the spread of Covid-19. People actually have to *follow* this advice and, crucially, the effectiveness of policies like mask mandates and vaccine drives depends on the cooperation of a substantial majority of the population. Thus, a high level of public trust in the sense of such measures is highly desirable because without it the policies will not be maximally effective. Of course, governments have the option of implementing such policies forcefully and through the threat of sanctions, as with anything else. I return to this point in section 3, when I discuss a case study of the Icelandic government's response to the first wave of the pandemic. However, for now, I simply note that it seems much more desirable from a government's point of view to get its citizens to comply with mitigation measures on the basis of cooperation and trust, rather than on the basis of fear of punishment.

Even though trust is generally considered an important stepping stone toward the legitimacy of public health interventions, it seems that this is *especially* true of the Covid-19 pandemic. This is because of the extraordinary nature of many mitigation policies and their dependence on widespread public cooperation. Next, I want to make this idea even

more precise. In particular, two specific kinds of trust—recommendation trust and epistemic trust—are crucial in grounding two specific kinds of authority: the epistemic authority of expert advisers and the political authority of public health officials and governments, respectively. Moreover, the relationship between trust and legitimacy can be characterized as a virtuous circle of sorts. The more public trust governments have with regard to the measures they implement, the greater their mandate and legitimacy. The greater legitimacy with which governments wield their authority, the more likely it is that they will enjoy the public's trust. When these happy conditions are met, the complex relationship between experts, policymakers, and the general public will be more harmonious. This will provide the appropriate background conditions for tackling the problems of reliability and relevance introduced above.

2.1 Epistemic Trust and Recommendation Trust

Bennett (2020) introduces a distinction between two objects of trust relationships between the public and expert-informed policymakers relevant to the Covid-19 pandemic: *epistemic* trust and *recommendation* trust. Epistemic trust has to do with reliable, factual testimony; that is, *X* shows *Y* epistemic trust just in case *X* takes *Y*'s word for a given proposition or claim, *Z*. For example, a member of the general public might trust an epidemiologist's claim that lockdowns do really mitigate transmission of dangerous viruses. Recommendation trust, on the other hand, has to do with heeding advice—it is geared toward actions rather than propositions. In particular, *X* shows *Y* recommendation trust with respect to some action *Z* when *X* (1) performs the action, and (2) performs the action because *X* believes that doing *Z* is in their best interest, in light of *Y*'s recommendation. So, if a member of the general public actually respects the rules of a lockdown because they think the relevant trustee has issued their advice in the public's best interest, they are exhibiting a form of recommendation trust.

Bennett (2020) argues that there are different thresholds for achieving recommendation trust compared to epistemic trust. In particular, recommendation trust involves something above and beyond cognitive reliability. It also requires that the trustor believe that the trustee is "looking out" for them in some sense, that the person issuing recommendations is aware of the situations of those they are advising and sincerely believes that these recommendations are in their best interest. This is of particular interest when evaluating the disproportionate consequences that certain Covid-19 measures, such as lockdowns, can have on vulnerable social groups. If policymakers want to cultivate recommendation trust within the broader public during the Covid-19 pandemic, they need to be aware of the distinct problems that can face different groups and take measures to fashion policy that is attentive to those differences. Hard lockdowns, for example, can be far more burdensome for those who live in smaller spaces, are precariously employed, or are victims of domestic violence. If policymakers are oblivious to these factors, or take no measures to respond to them, certain groups might feel forgotten and be less likely to trust that polices are being issued in their best interests.

The distinction between epistemic trust and recommendation trust is useful because it can help us capture two subtly different things we expect from policymakers fashioning responses to the Covid-19 pandemic. On the one hand, we trust them to seek out the best

available evidence, relay accurate information, and consult competent experts.[1] On the other hand, we trust them to seek out multiple perspectives and carefully consider the potentially negative consequences of their policies before deciding whether they are justified in enacting them. These things can come apart: one can be deserving of epistemic trust but not of recommendation trust and vice versa. Related issues have been identified in critical discussions of the doctor–patient relationship, which seem relevant in this context (Popowicz 2021; Hawley 2015). For example, a doctor might enjoy the epistemic trust of a patient when she claims that a given treatment or surgery will have a high probability of fixing the patient's condition. It does not necessarily follow, however, that the doctor also enjoys the patient's recommendation trust when it comes to *going through* with said treatment. The patient might, for reasons or values of his own, decide that it is in his better interests to live with his condition, rather than undergoing the procedure. Moreover, this does not have to contradict the fact that he trusts the doctor's epistemic judgment of the probability of the procedure being successful. However, recommendation trust and epistemic trust can also be intertwined. There is a moral aspect to epistemic trust, just as there is an epistemic aspect to recommendation trust.

The moral aspect of epistemic trust is what makes it distinct from mere *reliance* or *reliability*. We would feel betrayed by an expert who gives us a wildly misleading testimony, whether on the basis of deliberate obfuscation or mere incompetence. This is because when we turn to experts for advice on urgent issues, we hold them to certain moral and professional standards. A meteorologist who causes mass panic by predicting that a devastating storm is imminent, when he knows that to be false, would owe the public an apology. He would have breached their trust and be morally responsible for the harm he caused. Inanimate objects, by contrast, may be relied upon but they are not objects of *trust* in this stronger, moralized sense (Baier 1986; Hawley 2014, 2015). I might rely on my bicycle to get to work on time and if it breaks down this might frustrate me, but it would make little sense to hold the bicycle morally responsible or demand an apology from it. The epistemic aspect of recommendation trust, by contrast, should be reasonably apparent. In order to track the legitimate interests of those whom I advise, I must have a great deal of factual knowledge about their current situation and how a proposed action might influence or alter that situation. Seeking out distinct and relevant perspectives on a given policy issue, moreover, will rely on an understanding of what sort of perspectives are likely to be relevant to the policy and what sort of causal effects might flow from the proposed course of action.

Thus, policymakers who wish to cultivate recommendation trust during the Covid-19 pandemic must be *aware* of the potential social ramifications of their policy choices *and* actively try to minimize those negative effects. This shows why recommendation trust can be seen to be intimately linked to the problem of relevance introduced above. Recall that the problem of relevance invites policymakers to determine what *kind* of expertise is

[1] Strictly speaking, there might be reason to refrain from saying that we extend *epistemic* trust toward the policymakers themselves. Rather, we should reserve that label for the actual experts. However, there is an important epistemic dimension to the trust we show policymakers—they have fulfilled their important obligation of seeking out the advice of those with the relevant knowledge of the situation. Thus, we might extend epistemic trust to a policymaker not in virtue of their personal expertise but by virtue of the fact that they have sought out the relevant information from the best possible sources. Whether this important species of trust should be labeled as proper epistemic trust, or simply as the epistemic *dimension* of recommendation trust, is a question open for debate. For the purposes of this paper, I do not think that it need be definitively settled but I thank an anonymous reviewer for pointing this out.

relevant to a certain decision. This can be hard to do because certain decisions may admit a wide range of conflicting perspectives. Solving this problem goes in hand in hand with cultivating recommendation trust because it requires decision makers to be sensitive to the myriad consequences their policies might have on the general population and to *care* enough about those potential consequences to consult those with the relevant expertise on social policies. Those policymakers who actively seek out a broad range of expertise are those most likely to solve the sort of multilayered problems the Covid-19 pandemic has presented. Consequently, it is more likely that the authority such policymakers purport to wield will meet the conditions of standard benchmarks of political authority.

One such influential benchmark is Joseph Raz's (1985, 1986) normal justification thesis (NJT). According to the NJT, someone exerts legitimate authority over me when complying with their directives is what I had reason to do anyway (Raz 1986, 53). Raz's conception of political authority is, in this way, a "service conception" because it is supposed to benefit those who are subject to it by enabling them to act in accordance with their legitimate interests (1986, 56). Thus, if policymakers generate public recommendation trust by heeding the advice of a variety of experts and engaging with diverse viewpoints, more people will accept their directives as being in their interest and thus deserving of respect and cooperation. In other words, more people will deem it sensible to comply with the policies, rather than trying to chart appropriate courses of action on their own, meaning that they take those policies as legitimately authoritative, by the lights of the NJT (1986, 18–19; see also Christiano 2020, section 3.1).

To spell this out more clearly, it might be worth revisiting our tripartite framework, which defines trust as a relation between a trustor, *X;* a trustee, *Y;* and an object of trust, *Z*. The problem of relevance may then be formulated as follows: *which* experts, *Y,* should policymakers, *X,* trust with regard to providing the appropriate evidence for policy decision, *Z?* The emphasis here is on which experts should be consulted because the problem of relevance invites us to think about the multiple competing perspectives that might be relevant to a given issue. The answer being developed here, then, is that policymakers should rely on those experts, *Y,* who would generate policies deserving of *recommendation* trust. To see why this is plausible, recall that someone enjoys recommendation trust if their directives are followed, and they are followed because those issuing recommendations are seen to be sincere and acting in the best interest of those asked to comply. Thus, if a policymaker is faced with a complex decision but neglects to seek out the appropriately relevant experts, *Y,* and instead relies on a narrowly defined group of merely partially relevant experts, *Y∗,* the decision generated will not be deserving of recommendation trust. It will have failed to take into account the different interests of those affected by the decision. To fix this issue, the policymaker could engage seriously with the views and concerns of the public and incorporate the advice of a broader group of experts. This shows how identifying the relevant experts in a given situation and cultivating recommendation trust can go hand in hand. In both cases, a certain sensitivity to complexity is required. Failing to recognize such complexity may lead policymakers to conceive of problems in simplified ways, leading them to consult an overly narrow set of experts, which will then erode public recommendation trust in the policies issued.

I have argued that Bennett's (2020) notion of recommendation trust can be usefully applied to understanding the problem of relevance. Moreover, it seems that higher levels of recommendation trust could plausibly ground the legitimate political authority of those

issuing mitigation measures, thus prompting the cooperation of the wider public. Likewise, the notion of *epistemic* trust seems to underpin many of the issues pertaining to the problem of *reliability*. Once political decision makers have decided which perspectives are relevant to a given issue (which, as we have seen, is partly a normative or value-laden issue), they must turn to the more concrete project of assessing the credibility of expert advice and developing it into actual policy. This is where epistemic trust comes in on two fronts. First, policymakers determine the extent to which they trust the epistemic judgments of their expert advisers. Second, the general public determines the extent to which they trust the soundness of enacted policies. Here, a host of philosophical issues turns up. Scientists and policymakers working to contain the effects of the Covid-19 pandemic have had to act quickly and sometimes before all of the relevant data has been gathered. The question of how to develop sound policy and maintain levels of trust in situations where one is forced to take epistemic risks under conditions of uncertainty is challenging. Again, the connection between trust and authority is illuminating. Epistemic trust in scientific advisers will plausibly be an important condition for establishing the epistemic *authority* of said advisers. This is because to meet the epistemic counterpart to the NJT that Linda Zagzebski (2012, chapter 6) proposes, laypeople will have to be willing to substitute their own judgments on certain issues for the judgments of experts. It seems unlikely that laypeople will make this move without trust, in particular without the appropriate level of *epistemic* trust.

Giving a complete solution to the problems of relevance and reliability (in so far as a solution can be said to exist) is beyond the scope of this paper. However, what I am aiming to do is to argue that these issues are crucial to analyzing public responses to emergencies such as the Covid-19 pandemic. Moreover, I have suggested that a useful starting point for theorizing about the ideal relationships between experts, policymakers, and the general public is by thinking carefully about trust relations between these groups.

In the next section, I present a detailed case study of the Icelandic government's response to the first wave of the Covid-19 pandemic. I describe how Iceland addressed the problems of relevance and reliability, demonstrate how they may be analyzed in terms of trust relations, and comment on what seemed to work in Iceland and why.

3. Decision-Making Processes in Iceland during the First Wave of the Covid-19 Pandemic

At present, the Covid-19 pandemic rages on, most severely impacting countries that have not received access to vaccines. Documenting and comparing strategies employed by governments around the world to combat the pandemic is a valuable exercise for those who wish to prepare for future crises. Giving a satisfactory analysis of the lessons to be drawn from this tumultuous period will, however, require additional time and hindsight. It is difficult to see the full picture when one is still in the midst of a global public health emergency. That being said, it is also important to start working on such analyses immediately. The philosopher's toolkit has indeed been fruitfully applied to many questions pertaining to the pandemic, such as the legitimacy of lockdowns, the epistemology of pandemic modelling, the ethics of vaccine distribution, and the role of scientific experts (see, for example, White, Van Basshuysen, and Frisch 2022; Northcott 2022; Pamuk 2021; Nuffield Council of Bioethics 2020; Norheim et al. 2020).

The Covid-19 pandemic has been fast-paced and required most countries to adjust rapidly to new information and fresh challenges. Documenting decision-making processes at different stages of the pandemic is therefore important in order to prevent collective amnesia about why certain strategies were developed or abandoned at various stages. In what follows, I hope to contribute to such documentation by highlighting the Icelandic government's response to the pandemic.

After presenting a brief overview of how the pandemic developed in Iceland (section 3.1), I proceed to give an analysis of the role trust played in the Icelandic strategy and its relation to the problems of relevance and reliability described above (section 3.2). I do this by drawing on research conducted by Ásthildur Gyða Garðarsdóttir et al. (2021), which includes interviews conducted in the summer of 2020 with major decision makers in the Icelandic pandemic response, including the Prime Minister of Iceland, the Minister for Health, and top scientific advisers like the Chief Epidemiologist and the Director for Health.

One of the reasons why the Icelandic response to the pandemic is a useful case study is that policies were fashioned by a tight-knit, centralized group of public health officials and politicians. Decision-making processes are quite transparent and traceable in the Icelandic case as a result of the availability of public records concerning government strategies with respect to the Covid-19 pandemic, regular press briefings, and prior research and interviews with these key decision-making figures, accessible in the the report by Garðarsdóttir et al. (2021), published by the University of Iceland's Centre for Ethics. This means that when one studies the Icelandic case, it is relatively simple to grasp why national mitigation strategies were fashioned, justified, and implemented, in comparison with much larger countries where the picture might be complicated by more intricate bureaucracies or tensions between different decision-making bodies at the local and national levels. Iceland's small size has naturally also contributed to its relatively successful handling of the Covid-19 pandemic (Iceland has, throughout the pandemic, had one of the lowest infection rates per capita in Europe). Being a wealthy island nation with one international airport and approximately 360,000 inhabitants spread out over 100,000 square kilometers is a huge asset when it comes to containing a highly contagious virus.

However, it would be a mistake to assume that these favorable conditions mean that nothing can be gleaned from studying the pandemic response in Iceland. The way in which mitigation strategies were developed by the government and communicated to the general public were the deciding factors in how the pandemic developed in Iceland. Small population or not, the SARS-CoV-2 virus would have spread far more rapidly and caused more harm if Icelandic health authorities had not deployed the strategies they did, and if the public had not responded to them as they did.

As stated above, the main point of the following discussion is not to evaluate the quality of the Icelandic pandemic response, and nor is it to argue that other countries should copy the Icelandic government's specific strategies in future. What works in one place and time may not work in another. Rather, the purpose here is to draw on the policies enacted in Iceland in order to make general philosophical points about how trust impacts the problems of reliability and relevance.

Moreover, by pursuing such an analysis, one might further illuminate the complex relationship between trust, expertise, and political authority.[2]

3.1 Overview of the Covid-19 Pandemic in Iceland

The first Covid-19 case was registered in Iceland on 28 February 2020. As these words are written, eighteen months later, Icelandic health authorities have confirmed more than 10,000 infections, hospitalized a few hundred patients and attributed thirty deaths to Covid-19.[3] As in most countries, the pandemic in Iceland has ebbed and flowed since its first confirmed case. The fourteen-day incident rate per 100,000 inhabitants depicted in Figure 1 clearly shows how infection rates from March 2020 to June 2021 have three peaks (the first two significantly larger than the third peak in April 2021). The fourth and largest peak depicted in Figure 1 represents the surge in cases in Iceland since July 2021, which followed the easing of domestic restrictions announced by the government after the vast majority of eligible adults had been vaccinated by June 2021. As cases continue to mount (spurred on by the Delta variant), Icelandic health authorities monitor hospitalization numbers closely, hoping that high vaccination rates (see Figure 2) will prevent record numbers of cases from straining the infrastructure of the healthcare system.

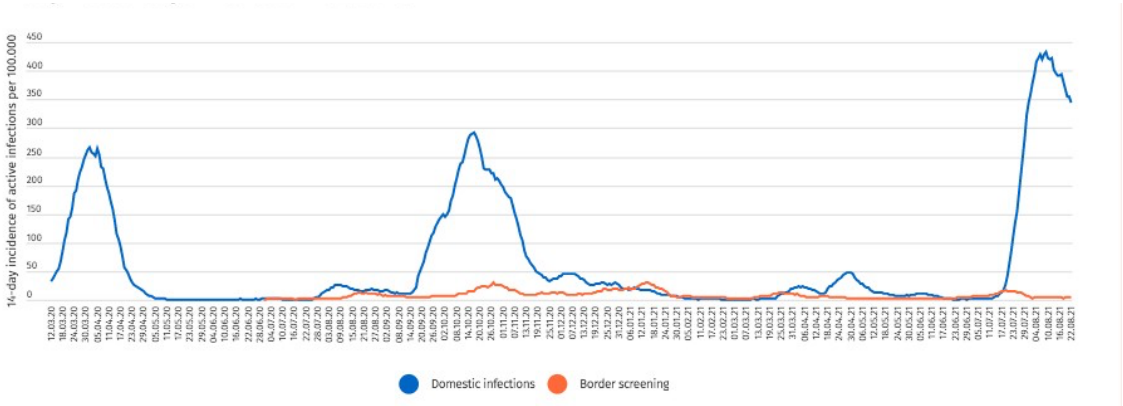

Figure 1. Fourteen-day incidence rate per 100,000 inhabitants in Iceland (http://www.covid.is/).

Icelandic authorities have aimed to contain the spread of the SARS-CoV-2 virus through policies that aim to restrict gatherings and encourage personal hygiene, the use of face masks, and social distancing. The severity of these restrictions has changed over time, in accordance with the status of the pandemic. Iceland has never enacted curfews, or general stay-at-home orders, as was seen in many countries, but the strictest rules have limited

[2] As an editor for *Philosophy of Medicine* pointed out, it should also be noted that factors like Iceland's small population size and relative wealth might have contributed to high levels of public trust in a situation like the Covid-19 pandemic. Thus, strategies for engendering trust in a place like Iceland might not work in a place where these background conditions are not met. This is, of course, entirely correct. What this paper aims to show, however, is that the concept of public trust is of *general* philosophical and practical interest to understanding the dynamics of the pandemic. Thus, although different societal conditions might result in there being different *paths* to public trust, it is argued that trust in itself is generally desirable.

[3] Icelandic health authorities regularly update official Covid-19 statistics at http://www.covid.is/data. As of 1 December 2022, the total number of confirmed infections from the start of the pandemic has surpassed 200,000. The number of confirmed deaths due to Covid-19 in Iceland, as of 1 November 2022, was 219.

gatherings to ten people and included the closure of bars, gyms, and other nonessential services.

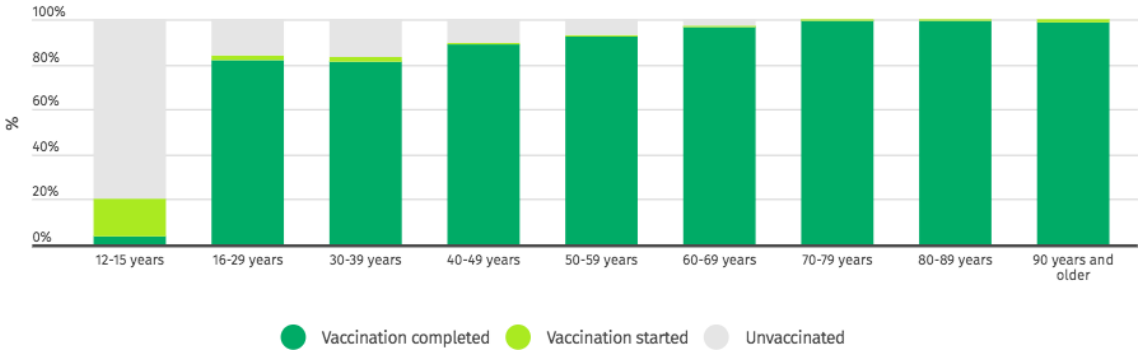

Figure 2. Percentage of vaccinated individuals in Iceland by age in August 2021 (http://www.covid.is/).

At times when infection rates have been low or virtually nonexistent and after the vaccination of the adult population in June 2021 (see Figure 1), regulations have been more relaxed, and life has approached normalcy. Testing, contact tracing, and quarantine have been the backbone of the Icelandic strategy (Scudellari 2020; Garðarsdóttir et al. 2021). This has included the testing of individuals with symptoms and those exposed to infected individuals, mass random testing of asymptotic individuals, and testing of those who enter the country. The Reykjavík-based genetics company DeCode Genetics has assisted the Icelandic health authorities with meeting testing needs at several points in the pandemic (especially during the first wave) and has also sequenced the genetic material of each positive infection in order to monitor whether new variants of the virus have been entering the country and how domestic variants have mutated.

Limits on gatherings, mask mandates, and other mitigation strategies employed by the Icelandic government in order to contain the spread of the SARS-CoV-2 virus achieved legal status when enacted as regulations by the Minister for Health (Svandís Svavarsdóttir, 2017–2021), who in turn was a member of the Cabinet spearheaded by Prime Minister Katrín Jakobsdóttir. Thus, the Icelandic government (in particular the Minister for Health) has the final say in all decisions relating to the pandemic and consequently bears full legal and political responsibility for them (Garðarsdóttir et al. 2021, section 2). What is interesting, however, is the prominent role that top public health officials have played during the pandemic in Iceland. The Chief Epidemiologist, Dr. Þórólfur Guðnason (2015–2022) is legally obliged to issue formal advice to the Minister for Health in the event of a pandemic or other public health emergencies. This division of labor is clearly marked in predetermined Icelandic "pandemic laws," which have guided decision-making processes throughout the Covid-19 crisis (Garðarsdóttir et al. 2021, section 2). Throughout the pandemic, the government has followed the advice of the Chief Epidemiologist very closely—often directly adopting his advice into policy. What is more, top civil servants like the Chief Epidemiologist have, to a large extent, been the public face of the government's response, hosting regular (often daily) press conferences where new developments in the pandemic have been reported and mitigation strategies justified and explained to the public.

Public health officials like the Chief Epidemiologist have therefore received extensive levels of trust from the Icelandic government. Within Bennett's (2020) framework, we might say that the Icelandic government extended their *epistemic trust* toward the Chief Epidemiologist by relying heavily on his expert analyses in major policy decisions. Despite the fact that these public health officials are legally obliged to advise the government in pandemics, it is still a political decision to consistently heed that advice. Moreover, the general public has extended *recommendation trust* toward the Chief Epidemiologist and other top public health officials by actively participating in mitigation strategies presented at regular press briefings and getting vaccinated (see Figure 2). Indeed, surveys spanning a twelve-month period indicate that 92% of the general public approve of the government's response to the Covid-19 pandemic (Gallup 2021); 91% trust the Department of Civil Protection (MMR 2020); and upward of 95% think that the information issued at regular press conferences hosted by top health officials during the pandemic was trustworthy and reliable (National Security Council of Iceland 2020). For comparison, a recent study by the Harvard School of Public Health (2021) found that only 52% of the American public trusted the CDC (Centers for Disease Control and Prevention), the government agency responsible for handling the Covid-19 pandemic in the United States. Do these high levels of trust in Iceland tell us anything? How do they relate to the problems of relevance and reliability? These are the questions to which I now turn.

3.2 Analysis of the Icelandic Strategy

The most striking aspect of the Icelandic government's response to the first wave of the Covid-19 pandemic is the extent to which public health officials both influenced policy decisions and answered publicly for the strategies being implemented. As was noted in the previous section, the Icelandic government's decision to seek out the advice of these particular experts was largely based on legal codes surrounding public health emergencies on the scale of the Covid-19 pandemic. These predetermined legal frameworks were thus a key factor in how the Icelandic government quickly addressed the problem of reliability—by deciding on which expert analysis to heed in the face of time pressure and uncertainty. As for the problem of relevance, a potential worry one might have about bringing a small number of experts to the decision-making table is that certain viewpoints might be missing. In an interview, Dr. Alma Möller, the Icelandic Director for Health, said the following when asked if the public health officials advising the government saw analyzing the socioeconomic consequences of mitigation policies as their responsibility:

> No, that's not our role. That is the Minister's job. Our decisions are made exclusively from the perspectives of public health. Others must weigh the importance of different perspectives and interests. We do not have the relevant expertise on, for example, economics. We have always made that clear. It's just not our field … That doesn't mean that we ignored everything else [social/economic factors], it's just not our area of strength. This is where the Minister comes in. She of course has a broader perspective on things, and I know she also presented all decisions to the wider cabinet where there is a broad range of expertise. (Garðarsdóttir et al. 2021, 36; my translation)

It seems clear that public health officials issuing advice to the government were mindful of the complexities involved in enforcing mitigation measures but ultimately viewed it as the

government's responsibility to evaluate factors not directly related to public health. In other words, the public health experts extended their own epistemic trust toward the government. They knew that some policy recommendations would create challenges beyond their expertise and trusted that others would address them. To reiterate, this is not to say that the scientific advisers from the Directorate of Health were *oblivious* to the ways in which social and economic circumstances can shape the conditions for public health. They acknowledged the fact that certain mitigation measures might have disproportionate effects on citizens in more precarious social situations, and explicitly aimed to suggest courses of action that did not involve overly burdensome or complex regulations on behavior, beyond what could reasonably be expected of the public (Garðarsdóttir et al. 2021). Thus, public health officials wanted to include social and economic perspectives into the pandemic response but ultimately encouraged the government to seek out these perspectives elsewhere.

So, how did the Icelandic government fare tackling these social, political, and economic issues? While a detailed answer to this question could provide the material for another paper, one thing that seems relevant to note is that according to the Minister for Health, no experts were given the same level of access to decision-making processes as public health officials like the Chief Epidemiologist and the Director for Health during the first wave of the pandemic (see Garðarsdóttir et al. 2021, 37). Thus, while the government was certainly aware of the sociopolitical challenges the pandemic created and worked to meet them by various means, this work was carried out in a more "business-as-usual" setting and without the extensive guidance of a particular set of expert advisers. This is, of course, not to say that the government did not seek out the opinions of *any* competent experts. Rather, there was simply no anointed council of advisers that delivered an official verdict on what course of action was best supported by the current scientific evidence. The reason for this seems to be twofold. First, there is no comparable legal framework in Iceland guiding actions during times of social or economic crisis, as with the "pandemic laws" of public health emergencies, and therefore no pre-specified officials to act as advisers. There is simply no Chief Sociologist or Chief Economist with comparable duties to the Chief Epidemiologist.

Second, it might be hypothesized that the question of how to deal with socioeconomic crises would be subject to more political disagreement than questions relating to the pandemic's underlying epidemiology. The former might lean into what Jennifer Lackey (2018, 229) has called "controversial" areas, which are especially sensitive to expert disagreement. It might also be that politicians simply feel more at home dealing with these socioeconomic issues, given their prevalence in everyday political life, and therefore less willing to extend comparably high levels of trust toward experts from the social sciences. Whether these tendencies among political decision makers are *desirable* is another matter. It might be argued, for example, that political decision makers should consult experts from the social sciences to the same degree as they consult experts from the natural or medical sciences, and that a failure to do so would amount to intellectual hubris on the politicians' part. These themes are revisited in section 4, when I consider what the Icelandic case study can tell us about the proper role of experts within democratic decision-making bodies. In particular, I draw on my philosophical analysis of trust and the case study being discussed to raise the question of how far a purely technocratic mode of decision making may reasonably be extended.

Although decision-making processes were guided by a relatively small group of experts and politicans in Iceland, an important outlet for diverse viewpoints was found in the

prewritten response plans to global pandemics on the scale of Covid-19. These plans proved vital to guiding initial response strategies, especially when it came to getting different sectors of society on board with mitigation measures when decision making was complicated by a lack of data and knowledge about the new virus and by the need to act quickly. In an interview, Chief Epidemiologist Dr. Þórólfur Guðnason described how these plans built common awareness and mutual trust among different sectors of society about what was expected in the event of a global pandemic and how that aided early efforts to contain the spread of Covid-19:

> When we are creating these response plans there are vast numbers of people involved. For example, the response plan for a global influenza epidemic involves collaborations between 60 to 70 government institutions. Every collaborator has a pre-specified role to play when the plan is then enacted; they know what to do, they know what everyone else is doing, and they know who to work with. It's a bit like a game of football. You have 11 players on the pitch and they all know what is expected of them when the game starts. (Garðarsdóttir et al. 2021, 30–31; my translation)

The broad cooperation involved with these response plans yielded a degree of inclusiveness in an environment where the need for swift decision making did not create optimal conditions for incorporating democratic values into policy work—something some philosophers have argued should not be forsaken in situations like the Covid-19 pandemic (Norheim et al. 2020). Similarly, the constant flow of information from top public health officials to the general public steered societal debates in Iceland about the direction being taken by the government and gave people the chance to voice their opinions. This information flow consisted of regular press briefings by the government's top scientific advisers, the availability of public documents surrounding deliberation behind new strategies, and the publication of information and data on the website http://www.covid.is (Garðarsdóttir et al. 2021). Moreover, an important aspect of the Icelandic government's communication strategy was to lay out general guidelines about restrictions and encourage individuals and groups to exhibit commonsense reasoning to determine whether certain borderline cases of gatherings were in the spirit of current regulations or not. This may have contributed to a general atmosphere of trust within Iceland, seeing as people were not always explicitly *forced* to comply with the advice of public health officials, but certainly *nudged* toward doing so, out of a sense of civic duty.

A plausible conjecture is that the work undertaken by health authorities to establish dialogues at the institutional level through cooperation on response plans and at the societal level through press briefings and transparent decision making is one of the reasons why high levels of public trust were recorded during the Covid-19 pandemic in Iceland (Gallup 2021; MMR 2020). This is ultimately an empirical question, which warrants further investigation.

However, it is likely that people respond better to policies when they feel that they are being listened to and included—even if that level of inclusion does not mean that they are actually at the decision-making table or having the final say. Mitigation policies that impede personal liberties and cause isolation will always be disliked. However, if people understand *why* those policies are necessary and believe that those implementing the policies have their best interests at heart, they will be more likely to accept them. Hearkening back to Bennett

(2020), they will be more likely to exhibit *recommendation trust* toward those making decisions by following their advice. Moreover, according to my analysis in section 2, policies that enjoy higher levels of recommendation trust will also be more likely to meet certain benchmarks for legitimate authority, such as Raz's NJT. It might be hypothesized that this induces a virtuous circle, where higher levels of trust increase the legitimacy of policies, and where legitimate policies engender higher levels of trust. Again, these arguments are ultimately conceptual and suggestive, and require further empirical study.

Consequently, I would conjecture that the Icelandic case shows that cultivating recommendation trust should be an essential goal for policymakers responding to the Covid-19 pandemic or similar crises. This seems plausible in light of what we know about the Icelandic case (Garðarsdóttir et al. 2021). Further study and empirical investigations are, however, necessary, especially comparisons with case studies from other countries, which I leave as avenues for future research. In particular, one should note that strategies for *acheiving* trust may vary greatly between countries and be far more complicated in larger or more divided societies—but it should be a goal to strive for nevertheless. I believe this case study from Iceland's handling of the first wave of the Covid-19 pandemic also strengthens my analysis of the problems of relevance and reliability from section 2. Theorizing about trust is a promising avenue for philosophers who wish to understand how rational policymakers should both determine the reliability of expert testimony and assess what types of expertise to bring to bear on a particular decision. Of course, the importance of trust has long been recognized among those writing about the legitimacy of public health interventions (Nuffield Council of Bioethics 2007; Childress and Bernheim 2008). What I have aimed to show, however, is that this is *especially* true of the Covid-19 pandemic and moreover that specific philosophical analyses of trust can be productively applied in this setting. Understanding trust as a tripartite relation between a trustor, a trustee, and an object of trust can help make sense of the relational dynamics between politicians, experts, and the general public during emergencies that demand coordinated societal action, as was the case with the Covid-19 pandemic. Bennett's (2020) distinction between recommendation trust and epistemic trust is particularly useful in making sense of these dynamics. Indeed, what makes the Icelandic case interesting is that it was the *same* group of public health officials who received both epistemic trust and recommendation trust from the general public. By having experts like the Chief Epidemiologist both advise policy and defend it publicly, the Icelandic government asked the public to place their trust in public health officials in not one but two ways.

4. Conclusion: The Limits of Technocracy

In this paper I have identified two problems facing policymakers during the Covid-19 pandemic. The problem of reliability challenges them to assess expert testimony in light of the fact that they themselves are non-experts, an issue that has been studied in the literature on social epistemology. The problem of relevance, however, invites policymakers to identify the *type* of expertise relevant to a given situation. The Covid-19 pandemic has cut across all sectors of society and demands the attention of those with experience in understanding the medical, moral, and economic aspects of this global crisis. It falls on the shoulders of political decision makers to weigh these different factors when fashioning policy. These judgments are invariably value judgments of some sort and will reflect the implicit or

explicit prioritization of political leadership. The value-ladenness of scientific practice is a much-discussed phenomenon in the philosophy of science (Hempel 1965; Longino 1990; Douglas 2009; Kitcher 2001). The values at play when it comes to the problem of relevance are, however, invariably more political, as they reflect the ways in which decision makers *apply* scientific advice in order to fashion policy. Thus, the problems of reliability and relevance both raise a host of interesting issues discussed in the wider philosophical literature—issues too numerous to cover in one paper.[4] What I have contented myself with doing, however, is to first argue that the concept of trust may prove important to further study on these issues, as it allows us to formulate questions about the relations between different societal groups in interesting ways. Second, I have demonstrated how the notion of trust may indeed help us make sense of actual cases concerning the problems of reliability and relevance by introducing a case study from the Icelandic government's handling of the first wave of the Covid-19 pandemic.

I would like to conclude with a final point about what lessons may be drawn from the case study discussed in section 3 and its relationship to my philosophical analysis of trust. A striking aspect of the Icelandic government's response to the Covid-19 pandemic is the extent to which political decision makers allowed public health experts to shape policy and explain it to the general population. One might therefore be inclined to view this example as a demonstration of the limits of democratic rule in favor of technocracy or epistocracy—rule by experts. The argument for limiting the power of the masses in favor of the most capable is an old one, stretching back to Plato's *Gorgias* and still defended by some political philosophers today (for example, Brennan 2016). In the Icelandic case, handing over significant power to a small group of knowledgeable people seemed to work reasonably well and expedited decision-making processes.

Nevertheless, I think that it would be a mistake to think that the Icelandic case speaks in favor of epistocracy. First, it should be noted that the policy developed by public experts was explicitly geared toward containing the spread of the virus and preserving public health. Thus, one of the reasons these policies succeeded was precisely that the experts in question tried not to overstep their range of expertise by analyzing the socioeconomic factors at play in the pandemic. Second, although public health officials proved very influential in policy decisions during the pandemic, they were ultimately accountable to the democratically elected government, which had the final say on all matters. This element of cooperation with democratic leadership, together with the cooperation with multiple societal institutions on response plans and regular engagement with the general public, created the conditions in which trust in these experts could thrive.

In other words, the trust that made it possible for these experts to work rested on a thoroughly democratic and cooperative basis. I would argue that the same would be true whenever policymakers are faced with relatively complex decisions involving the intersection of various kinds of expertise and interests. While attaining expert advice might be a necessary ingredient to crafting informed policy, it is not sufficient. The policymaker

[4] To flag one such issue: consider the nature of moral expertise. Can the professional ethicist be treated as an expert in the same way as, say, doctors or engineers? There is clearly something to the idea. Hospitals, for example, have relied on ethical guidelines during the pandemic to facilitate decisions pertaining to the prioritization of patient care (Garðarsdóttir et al. 2021). However, a deeper investigation of the ethicist as an expert will have to deal with meta-ethical issues, such as the status of normative facts. While of imminent interest, these questions lie beyond the scope of the present paper—see Crosthwaite (1995) for a discussion. Thanks to an anonymous reviewer for pointing this out.

will invariably have to make value judgments involving the prioritization of needs and perspectives. Moreover, carrying out these judgments will be best realized when the relevance of different viewpoints is determined in an open, cooperative environment.

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