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21

THE PANDEMIC AS WE KNOW IT

A policy studies perspective on ignorance and nonknowledge in COVID-19 governance

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21

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Introduction

Values of knowledge, truth and evidence have normatively underpinned policymaking in contemporary postwar democracies: scientific expertise and 'hard data' is valued as knowledge input for policy, and citizens can rightfully expect that the best available evidence at any given moment informs the general political trajectory. These values have also informed the study of policymaking, both in normative and methodological concerns: in discussions of how knowledge, and what kind of knowledge, can and should inform policy; and in more fundamental epistemological debates regarding the very production of policy-relevant knowledge. This strong focus on knowledge has concealed the key role of ignorance and nonknowledge in policy. While agnotology and studies of ignorance have frequently chosen policies as objects of analysis, the link between policy studies and ignorance studies has often remained implicit. In the present chapter, we seek to weave a policy studies perspective into the study of ignorance, pointing to the added value of making explicit the role of ignorance in policymaking. We do so by mobilizing a few examples from policy making and governance in the current COVID-19 crisis.

The problematization of ignorance as a force in pandemic governance is not new (Ortega and Orsini, 2020); however, the current crisis offers a heuristic moment for making the work of ignorance in policymaking and governance explicit and visible. In some sense, the current COVID crisis has exacerbated the conflicts and tensions in relation to what is often captured as 'post–Truth era' (D'Ancona, 2017; McIntyre, 2018), where scientific experts have suffered from a perceived loss of authority (Nichols, 2017) and autonomy and where politics seems to operate, once again, primarily on the basis of a stubborn will to ignorance and blatant forms of denial. The toll of this ignorance, it seems, is particularly palpable in countries where vital information regarding the effects of SARS-CoV-2 infections or mortality rates (Ortega and Orsini, 2020) have been withheld, suppressed or drawn into doubt by the highest political ranks.

At the same time, the COVID-19 crisis seems to have brought about a new 'civic positivism' that, at first glance, breaks with the populist relativism of alternative facts. Reproduction rates,

incidences, hospitalizations, deaths – these metrics appear both descriptive and prescriptive, to the extent that they represent the current state of the pandemic and suggest the urgency of the particular measures to be taken. Moreover, the past year has seen an astonishing surge in the public awareness – and perhaps even, understanding – of the science that underpins fields such as epidemiology, immunology and virology, to name but a few. In this way, notions of scientific expertise and scientific citizenship, deemed a prerequisite for the knowledge-based democracies of the twenty-first century (Stengers, 2018), have backed the declaredly rational, evidence-based policy precepts of pandemic governance.

This rationalist paradigm of policymaking induces a fragile certainty by covering over the indeterminacies, contingencies and non-knowns of governance. Ignorance is then reduced to a defect that rational policy design should fix such as by gathering 'more evidence'. The powerful effects of non-knowledge and ignorance, on the other hand, remain underestimated, if not *ignored*, by policy scholars. Likewise, ignorance studies have only recently begun to take a more comprehensive approach towards the study of non-knowledge in the process of policymaking. Adding to this research agenda, we seek to capture the role of ignorance as a constitutive feature of policymaking rather than as an external disturbance. At stake in such an engagement, conceptually and politically, is less the obvious fact *that* we suffer from various unknowns but rather the less obvious question of *how* we do not know many essential things that *could* be known; how we ignore the policy-relevance, strategic value and socio-political implications of some unknowns and uncertainties; and what these unknowns and forms of ignorance do in policymaking. Critical and interpretive traditions of policy studies offer a whole range of conceptual tools for the study of ignorance.

Using the COVID-19 crisis as a focal point, we explore and illustrate different mechanisms of how ignorance is mobilized and deployed strategically at different points and at different scales in pandemic policymaking. Drawing on Arjun Appadurai's (1986) notion of 'social lives' of commodities, we consider policies to having a social and political life, too, as they are being articulated, moved through various stages of the policy cycle, become enacted, implemented and evaluated.

This chapter proceeds as follows: we first set the scene by critically discussing the status of knowledge concepts in policy studies, including its focus on what we term 'residual ignorance'. We then recouple policy studies and ignorance studies by outlining a model of policy that is sensitive to both knowledge and ignorance in a symmetrical fashion, which we term 'policy studies with agnoto-epistemological sensibilities' (Paul and Haddad, 2019). On this basis, we then critically examine COVID-19 policies and showcase several types of policy ignorance along four overlapping stages of the social life of pandemic policies: agenda setting, policy design, implementation and evaluation. In doing so, we build on established concepts of 'strategic ignorance' (McGoey 2012a; 2012b) but provide additional illustrations of less intentional, but equally political forms of ignorance practices.

Conceptual preliminaries: policy, knowledge, and ignorance

In political science, *policy* refers to the material substance of political decisions and political processes – the actual measures taken. At the same time, policy is understood as an intrinsic dimension of the political, alongside *politics* (the ceaseless power struggles and tactics) and *polity* (the institutional context in which policies are shaped). Policymaking and policy analysis is frequently perceived as a technocratic practice, dominated by experts and bureaucrats, which offers hardly any intriguing insights into the big questions of power, politics and ideology. Yet, policy making at all stages is deeply entangled with power and politics, and inseparable

from society and culture – and therefore also a place where societal knowledge and 'truths' are mobilized and negotiated (Hajer, 1997; Wagenaar and Hajer, 2003; Yanow, 1996). Thus, we can conceive of policy making as a site where actors negotiate and strategically place particular forms of knowledge – and, at the same time, mobilize strategic unknowns – they deem relevant for public policy and the public good. Involving a broad panoply of knowledge- and ignorance-generating practices that are co-constitutive of forms of power and authority, policies shape rules and interactions, the distribution of and access to resources, and devise legitimate roles and responsibilities of various actors. At the same time, policies are often designed in a way to make some issues invisible, selected actors unaccountable, or even incapable of action. Knowledge practices, as we argue below, play a key role in this process.

Moving beyond 'evidence' and residual ignorance

Nonknowledge (Böschen et al. 2010; Gross, 2007) and ignorance have hardly been treated systematically in policy theories: policy studies have been much more concerned with the role of knowledge rather than nonknowledge as source for policy, a bias that is shared with many other sciences (cf. Proctor and Schiebinger, 2008). The alleged crisis of expertise and knowledge (Nichols, 2017) has sparked renewed interest in the relation between knowledge and politics and between ignorance and evidence. First and most prominently, we witness a renewed will to reclaim truth and evidence and to defend scientifically grounded knowledge against the perils of 'truthiness' and alternative facts (Perl et al., 2018). Second, we see efforts to formulate *non-relativist* constructivist concepts of knowledge (e.g. Angermuller, 2018) not least because the postmodern turn has been blamed for discrediting the notion of scientific truth (e.g., by Guardian columnist D'Ancona, 2017).

These disciplinary debates have left an important blind spot that is both a root cause and symptomatic of the current crisis: the very concept of evidence and knowledge practices has been limited inasmuch as it includes only the production, accumulation and dissemination of knowledge (and questions regarding its validity and significance), rather than its absence. If discussed at all, the absence of knowledge is primarily discussed in terms of a knowledge 'not yet produced' or knowledge repressed (Perl et al., 2018), a notion that we have elsewhere termed 'residual ignorance' (Paul and Haddad, 2019). In this perspective, ignorance is cast as the undesired *Other* of policy knowledge, both epistemologically and normatively. Such an approach ultimately fails to engage fully with ignorance in a systematic and comprehensive fashion. Building on studies of ignorance, we have urged the need to develop 'agnoto-epistemological sensibilities' in policy studies (Paul and Haddad, 2019). Here, we show how, in turn, policy studies perspectives can further enrich existing studies of ignorance as they also appear in this collection.

Developing agnoto-epistemological sensibilities

Our own approach to ignorance specifically builds on and further develops McGoey's (2012a) notion of strategic ignorance by trying to develop a decidedly *symmetrical* approach to the study of knowledge and ignorance.[2] Discontent with the way historians of science approached truth and falsity, sociologists such as Bloor (1991) and Callon (1986) put forward the concept of *symmetry* as a methodological principle. Symmetry requires that sociological analyses of truth and falsity of scientific theories were to be done in the same conceptual terms. We transfer this perspective to policy knowledge and ignorance. Like knowledge, ignorance is then analyzed as an active and serious product that results from a variety of sociotechnical

practices. Like knowledge, ignorance takes on different forms and means different things to different people and in different contexts. Like knowledge, ignorance thrives within particular institutions and infrastructures and is at once maintained by them. Like knowledge, ignorance is analyzed as material good that can become commodified, privatized, circulated or sequestered, and 'weaponized' as a strategic arm in policy disputes by governmental, industry and NGO-based actors alike. Moreover, on a more philosophical note, symmetry prompts us to complement the heavy focus on epistemology (i.e., the systematic study of how we know) with agnotology (i.e., the systematic study of how we do not know) – hence the term 'agnoto-epistemological sensibilities' within policy studies. In this way, a policy studies approach to ignorance can help unfold a broad perspective that can come to terms with a range of knowledge and nonknowledge practices along a chain of events shaping policy in more or less visible ways. Moreover, this approach can sensitize ignorance scholars to different forms of 'institutionalized ignorance', as we show in this chapter.

Thinking like a policy: introducing ignorance in policy models

Policy analysis has strongly relied on phased or process-oriented models that heuristically describe the policy process in terms of a cycle of different stages or phases, an approach first put forward by Harold Lasswell (1956). As part of his attempt to establish a 'science' of policy that would at the same time fulfill a normative function for democratic politics, Lasswell introduced a model of the policy process comprised of seven stages (cf. Jann and Wegrich, 2007). This model has since seen several modifications and translations (eg. Jenkins, 1978; May and Wildavsky, 1978) and has been discussed extensively in the policy studies community. Yet today, in its most common version as an analytical heuristic, the differentiation between *agenda-setting*, *policy formulation*, *decision making*, *implementation*, and *evaluation* persists and continues to offer guidance in efforts to sort, make sense of, and critically examine policy practices. Since its inception, the policy cycle model has gained a more iterative and dynamic connotation, moving beyond earlier technical notions that differentiate rigidly between politics and policy, or input and output (Jann and Wegrich, 2007). As Howard (2005) points out, the model of the policy cycle

> has the potential to capture some of the fundamental features of current policy formulation, including the existence of numerous decision makers, the high degree of competition and contestability among sources of policy advice, and the substantial impact of previous policies on new efforts.

This model helps elucidate how a policy is shaped and incrementally enacted in different, institutionally separated steps. Used as a heuristic device, it provides a rough model to trace how different actors negotiate, craft and tinker with a policy. At each step, there is a particular knowledge/power nexus at work through which a policy becomes processed. For instance, what expertise and what kinds of knowledge are being mobilized in problematizations that forge the initial policy agenda? What knowledge and expertise is needed to navigate a policy proposal through the intricacies of the multi-tiered decision making process, so that it eventually becomes 'authorized' as a public policy, e.g. when it is enacted as a law or government regulation? Or what kind of knowledge of a policy field is necessary in order to implement a new set of measures 'in the field' so that it becomes effectively adopted and becomes a lived practice of those subjects addressed by it? And finally, how is knowledge about the effects and outcomes of a policy gathered, evaluated and communicated so that a policy can be described

in terms of success or failure; including a definition of what can be measured as core effect and what merely as unintended and unwanted 'side effect' of a policy?

At each of these steps, the production and mobilization of knowledge is intimately interlaced with strategy and power relations. From a symmetrical perspective, each 'stage' in the process offers particular conditions and specific 'windows' to engineer a particular *mix of knowledge and ignorance* into the policy process. These practices do not only shape the policy agenda in selective ways but create blind spots, make certain things unknowable and hence particular kinds of policies inconceivable. They affect the scale and reach of policies (e.g., local, national or global), they define new target groups (e.g., the vulnerable) and reinvoke forgotten ones (e.g., the chronically ill, single parents, those living alone). Finally, they also substantially affect what kind of solutions can be thought of. In the present crisis, these range from non-pharmaceutical interventions to testing tools, vaccines and therapeutics, assigning different value to them in the broader landscape of policy measures addressing COVID-19. It is in this sense that we understand policies as having a 'social life' with particular lifelines and trajectories, leaning on what Appadurai (1986) has described in relation to commodities. On this basis, in the remainder of this Chapter, we highlight the nexus of knowledge and ignorance at the different stages of the policy cycle, broadly understood, by mobilizing a range of examples from COVID-19-related pandemic policy making and governance.

Pandemic policies: matters of knowledge and ignorance

Problem definition and agenda setting: knowing and acting upon COVID-19

Before policies are designed and negotiated, policy issues need to effectively become placed onto the political agenda in a particular polity. This requires not only an awareness of a policy problem, but an effective definition of a policy problem that actors come to agree on, typically with reference to different forms of knowledge and expertise (for the exemplary case of 'acid rain', see Hajer 1997). Notably, the line between social actors (which include scientific experts, but also various activists and lobbyists) and policy actors (i.e., decision makers in ministries or elected representatives) is typically blurry, as policy communities in the era of network governance are heterogeneous (Wagenaar and Hajer, 2003). This has implications for the politics of knowledge in policy making: different actors with diverse epistemic and ideological perspectives articulate claims regarding what is knowable in the first place, what knowledge and expertise counts as 'policy relevant', but also what is considered irrelevant or unworthy knowledge (see also Paul and Haddad, 2019). Hence, politics of knowledge and ignorance shapes the earliest phases of the policy process. Let us consider two examples of how the agenda of COVID-19 policymaking becomes shaped in the interplay of knowledge and ignorance: first, how COVID-19 is conceptualized as a global pandemic through established policy paradigms (Hall, 1993); second, how data functions to define and make (in)visible particular policy problems.

First, the designation of COVID-19 as a global crisis, as evident as it might now seem, was not inevitable but emerged as the effect of a particular interpretation of the global infection events mediated by scientific, political and legal considerations. This problem definition had crucial implications for subsequent policymaking for it informed framings of what kind of crisis the global community was faced with and what instruments were required to address it. When the World Health Organization (WHO) invoked the language of a public health emergency of international concern, COVID-19 became a *global public health security* crisis (Elbe, 2010; Weir, 2012), yet it remained unclear what kind of action this would necessitate. A year into the pandemic, it has become painfully clear that the crisis has largely produced

national, rather than global responses. While the paradigm of global health security mobilizes a language of globally shared vulnerability and shared approach to health threats, it prioritizes the economic and security interests of the global north and operates on an ethics of self-protection rather than a care for the other in the name of a global humanity (Lakoff, 2017: 73). Moreover, GHS prioritizes technological 'fixes' – such as drugs or vaccines – of such crises over other, more behavioural and systemic approaches and thus shapes pandemic policies in particular ways.

A second example of how knowledge practices shape the political agenda becomes visible in the choice of knowledge that was used to make COVID-19 knowable and intelligible. Decision makers have largely turned a blind eye to extant knowledge of past epidemics that would indicate the need for joint action. This historical and contextualized pandemic knowledge has largely been crowded out by the heavy reliance on selective, quantifiable forms of knowledge, particularly originating from economics and epidemiology – the latter, interestingly enough, having been contested as insufficiently 'scientific' in the past (Amsterdamska, 2005). This turning a blind eye is perhaps less strategic but perhaps convenient in the context of the dominance 'forward-looking' thinking that organizes crisis governance in existing modern capitalist societies. Given the strong economic and medical framing of the COVID-19 crisis, agenda setting and policy proposals have largely relied on quantifiable data which is typically deemed the most effective source of knowledge for public health (Adams, 2016).

Metrics and dashboards have now permeated our daily lives in unprecedented ways, offering a sense of intelligibility and control over pandemic events and an ability to hold decision makers accountable. Yet, also here, a multitude of opportunities to redefine and classify what is worth knowing and what is worth counting persist: as the pandemic has made evident in many countries, data can only be as good as the infrastructures in which they are curated, and their use is shaped by political will to knowledge – or willful ignorance (McGoey, 2012a). In an exemplary instance of such willful ignorance, in July 2020, the Brazilian government, headed by its far-right president Jair Bolsonaro, deleted historical data relating to the pandemic and announced it would stop publishing the cumulative death toll or number of infections. This decision was later revoked by the Supreme Court but made invisible the many lives lost by government inaction, denial and willful ignorance. Similarly, the former US President Trump denied the risks associated with SARS–CoV–2 throughout his tenure during the pandemic.

Beyond willful forms of ignorance with regard to data, we also find ignorance in seemingly mundane epistemic practices. In Austria, for instance, the nature of data collection in registries pertaining to public health – be it the available number of intensive care unit beds, mortality rates, infection rates and last but not least vaccination rates – has remained fragmented, thus making it more difficult to assess the effects of policy measures (Paul and Haddad, 2019; Pichelstorfer and Paul, 2022). The pandemic has further laid bare the inconsistent data collection across regions particularly when it comes to vaccinations. These inconsistencies, and at times absence of data, enable a high degree of uncertainty when it comes to defining 'what the issue is' in policymaking: there is then no way of knowing which groups remain underimmunized, with poor access to primary care, or 'hard to reach'. We do not consider these fractures in the vaccination data landscape as either the outcome of a strategic agenda or merely accidental. Rather, it appears as an institutionalized and ritualized form of *neglect* that seems to be serving a different political calculus. It is thus here that we see a need for the kind of policy research that we propose: to focus not only on what and how policymakers know but also on the kind of knowledge that is absent and to examine the conditions of possibility for this ignorance.

Designing policy responses and solutions in times of urgency: making COVID-19 governable

As becomes clear now, the definition of SARS-CoV-2 as a particular kind of crisis has been shaped by the mobilization and selective availability of some forms of knowledge, but not others. The predominantly economic and medico-scientific knowledge practices have informed the range of solutions, or policy instruments, available to us at this time: testing, tracing, isolating, lockdowns, vaccination etc. Overall, pharmaceutical interventions have held a privileged position in the unfolding of pandemic policies, as is evident in the current political appeal to vaccination as a magic bullet – a position that is problematic as it sidelines the need for continuous non-pharmaceutical interventions and a regard for vaccine equity.

The technologies we now consider as valuable and innovative solutions to address the crisis are thus a direct material consequence of the social life of pandemic policies. The focus on vaccine development as the ultimate solution-to-come has generated a particular expectation of a technological fix. This focus, we propose, amounts to a secular eschatology that obstructs vision and collective knowledge creation of the pandemic predicament in a comprehensive sense and a consideration its wider implications, but also promotes the collective fantasy to 'go back to normal'. By the same token, knowledge generated by the social sciences and humanities that could complement and critically revise such oversimplified solutionism were backgrounded. Again, this bears material consequences for future knowledge production, as funding for these disciplines is likely to undergo cuts, making invisible existing knowledge, delaying ongoing knowledge production or foreclosing future knowledge.

Another dimension of vital ignorance unfolds along the trajectories in which such technological countermeasures are developed. To begin with, this concerns the safety and efficacy of drugs and vaccines developed under the sign of a public health emergency and its political and biomedical temporalities (Kelly, 2018). At the stage of research and development, pharmaceutical research identifies target groups for both trials and the envisaged end product. Whereas the elderly were successfully recruited for some of the vaccine trials of the past year, controversies around the Astra Zeneca/Oxford vaccine have made evident that data gaps – and thus also limited knowledge – continue to shape the use of the vaccine among the elderly, but also younger women. Moreover, data on the use of the vaccine during pregnancy was largely missing, as was data for women who breastfeed. Again, this is a material consequence of not so much an agnotological intention, but in line with a more general pattern of gendered epistemic injustice (Fricker, 2009) that political decision makers have neglected to address. Knowledge about vaccines only incrementally replaces many of the unknowns in the course of pre-clinical and clinical research as well as in post-marketing surveillance studies, when vaccines are deployed in actual populations. Yet, it is not only a matter of biomedical and clinical research that shapes what is publicly known and not known about them. Also, regulatory definitions of what counts as good enough knowledge shapes COVID-19 pharmaceutical policy and offers windows for actors to strategically create blind spots.

With mounting political and economic pressure, thresholds for what counts as (good) enough data to assess the quality of new technologies, specifically vaccines, risk being affected by the urge to 'roll out' technical solutions. In the conditional licensing of current vaccines and in advance purchasing agreements, members of the pharmaceutical industry have a greater say in negotiating these thresholds – not least, because no one knows the research data of a vaccine better than the developers. This has led to particular forms of ignorance: *delayed knowledge* by deferred data delivery and *selective or suspended knowledge* in 'science by press release', whereby

effective headlines are made with claims not yet backed up by available data or publicly accessible peer review.

Likewise, the contracts on which vaccine research was based were not made public. Not only did developers sell their vaccine for different prices to different bidders; but national governments and publics were actively barred from knowing the exact details of production and pricing. Only partial information was accidentally released in early 2021. While officials at the European Commission have threatened to make contracts public, secrecy, as a form of sanctioned public ignorance, is pervasive even in a domain where the public is invested with millions and in a context of a severe public health emergency of international concern. (e.g. Croissant, 2014; Otto, 2019; Rappert et al., 2011)

Ignorance, here, is not produced unilaterally by industry, but in the intimate nexus between industry and public actors. In the fall of 2020, the European Commission invested in costly contracts to purchase *Remdesvir*, at the time a promising COVID-19 treatment, but did so based on very limited evidence. Only eight days later, it became evident that *Remdesvir* would not fulfill its therapeutic promises (Hordijk and Patnaik, 2020). By signing contracts early on and merely on the basis of one-sided, overly optimistic expectations, however, the European Commission contributed to a regime of institutionalized ignorance. This instance is somewhat reminiscent of decisionmakers' investments in massive stockpiles of antiviral *Tamiflu* in the context of the pandemic flu in the 2000s (Elbe, 2018). Given the current pressure on vaccination, there is then a clear risk that these different forms of ignorance become inscribed into regulatory infrastructures despite past efforts to make these more robust.

Implementing the vaccine roll-out: circulating and fencing vital knowledge

In line with the focus on technical fixes, the notion of a global *roll-out* of vaccines is fraught with problematic forms of selective nonknowns. It conceals not only the (non-)knowledge practices that inform its centerpiece – the vaccine – but suggests that this process is linear and without frictions. This warrants a thorough look at the investment and *disinvestments* of particular knowledge forms that have informed COVID-19 policy from the very outset.

To begin with, the formation of public–private product development partnerships raises a set of questions regarding the intricate – and insufficiently transparent – entanglement of public and private interests. The first issue pertains to the ownership and accessibility of the knowledge 'co-produced' in these public-private collaborations, and especially the role of patents. This is particularly critical inasmuch as the proportion of public funding has been extremely high, and much work of scientists has been undertaken in publicly funded labs and in an open science fashion, thus freely sharing knowledge, such as on genomic sequencing on emerging viral strains in the open science network Nextstrain (Zastrow, 2020).

Aware of the problematic character of patents, the UN initiative Access to COVID-19 tools set up a pool in which knowledge and technology were to be shared globally for the purpose of open innovation. However, its technology access pool has remained largely empty to this day. Despite pervasive notions of a shared burden – 'no one is safe until everyone is safe' – the call for joint collaboration across sectoral and national borders runs into constraints, because the pooling of proprietary assets in 'public–private' arrangements is only deemed viable under strictly confined conditions that abide by, and reinforce, private ownership through intellectual property rights (Lezaun and Montgomery, 2015). Similar development concerns the ambition of a fair and equitable distribution of vaccines, once they are fully developed and licensed. Corporate control over vaccines through trade secrets and patents also thwarts efforts to produce and distribute vaccines globally in an effective and distributed way. The UN-CoVAX Facility,

in essence a buyers' club with a re-distributive mechanism focused on 'global' health needs in low-income countries, has further become undermined by bilateral secretive competition and debates on the circumstances under which it would be possible to scale up production by using unused factories of other manufacturers or newly created production sites.

In October 2020, countries of the Global South, under the leadership of South Africa and India, petitioned the World Trade Organization (WTO) to suspend the enforcement of intellectual property claims on technologies needed to fight the COVID-19 pandemic. A 'TRIPS waiver' would allow countries and manufacturers around the world to quickly and unbureaucratically produce the essential technologies to improve global supply. Following negotiations that were largely conducted behind closed doors across a period of six months, unsurprisingly, the initiative was rejected, largely due to the veto of powerful countries mainly from North America, Europe, Japan and Australia – the very countries that have already secured the vast and disproportionate share of globally available vaccine doses (Bhutto, 2021).

In the face of pressure from public opinion, the pharmaceutical lobby has increasingly pointed to instruments that already exist under the TRIPS treaty to enable states to temporarily suspend patent rights in the face of a 'public health emergency'. Yet, these mechanisms are practically unfeasible, because they involve lengthy case-by-case negotiations that require multiple expertise on technical and procedural questions. Pointing to the mere fact that this formal mechanism 'exists' as a solution in the current pandemic is possible only when knowledge of its intricacies and practical challenges becomes actively sidelined or eluded. As critics and activists underscore, barring countries from accessing knowledge pertinent to vaccine development amounts to a willful fencing of vital knowledge in the name of profits, property rights and trade secrecy (Oxfam, 2020). Beyond its humanitarian impact, the distribution of technological expertise under legal certainty would multiply production capacity on a global scale.

Evaluating pandemic policies by selecting knowledge

A final stage in the social life of policies is evaluation, which can be broadly understood as efforts to assess the impact and effectiveness of policies against their stated aims and intentions (Jann and Wegrich, 2007). Despite its seemingly technical guise, policy evaluation amounts to a value-laden undertaking (Fischer, 1990) which can take different shapes and temporal dimensions. For the sake of the argument made here, we focus on scientific evaluations; more specifically, we explore the very possibility of evaluation in the context of COVID-19 policy.

Policy assessment typically relies on the willingness of policy institutions to be evaluated – not only the availability of pertinent data, but the use of this data, too. Policy studies has typically presumed that modern 'governmentalized' states have an active interest in knowledge over its population for the sake of governance. Yet as recent contributions (Best, 2021; 2012; Boswell and Badenhoop, 2021; Paul and Haddad, 2019) have suggested, state actors and bureaucracies can take a variety of positions vis-a-vis ignorance: beyond strategic intent, states can be ambivalent, if not complacently ignorant, about further elucidating social and political problems over which they feel they have little control.

Let us return to the role of data and their key role in producing metrics as a source of knowledge. Here the policy cycle comes full circle, as the evaluation of policy usually presents the starting point for further problematization and new agenda setting. For instance, what impact have policy measures such as school closures, testing policies and physical distancing had on infection rates? What groups are hit hardest by the pandemic, both clinically and economically? How have policy measures impacted on mental health? Asking and responding to these critical evaluative questions is experienced as a risky knowledge practice by some: an opinion piece

on the 'COVID science wars' published in *Scientific American* reports a tense political climate in which researchers feel intimidated to publish data that question the efficacy of those measures publicly propagated as 'vital' in the governance of the pandemic, such as the effectiveness of face masks to prevent infections (Brownlee and Lenzer, 2020).

Beyond such extremes, we find several hindrances in the way of any sound evaluation. As the pandemic has made evident, some countries lack adequate data infrastructure to begin with – case definitions can vary across regions, data curation is not a habitual practice – and, importantly, precision is not always in the interest of the state when high incidence rates are politically costly and publicly visible, such as in the 'Our World in Data' initiative. Nonknowledge, or at least uncertainty, is more often politically convenient.

Moreover, even where data infrastructures exist, these can be tinkered with: seemingly simple performance indicators such as vaccination rates rest on comparing the number of doses administered to the eligible target population. But definitions of eligibility may vary across regions and can be changed *ad hoc*, depending on vaccine prioritization. Decisions as to who is counted and thus epidemiologically *known* are thus effective political practices. Beyond absent data and tinkered data, the centrality of quantifiable indicators creates what Broom et al. (2020) have labelled temporal myopia, or the impossibility for knowledge on long-term impacts to come *into view*: little effort has been made to assess what The British Academy (2021) has discussed as the long-term societal impact of the pandemic, and with the social sciences and humanities being at a structural disadvantage, long term perspectives are difficult to establish, particularly those that want to move beyond the acute seven–day-incidence reports and the short-term modelling exercises that have shaped this pandemic experience (Leonelli, 2021). By default, these knowledge practices also preclude the inclusion of experiential knowledge or lay knowledge in policy evaluation – or any other stage of the social life of a given policy. In sum, this makes evident that pandemic policies do not only create but also reproduce existing epistemic injustice by prioritizing quantifiable, short-term forms of knowledge practices.

Conclusion

This chapter coupled a policy studies perspective with established approaches to the study of ignorance, taking the ongoing COVID-19 pandemic as a unique moment to examine the role of ignorance and nonknowledge in policy processes. To introduce a systematic and explicitly policy-focused approach, we used the notion of the policy cycle as a heuristic device. Throughout the social life of policies (Appadurai 1986), we showed here, ignorance assumes different forms, some of them more strategic and intentional than others, but all of them doing political work at several stages of the policy process. As we have seen, these may occur in the form of *turning a blind eye* to historical lessons, or *bracketing out* alternative forms of knowledge in an overreliance on quantifiable knowledge, actively *concealing* and *delaying* knowledge, or in simply *not sharing* knowledge in the case of vaccine development. From problem definition to formulating policy and technical solutions, implementing policy and evaluating policy: all stages of the social life of a policy offer opportunities for actors to inscribe, process and institutionalize both knowledge and ignorance – be it state bureaucracies avoiding the collection and use of data, corporate actors delaying and concealing weaknesses of clinical trials, or governments failing to contribute to solidaristic pandemic policymaking by sharing knowledge.

Yet it would be a political mistake and an intellectual misconception to consider the panoply of things we do not know as either merely coincidental (i.e., 'residual knowledge'), or as the fully intentional strategic outcome of powerful actors conspiring behind closed doors for their own benefit. Sometimes ignorance comes in the form of convenient uncertainty or even

institutional complacency that thwarts any real political action. These are perhaps less glam-orous forms of ignorance, but no less political in their consequences. Critical policy studies with agnoto-epistemological sensibilities offers tools and methods to render these visible. But to do so, policy scholars must shift the analytical attention away from the mere mapping of uncertainties and unknowns that underpin policy towards questions of *how* we don't know – not just in terms of a philosophical inquiry, but also in terms of practical, critical and activist engagement. In this way, studies of agnotology and policy studies can jointly tackle, empiric-ally and conceptually, how ignorance supports particular power structures reinforced in public policy. Placing ignorance on a par with policy knowledge offers an opportunity to both make sense of and confront the current *Realpolitik* of truth that threatens contemporary democracies and has put lives at risk.

Notes

2 The argument developed in this section draws on our previous work (see Paul and Haddad (2019).

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