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Learning from the COVID-19 crisis: an initial analysis of national responses

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ABSTRACT
Governments everywhere faced daunting and often unprecedented challenges in the face of the first peak of the COVD-19 pandemic. Public leaders sought to regain control over a highly uncertain and dynamic threat, formulating strategies that were implemented at considerable economic, societal and political costs. Normal modes of policymaking had to be abandoned, as conventional toolkits and contingency plans proved ineffective. In this paper, we offer a first inventory of possible lessons that we draw from our study of crisis responses in various European political systems. Our aim is to formulate an agenda for learning lessons from the management of the largest crisis to hit the world in years. These lessons should help policymakers prepare for future crises, which appear inevitable.

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1. Introduction: Learning from a creeping mega-crisis

COVID-19 is the second transboundary mega-crisis to hit contemporary societies in this century (following the financial crisis). This seems to confirm the notion that societies (and, thus, states) have become increasingly vulnerable to transboundary threats (OECD 2003; Ansell, Boin, and Keller 2010; Boin and Lodge 2016). Given the manifest possibility of further such transboundary threats (think of climate change, immigration, potable water shortages and cyber terrorism), it is essential to reflect on what we can learn from national COVID-19 responses to date.

COVID-19 presented a fundamental challenge for the crisis management capacities of the modern state. At the time of writing, the pandemic had caused considerable excess deaths in many countries, placed huge strains on health systems and has had considerable (and varying) effects on economic and social life. COVID-19 therefore truly classifies as a "mega-crisis" (Helsloot et al. 2012).

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This was a crisis that arrived slowly. China informed the WHO China Country Office about cases of pneumonia of unknown causes on 31 December 2019. It took most countries weeks if not months to formulate policy interventions. When the epidemic was seemingly brought under initial control (the curve was flattened), it took time to transition back to some "new" normality, characterized by face masks, social distancing and localized lockdowns. Arriving slowly and slow to leave, we may describe COVID-19 as a "creeping crisis" (cf. Boin, Ekengren, et al. 2020). The "creeping" characteristics of the pandemic posed novel and complex challenges, even to those policymakers well-versed in the management of "acute" crises, such as plane crashes or natural disasters.

This paper does not offer a premature policy evaluation as to which country may have intervened "better" than others at one point or another. It rather takes as a point of departure existing discussions and insights in the field of crisis management (for overviews, see Rosenthal, Charles, and 't Hart 1989, Rosenthal et al. 2001; Boin et al. 2016). We focus on the first phase of responses to COVID-19 (January–June 2020) in Western Europe. In particular, this paper focuses on four critical aspects or tasks that policymakers face in a crisis: sense-making (understanding a crisis); making critical decisions and solving emerging problems; crisis communication; and terminating a crisis through "exit strategies".[1]

In engaging with possible lessons from managing COVID-19, we acknowledge the difficulties that policymakers face when negotiating conditions of existential threat, a pervasive sense of urgency and deep uncertainty (Rosenthal, Charles, and 't Hart 1989; Boin et al. 2016). Little was, initially, known about the virus, its paths of transmission and its health impact. Standard advice (see World Health Organization Writing Group 2006) regarding how to manage pandemics was soon proven insufficient. Policymakers were pressed into taking measures that, in the context of western liberal democracies at least, were seen as both unimaginable and infeasible (such as extensive lockdowns as initially imposed in Wuhan). Once such measures had been taken, questions as to how to manage a lockdown, how to frame compensatory policy packages for ailing economies and how to eventually 'loosen' these lockdowns became critical, but could not build on existing experiences.

The Dutch Prime Minister, Mark Rutte, neatly summarized the challenge when he observed that he had to make 100% of the decisions with less than 50% of the required information. Political leaders and policymakers everywhere had to cope with this condition of deep uncertainty (Capano et al. 2020). It reminds us of what Yehezek Dror (1986) referred to as "fuzzy gambling". This paper's interest can thus be squarely placed in the category of "policymaking under conditions of adversity".

The following takes stock of initial lessons that deserve prioritization on the research agenda. The aim is to help policymakers enhance national crisis management structures and processes. We do so in full knowledge that any such probing into lessons will not help to produce policies that lead directly to prolonged reductions or elimination of reported infections. Our lessons can only have an indirect effect on fatality rates, economic trajectories, or long-term economic and societal impacts of the crisis. Epidemiological research will, in time, deliver more definite lessons with regard to the effectiveness of this or that measure – or combination thereof (closing schools, bars,

hair dressers etc.), taking account of country's "stating positions" in terms of existing administrative capacities, health infrastructures and public health generally.

Despite these limitations, it is possible, even in these early stages, to say something about the performance of crisis management structures, practices and strategies and thereby inform practitioner and research debates in crisis management. We do not offer these insights in terms of systematic probing into select countries, but draw selectively on wider comparative research (see f.i. Boin, Ekengren, et al. 2020; Capano et al. 2020; Maor, Sulitzeanu-Kenan, and Chinitz 2020; Pierre 2020). In the next four sections, we discuss potential lessons for the essential crisis management tasks of sense-making, decision-making, crisis communication and "crisis exiting". We conclude by pointing to five cross-cutting factors that require further investigation in the worlds of research and practice, to help us get prepared for the inevitable mega-crises that we will face in the future.

2. Making sense of crisis: the challenge of deep uncertainty

The mechanisms of a pandemic are well known. A virus spreads easily in a society where many people work and play together, travel widely and frequently, and do not like to limit their personal behavior (WHO 2020a). Every virus, however, has its own peculiar characteristics, which need to be understood before its speed, scope and consequences can be, at least somewhat, accurately mapped. COVID-19 proved no different. The more doctors and researchers learned about the virus, the more perplexed they became (see e.g. Cookson 2020).

Policymakers everywhere entered the COVID-19 crisis in a fog of uncertainty. Deep uncertainty is, of course, a defining characteristic of crisis (Rosenthal, Charles, and 't Hart 1989). In most crises, uncertainties are quickly reduced through established methods of information collection and analysis (crisis researchers refer to this process in terms of "sense-making"). The COVID-19 crisis was unique as it kept generating new uncertainties (for instance with regard to exit strategies). It is therefore interesting to contemplate why policymakers kept operating in the dark. We identify four key factors that seemed to have played a limiting role in understanding COVID-19.

The absence of testing capacity is one critical factor. Many countries did not have the laboratories or materials to ramp up testing and meet the WHO's "test test test" advocacy (Campbell and Epstein 2020). In some countries, ramping up testing capacity was delayed by policy choices: it was considered sufficient to only test people who had symptoms or worked in critical jobs; in other countries, test capacity had been privatized well before the crisis. Countries that did begin testing soon and widely (Germany, South Korea) appear to have had a better idea of the extent to which the coronavirus had spread among their population (Hall and Buck 2020).

A second factor is the lack of 'track and trace' capacity. The WHO guidelines prescribe that the recent contacts of each discovered patient are traced in order to identify and warn people that may have been endangered by the patient (World Health Organization Writing Group 2006). This is not rocket science, but it does require significant human resources to do it right and do it quickly.[2] Some countries, like the Netherlands and the United Kingdom, simply gave up in the early phase of the crisis

(Boin, Overdijk, et al. 2020). Other countries doubled down and made every effort to identify everybody at risk (Williams 2020). The effectiveness of the German response has been explained as a result of aggressive contact tracing (Chazan 2020).

A third factor might be referred to as the humility of experts. In many countries, decision-makers relied on experts (virologists, epidemiologists) to make sense of COVID-19. Some of these experts became public personalities overnight (Kupferschmidt 2020). However, these experts themselves needed to interpret emerging research in the absence of reliable data in those early months of the pandemic. Even the available data was problematic, due to different ways of recording causes of death, different types of outbreaks (concentrated within one facility or spread across a local community), or administrative constraints (e.g. in Germany, infection reporting was affected by some local authorities not reporting on weekends). Modeling filled the void (Raphael 2020; Sample 2020). In modeling without data, starting assumptions become rather important. It matters a great deal whether your assumed R0 is 2.1% or 3.4%. It is no surprise, then, that prestigious university centers in the UK arrived at very different assessments of the situation (as they used different assumptions in their models).[3] This helps to explain why policymakers zeroed in on indicators that, in fact, appeared reliable (the number of COVID-patients in IC wards).

A fourth factor is the limited access to certain groups in which the virus might spread. In the US, the African-American communities were hit harder than other communities (Maqbool 2020; Kaur 2020). The same pattern existed in the United Kingdom. In Singapore and Germany, authorities were surprised by outbreaks of COVID-19 cases among migrant workers who live in cramped dormitories (Leung 2020). During this pandemic, public policymakers discovered that certain groups simply were not on their radar.

The combination of these factors points to the distinct challenges encountered in sense-making during COVID-19. Drawing from the crisis management literature, we can formulate a few lessons that may help to enhance sense-making capacity in the light of future pandemics.

- *Prepare to collect more rather than less data*. Collecting data is expensive and time consuming, but it is essential for making sense of a crisis. Governments have to learn how to ramp up data collection operations on short notice.
- *Spread the net widely*. In collecting data, experts and policymakers should try to reach all segments of society. Research is needed to help policymakers identify and access all relevant segments.
- *Expert assessments cannot replace empirical fact-finding efforts*. Experts may know a lot about general mechanisms and dynamics of a certain threat type, but that does not mean they possess actual information about a situation.
- *Model builders must clearly explicate starting assumptions and limitations of their models*. In the fog of uncertainty, policymakers will be happy with authoritative-sounding assessments of the situation. The allure of modeling is clear: it suggests a clear 'operational picture'. Experts should publicly discuss the nature of a model (predictions based on limited data and assumptions).

3. Crafting a response that is both effective and legitimate

The coronavirus was much more contagious than initially thought, many carriers turned out to be asymptomatic, and the effects on a small, but not insignificant percentage of people were deadly. With no cure in hand, hospitals (especially the IC-units) could get quickly overwhelmed if the virus was allowed to spread. As decision-makers faced the prospect of overwhelmed health systems, they had to weigh unprecedented measures of social distancing and imposed quarantines. These measures would cause economic and societal disruption. But would the great majority of people follow these unprecedented rules? Policymakers could not know that most citizens and business owners would abide by the imposed regimes of social distancing (in countries reliant on largely informal economies, such rule compliance was far more problematic).

Governments everywhere soon encountered problems that threatened to undermine either the effectiveness or the legitimacy (or both) of their response. Typical problems that required attention included the lack of IC beds, ventilators and qualified personnel; a shortage of PPE; citizens stranded abroad; and the enormity of the looming economic damage (Blamont 2020; WHO 2020b; Walker 2020).

Most governments found themselves ill-prepared to deal with the COVID-19 crisis. This may seem odd as the specter of a pandemic was frequently raised and national threat assessments routinely included pandemics among expected future threats. Moreover, experts had warned that the international community was not ready for the next pandemic.[4] A complicating factor was the apparent effectiveness of existing plans in earlier crises. Most western countries had plans in place that had worked in response to SARS and H1N1.[5] Dutch policymakers described their pandemic planning as 'excellent' (Boin, Overdijk, et al. 2020). The UK's Coronavirus Action Plan, published on 3 March 2020, similarly mentioned a reassuring 'track record of success' (Department of Health and Social Care 2020).[6]

Conventional wisdom would dictate that social distancing is a key to stopping a pandemic. Quarantining has featured as a response for centuries (e.g. pest houses) and beak-like plague masks may be regarded as predecessors to the modern day facemask. In reality, there was a surprising dearth of validated knowledge with regard to the feasibility and impacts of what are referred to as non-pharmaceutical interventions (NPIs) (Aledort et al. 2007; World Health Organization Writing Group 2006).

The NPIs that we are now so familiar with – social distancing, the use of face masks, the closing of social gathering points – were introduced with limited scientific knowledge. In fact, conventional wisdom among public health experts considered many of these measures infeasible. According to one literature review, experts rejected 'non-pharmaceutical interventions including mask-use [.], school and workplace closures early in an epidemic [.] as likely to be ineffective, infeasible, or unacceptable by the public' (Aledort et al. 2007, p. 1). A group of experts assembled by the WHO (World Health Organization Writing Group 2006, p. 1) agreed that "forced isolation and quarantine are ineffective and impractical". Michael Tildesly, a member of the UK's SAGE advisory group later commented: 'This is something we were wrong about. We completely underestimated how incredible the general public were' (Parker et al. 2020, p. 14).

Many countries had a pandemic plan that prescribed the centralization of power in a national crisis response team.[7] Public health experts were closely tied into these national crisis teams. The Netherlands, for example, assembled a national Outbreak Management Team (Boin, Overdijk, et al. 2020). In Sweden, due to its government structure, the response was largely dictated by public health experts (Pierre 2020). In many countries, there was much discussion about the apparent 'rule of scientists'. While that certainly was true in Sweden, in most other countries – including Germany, Italy, the UK, New Zealand and the Netherlands – politicians made the most consequential decisions (e.g. Boin, Overdijk, et al. 2020; Ministry of Health 2020). They rarely failed to support their decision with a reference to 'expert advice'.

The most consequential decision was the imposition of some type of lockdown. China set the example with a full-scale lockdown in its most affected provinces. Many countries followed suit. A handful of countries (the Netherlands, Sweden, Germany and the UK) adopted a more cautious approach, imposing more modest measures and awaiting feedback with regard to their effectiveness. Some countries did not do anything (Brazil, Nicaragua). Sooner or later, most countries imposed some type of lockdown for an extended period of time. Countries such as the Netherlands, Germany and Sweden were among the few countries that avoided complete lockdowns (Die Bundesregierung 2020; Boin, Overdijk, et al. 2020; Pierre 2020). Most European countries and the United States provided financial support to citizens and businesses, even though the length and amounts differed widely (BBC 2020b).

International coordination of all these efforts was largely absent. In most countries, this apparently was not an urgent question. As borders were closed, international organizations such as the European Union (EU) played a very modest role (if any) in coordinating immediate national responses. The World Health Organization's reputation was challenged by criticism regarding (the speed of) its advice and its initial role in supporting China's initial response.

Although generalizable statements about the effectiveness of different strategies would be highly premature, one can formulate a few initial lessons with regard to crisis management:

- *Plans only go so far*. Crisis plans rarely survive the first contact with reality (Clarke 1999). In spite of what public health experts predicted (or thought they knew), the public acceptance of imposed lockdowns was surprisingly high. Contrary to widespread assumptions, the public did not panic or shirk. This observation suggests that preparatory plans should be taken as a starting point for the response, to be continuously challenged and adapted in the light of unfolding dynamics.
- *A response was produced*. The crisis literature has often noted that politicians can fall prey to indecision or outright paralysis in the face of deep uncertainty and absent policy options. While some leaders acted (much) quicker than others, most countries managed to formulate a crisis regime – improvised, copied or happened upon – that managed to flatten the curve and preserved the legitimacy of the national response.

- *Politicians firmly in charge*. The experts came up short in the early phase of the pandemic. International guidelines turned out to be inadequate (they hardly mentioned NPIs). There was no evidence-based repository of policy measures available. It is no surprise, then, that political leaders and national policymakers took the most consequential decisions, sometimes acting against the advice of experts.
- *Inward inclinations*. In times of crisis, political leaders appear, at best, lukewarm with regard to the prospect of international coordination. National, if not subnational borders are quickly rediscovered: leaders concentrate on their primary administrative tools at hand to control 'their' population. International organizations such as the EU will have their work cut out to demonstrate their 'added value' in times of crisis or they may have to re-shape their ambitions to playing 'back room' support in enabling greater coordination over national response efforts.

4. Maintaining solidarity through crisis communication

In the absence of a vaccine and a cure, social distancing became the most important remedial tool during COVID-19. Initial fatality data suggested that the lives of relatively small groups of people (the elderly and those with underlying medical conditions) depended on the behavior of all others (DW 2020a; BBC 2020d). The great majority, in other words, had to suffer significant limitations on their lives and livelihoods to protect the few from premature death (leaving aside the growing knowledge of other severe health impacts of COVID-19 on some individuals).

Pandemic plans that were based on WHO guidelines incorporated the assumption that most people are unlikely to abide by social distancing rules, certainly not for a longer time. Disaster researchers have often noted that people behave in remarkably social and supportive ways (Quarantelli 1988; Solnit 2010). Crisis researchers, on the other hand, have pointed to the near-inevitable politicization and polarization that often emerge as the crisis abates (Boin, McConnell and 't Hart, 2008).

Politicization worked out differently in several countries. In Italy, a political blame game between central and regional levels slowed the national response (Capano et al. 2020). In Germany, the federal government needed to orchestrate different subnational government responses, having to also accommodate the political aspirations of different *Land* prime ministers looking to succeed Chancellor Merkel. In Sweden, politicization hit the country in a later phase of the crisis. All parties were initially broadly on board with the decision not to go into full lockdown. However, this changed as death figures increased (in care homes particularly), especially in comparison to other Scandinavian countries, and government epidemiologist Tagnell admitted that mistakes had been made (Duxbury 2020). In the United Kingdom, a fierce blame game ensued over the question why the UK government had delayed going into an overall lockdown and whether that choice was based on ideas regarding encouraging "herd immunity" (Health and Social Care Committee 2020; Prime Minister's Office 2020a; Titheradge and Kirkland 2020).

So even if solidarity materializes seemingly natural in response to a threat, crisis researchers would argue that it needs to be maintained, especially if the situation

appears to be under control and on its way to "normality". The challenge for crisis leaders can be simply stated but is quite complex: they have to motivate people who are unlikely to suffer from the virus to make a personal and long-term sacrifice that will not be compensated. They can do this through a mixture of 'muscles, sermons and prayer' (cf. Gormley 1989). Some governments relied heavily on the state's muscles: lockdowns were enforced with armed patrols and heavy fines. Other governments relied on communicating a convincing story: explaining why solidarity was needed and evoking a sense of shared responsibility (the "responsible" citizen) (Savage 2020). Most states used a combination of the two strategies.

The literature on crisis communication offers clear prescriptions to crisis managers (Sellnow et al. 2009). Effective messaging is characterized by clarity, empathy, actionable advice, timing and differentiation for multiple audiences.[8] Most leaders followed the playbook. For instance, advice such as washing hands for at least twenty seconds was widely dispensed and widely adopted.

Three leaders received glowing reviews: Prime minister Ardern (New Zealand) became the most popular prime minister of New Zealand in the past century as her political party rose in the polls (O'Brien 2020). Prime minister Rutte (the Netherlands) enjoyed widespread support from the Dutch population (Boin, Overdijk, et al. 2020). First minister Sturgeon (Scotland) upheld her reputation as 82% of the Scottish public said that she had done very well (Gray 2020). Other leaders received less flattering reviews. Prime minister Johnson (UK) was said to be handling the coronavirus outbreak badly by 55% (Gray 2020). President Trump's (USA) handling of the crisis was disapproved by 58% (Kahn 2020). President Bolsonaro's (Brazil) disapproval rating reached 55% (Boadle 2020).

The COVID-19 crisis by and large seems to support the findings and prescriptions of crisis communications scholars. We offer a few observations deserving further research:

- *Understanding the audience (citizens don't panic that easily).* When policymakers face the prospect of having to impose harsh measures, they are well advised to consider the feasibility of those measures. They don't have to worry about frightening citizens, however. Crisis research clearly shows that people usually do not panic, even in disastrous situations (unless their life is under immediate threat). Research should help to explain how this classic finding can be effectively disseminated among policymakers.
- *Inconsistency between message and measures matters.* President Trump consistently underplayed the messaging of experts with regard to social distancing and the wearing of face masks (Brooks 2020). The delegitimization of experts opened up space for alternative explanations and theories, which, in turn, fueled polarization (from "anti-maskers" in the United States to the "virus insanity" [virus waanzin] movement in the Netherlands and elsewhere).
- *Symbolics matter.* Soon after the UK went into lockdown, prime minister Johnson tested positive for coronavirus. A month later, on April 30, Johnson held his first speech after his recovery from days in intensive care. In the speech, Johnson shared his experience, thanked the medical staff for taking good care of him, and

delivered good news because soon he would announce the UK's exit strategy (Prime Minister's Office 2020b). The symbolism of his comeback worked in favor of the prime minister. A month later, however, the situation turned as Johnson defended a rule-breaking family trip that Dominic Cummings, Johnson's senior adviser, took during lockdown (Dodd 2020). The symbolism that accompanies the UK government's slogan 'Stay home, protect the NHS, save lives' was damaged, especially as this advisor, unlike other politicians or experts found to be rule-breaking, did not show any remorse, let alone resign.

- *You will have to explain what you do not do*. The COVID-19 crisis gave rise to an army of amateur virologists and intense public discussion. Looking to the crisis regimes of other countries, public discussions would soon revolve around the question 'why don't we do that?' The closing of schools is a case in point. For example, the measures implemented in Ireland and the UK were compared to each other. On March 12, Ireland closed its schools. This increased public pressure on the UK to follow suit, especially as parents removed their children from schools themselves (Carroll 2020).

5. Formulating a 'loosening' strategy

One of the unrecognized challenges of crisis leadership is the termination of a crisis (Boin et al. 2016). It is tempting to equate the operational cessation of activities with the end of the crisis. But that is not always the case. Creeping crises, especially, have undefined closure points; the road to the exit may harbor nasty surprises. The COVID-19 crisis was no different. The closure of COVID hospital wings and the reopening of restaurants did not mark the end of the crisis.

The effectiveness of the COVID-19 response depended to a significant degree on the prolongation of imposed lockdown measures. The longer these were maintained, the more likely an effective response in terms of reducing patient numbers. But that same effectiveness fed a sense of impatience among citizens and business owners. A careful balance between effectiveness and growing impatience was not always easy to maintain. Failure to maintain that balance resulted in instant politicization, which, in turn, undermined the effectiveness of the response. So while political leaders and their exhausted staff may long for the end of the crisis, it may require more work than imagined.

In formulating exit strategies, policymakers lacked scripts. They also faced a dilemma: keeping the number of coronavirus cases down demanded a cautious approach toward relaxation of measures; supporting the economy required a rapid easing of restrictions. Different leaders made different choices. Some leaders were very cautious ("better safe than sorry", pronounced Dutch prime minister Rutte), testing the patience of citizens and business leaders (Boin, Overdijk, et al. 2020).

This challenge of maintaining an effective response while easing back to a new sense of normalcy is one that leaders have not encountered often, if at all. We can formulate some first lessons here that may enrich the budding research into crisis termination.

- *Creeping crises may last a long time, changing shape along the way*. The COVID-19 crisis reminds us just how long a crisis can remain active and how many new

surprises it may bring. Politicians must deal with societal impatience, while exhausted policymakers must keep 'ramping up' capacity. Meanwhile, routine problems return to the agenda. Research should provide policymakers with scripts to deal with extended periods of volatile adversity.

- *The limited usefulness of experts.* In the absence of evidence-based insights, smart experts will want to avoid making promises regarding "safety" that they cannot keep. This opens the way to the precautionary principle: only offer advice if you are absolutely clear that it will cause no harm. In a situation where politicians rely on expert advice, we might then expect policymakers to start shunning experts who keep telling them there is no evidence for the effectiveness of this or that measure. This prompts the question: what role for experts during the exit phase of a creeping crisis? (cf. Rosenthal and 't Hart 1991).
- *The democratization of expertise.* In the early phase of COVID-19, medical experts played a prominent role. As the aim shifted over time from preventing deaths to designing a 'new normal' strategy, the need for a more interdisciplinary approach arose. The German National Academy of Sciences Leopoldina (Leopoldina Nationale Akademie der Wissenschaften 2020, p. 2) recommended such an interdisciplinary approach, stating that 'political decisions to deal with the crisis must recognize the multidimensionality of the problem'. Experts with social, legal, educational, and economic backgrounds came to the fore, giving rise to a cacophony of opinions and expert advice. The question is now slightly different: what role for which experts?

6. The need for improved response capacities in the light of creeping mega-crises

The COVID-19 crisis brought urgent challenges that policymakers had to resolve under conditions of deep uncertainty: understanding the nature of the virus, improvising social distancing measures without evidence-based roadmaps, communicating with an anxious public, and preserving economic and social well-being. While we are not in a position to offer definite assessments, it appears that policymakers were quite effective in crafting an initial response. In many countries, the curve was flattened.

But the 'creeping' character of COVID-19 caused additional challenges that made this crisis so much harder to manage than those crises that are more sharply delineated in time. In the face of rising impatience if not desperation, some sort of crisis regime had to be maintained in order to keep the virus under control. Some sort of endpoint had to be defined in the absence of any evidence that would enable such promise. New dilemmas arose, as exhausted policymakers kept discovering the limits of available expertise. Crisis management is akin to sailing through the fog, but in this crisis the fog never seemed to lift.

Our discussion of the COVID-19 crisis unearthed a set of factors that shaped national policy responses, for better or worse. We end this paper with a list of the five factors that should be at the heart of future comparative research into the effectiveness and legitimacy of national responses.

Preparation and planning. Most countries have experience with epidemics (think of AIDS, bird flu, Mexican flu [H1N1], and MERS) and have detailed plans and protocols in place. The guidelines of the WHO inform these plans. But countries can be seemingly well prepared and discover to their surprise that they are not. If we are not prepared for a known risk (the 'next pandemic' features on everybody's future risk list), how prepared are we for an 'unknown unknown'?

A fruitful relation with experts. Scholars have long studied the relation between experts and policymakers (Fischer 2009; Lodge and Matus 2014). One might say that they 'travel in parallel universes' (Brownson et al. 2006). A crisis forges those universes: policymakers suddenly want to hear from experts, even if they do not have the required knowledge for the situation at hand (Rosenthal and 't Hart 1991). COVID-19 was no exception: the crisis created (hesitant) rock stars out of obscure scientists. It also prompted the question what, exactly, the role was of all these virologists and epidemiologists in the crisis decision-making process, especially in terms of diffusion of international knowledge that fed into national decision-making systems. Who were making the critical decisions, experts or politicians? How do governments know that they have 'best in world' expertise available? Who are the boundary-spanners across disciplines and between science, executive decision-makers and public health managers? The COVID-19 experience has catapulted these questions back to the top of the research agenda.

Communicating through an extended crisis. The imposition of a crisis regime that tests the boundaries of solidarity poses serious challenges to the crisis communication skills of political leaders and their advisors. Some leaders (Jacinda Adern) were lauded, others (Donald Trump) were criticized for their crisis communication skills. Those extreme cases should not distract us from the observation that most leaders, one way or another, managed to convince their citizens to make serious sacrifices. Such communicative efforts have to, however, be linked to consistent behavior by political elites, and they become increasingly tricky, once measures had been 'loosened' and required readjusting. The question is whether the insights of the crisis communications literature prepare crisis communicators for the management of creeping crises.

How long can a crisis regime last (without losing legitimacy)? COVID-19 brought the world the longest period of sustained crisis regimes since World War II. Public health emergency powers were used to make hugely consequential decisions. The consequences will no doubt be studied and assessed in the post-crisis phase. The crisis literature has a lot to say about the detection of crises, early warnings and the subsequent activation of crisis regimes. It has much less to say about the relaxation of crisis regimes (the return to routine policymaking modes). It also has little to say about the depletion of administrative and health system capacity over time, as spending constraints tighten and public resistance toward voluntary compliance increases. COVID-19 provides fertile ground to pursue this line of inquiry.

Enhancing international cooperation? The logic of transboundary crises would strongly suggest a need to develop transboundary crisis management capacities to deal with these crisis types (Ansell, Boin, and Keller 2010). In many ways, national responses to COVID-19 were shaped by international context, whether it was alarm at TV images from Italy, geopolitical posturing between the US President and China, or

the way in which national populations adjusted their behavior in view of policy responses elsewhere (such as parents withdrawing their children from school). Precisely those institutions that were designed to provide mechanisms and protocols to enhance international collaboration and coordination in the face of a global crisis were found wanting in the case of COVID-19. Have these investments in international collaboration proven irrelevant by COVID-19? What are the roles of transboundary crisis management in the context of (the different stages of) transboundary crises, such as COVID-19?

Notes

1. We do not take into account the pre-crisis phase (the missed early warnings).
2. In the UK, questions surfaced about process, such as the recording of addresses in handwriting which inevitably led to mistakes or the reluctance of individuals to receive phone-calls from health officials as they, mistakingly, identified the (unknown) numbers with cold callers. See https://www.dailymail.co.uk/news/article-8599203/Cold-callers-blamed-test-trace-failures-NHS-using-0300-numbers.html
3. https://www.ft.com/content/5ff6469a-6dd8-11ea-89df-41bea055720b
4. See, for example, the warnings of Garrett (1994) and Bill Gates (https://www.gatesnotes.com/health/we-are-not-ready-for-the-next-epidemic).
5. The UK, for instance, based its crisis response plan primarily on the plans it had developed in 2011 for an influenza pandemic (Department of Health and Social Care, 2011).
6. This track record included, according to the document, the 1918 Spanish Flu and other outbreaks, most of which did not reach the United Kingdom.
7. Few countries did not initiate any sort of (centralized) crisis governance. For example in Brazil, where the federal President largely defied social distancing measures and lockdowns implemented by federal states and regions (McCaffrey 2020c). In federal countries, tensions ensued between national crisis management structures and sub-national authorities. Discussions arose when some states eased the restrictions faster than others (Marcus 2020).
8. This may be harder than it sounds. In the Netherlands, for instance, the majority of the younger population (16-24 years old) felt ignored by the national response (Kamphuis 2020). A few months later, the youth population was identified as an important spreader in the upswing to a 'second wave'.

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