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SOCIAL STATE

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## Abstract

We consider the implications of the Covid-19 crisis for the theory and practice of governance. We define ‘governance’ as the process through which, in the case of a given entity or polity, resources are allocated, decisions made and policies implemented, with a view to ensuring the effectiveness of its operations in the face of risks in its environment. Core to this, we argue, is the organisation of knowledge through public institutions, including the legal system. Covid-19 poses a particular type of ‘Anthropogenic’ risk which arises when organised human activity triggers feedback effects from the natural environment. As such it requires the concerted mobilisation of knowledge and a directed response from governments and international agencies. In this context, neoliberal theories and practices, which emphasise the self-adjusting properties of systems of governance in response to external shocks, are going to be put to the test. In states’ varied responses to Covid-19 to date it is already possible to observe some trends. One of them is the widespread mischaracterisation of the measures taken to address the epidemic at the point of its emergence in the Chinese city of Wuhan in January and February 2020. Public health measures of this kind, rather than constituting a ‘state of exception’ in which legality is set aside, are informed by practices which originated in the welfare or social states of industrialised countries, and which were successful in achieving a ‘mortality revolution’ in the course of the nineteenth and twentieth centuries. Relearning this history would seem to be essential for the future control of pandemics and other Anthropogenic risks.

**Keywords:** Covid-19, Anthropocene, risk, learning, legal evolution, social state

**JEL Codes:** I18, I38, J38, J88

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## 1. Introduction

The initial focus of research on the SARS-CoV-2 virus<sup>1</sup> and the disease it has generated, Covid-19,<sup>2</sup> was devoted to understanding its virology,<sup>3</sup> that is, its biological nature and origins, and its epidemiology,<sup>4</sup> that is, its infectivity and diffusion among the human population. As the virus spread worldwide, efforts to contain it were studied from the point of view of the behavioural sciences, with psychology to the fore.<sup>5</sup> Less studied to this point has been what we call here the *governance* of Covid-19. We use a broad understanding of the term ‘governance’ to refer to the processes and systems through which decisions are made and implemented within a given polity or entity, with a view to ensuring the effectiveness of its operations in the face of risks present in its environment. We set out the implications of governance theory, so defined, for the way in which the public health response to Covid-19 crisis has been managed to date, and for how we might expect responses to unfold in coming months and years.

Covid-19 poses in an acute form the issue at the core of governance research, namely the collective action problem: while the incidence and effects of the virus are not uniformly felt across populations,<sup>6</sup> the risks it poses can only be effectively addressed by a group-level response.<sup>7</sup> In the psychological literature on Covid-19, discussion has focused on role of biases and heuristics in shaping responses to the virus among populations, and on the tools available to governments in ‘nudging’ their behaviour. This focus neglects the role played by institutions, both public and private, in framing the way that risks of the kind posed by Covid-19 are understood and managed. To understand how policies are made and implemented in a context such as the Covid-19 crisis, additional disciplinary perspectives, drawn from the social sciences including applied research in law and political economy, can usefully be drawn on.

From a governance perspective, the risks and challenges posed by Covid-19 were neither unprecedented nor unexpected. They were predictable and, indeed, predicted.<sup>8</sup> Pandemics have occurred throughout human history, but they are not random events.<sup>9</sup> Their incidence is closely correlated with trends in human behaviour which are institutionally framed: the rise of trade, the associated movement of peoples, and resulting inequalities of income and resources. The response to pandemics has also been shaped by human institutions and in particular by the emergence of a particular kind of state – a welfare or *social* state – with the capacity, among other things, to mobilise the resources needed to control infectious diseases and manage their consequences. Here the term ‘social state’ (*État social*, *Sozialstaat*) better captures the full range of governmental functions involved in the management of social and economic risks, which include regulatory aspects of labour law as well as the risk-pooling features of

social security law, than the term ‘welfare state’ which is commonly used in the British context.<sup>10</sup>

Although the Covid-19 crisis is still unfolding, it is already possible to observe striking differences in countries’ responses to it, and in outcomes.<sup>11</sup> States differ in the aims they have adopted in managing the disease, on a spectrum ranging from repression to mitigation and accommodation. They also differ in the means used to implement these aims, from direct enforcement through regulatory instructions and criminal sanctions, to more indirect encouragement and persuasion. At this relatively early stage in the development of the Covid-19 pandemic, it is not possible to state with any certainty how differences in states’ responses may be related to their differing degrees of success in countering the effects of the virus.<sup>12</sup> Cross-national data on infection and mortality rates are not currently available in a standardised form. Because of differences in testing regimes and in approaches to the certification of causes of death, it is not possible to make systematic cross-national comparisons. This lack of comparability makes the identification of causal links between institutional interventions and health outcomes a problematic undertaking, but even with better data it will not be straightforward to design empirical research capable of isolating the relevant effects.<sup>13</sup>

However, some emerging trends can be clearly identified. On 15 October 2020, China, where the first outbreak of Covid-19 was documented,<sup>14</sup> had recorded a total of 4,739 deaths out of a global total of over one million cases.<sup>15</sup> The USA had recorded 216,904, the highest total of any country; the UK had recorded 43,245, the highest of any country in Europe.<sup>16</sup> In both countries, the public health response to the coronavirus was delayed and its operationalisation has been fragmented and incomplete.<sup>17</sup> What accounts for this failure?

A range of non-pharmaceutical interventions (‘NPIs’), including quarantines, cordons sanitaires, and test, trace, isolate and support programmes, were adopted in China in its response to the first reports of the Covid-19 outbreak in the final days of 2019, and were then replicated in varying degrees in a number of other countries in January and February 2020, in each case making it possible for the spread of the disease to be locally contained.<sup>18</sup> One explanation for the failure of other countries rapidly to adopt similar measures is that China’s reaction was in various ways exceptional: a product, alternatively, of an illiberal state regime,<sup>19</sup> or of a communitarian culture rooted in Confucian values.<sup>20</sup> Further research, focusing on the combination of political and social conditions which framed the Chinese response, may in due course throw light on these claims. The Chinese response, while the first and the most extensive in terms of scale and, understandably, the one which has so far received most attention, is not unique. Other countries which managed to suppress community transmission in the first

wave by a wide variety of NPIs include Korea, Taiwan, Vietnam, Rwanda, the Nordic countries (other than Sweden), New Zealand, Jordan and Uruguay:<sup>21</sup> in other words, countries from all continents, regions and cultures, and spanning the whole spectrum of political systems from liberal democracies to one-party states.<sup>22</sup>

Rather than focusing on loosely defined variables such as ‘culture’, we wish to draw attention to a simpler and, we suggest, more straightforward explanation for the success of the measures taken to control the virus in the minority of countries where this has been achieved. This is that the measures taken in China and elsewhere were not new, except, in the Chinese case, in the scale of their application. Each one of them has antecedents in the practice of the countries of the global North, which, in the case of Europe, go back to the late Middle Ages. Many of them were adopted with success in Britain (among other countries) as recently as the turn of the twentieth century, and played a central part in the construction of a welfare state which placed the protection of public health at its core.<sup>23</sup> These same policies were later embedded in global strategies for disease eradication which were formulated and disseminated by the World Health Organization (‘WHO’).<sup>24</sup> Yet in the current crisis, the roots of these practices have been largely forgotten in their countries of origin.

What has to be explained, we will suggest, is not why China followed a particular path, but why other countries, in particular the UK, given its history, did not. We will argue that the failure of certain states, including the UK, to respond more effectively to the immediate challenge posed by Covid-19, has roots in transformations of systems of governance which have been occurring since the late 1970s. These changes have been informed by theories of governance which have cast doubt on the effectiveness and legitimacy of public interventions in managing social and economic risks. As these theories took hold, the welfare state of the mid-twentieth century gave way to a very different model which we describe below as the ‘neoliberal state’. As it unfolds, the Covid-19 crisis will present us with an opportunity to assess the operation of these theories and the practices which they have informed. This paper makes a start on that process of assessment.

Our analysis proceeds as follows. Section 2 below sets out the elements of a theory of governance for Covid-19. While we can identify different streams of research on governance, alternatively stressing its institutional, systemic and conventional dimensions, for present purposes we think it is more important to stress what these approaches have in common, which is a focus on governance as process of learning in response to risk. With that specific point in mind, section 3 outlines the nature of the risks which the Covid-19 crisis has posed. Here we build on the observation that these risks are Anthropogenic in the sense of being

derived only partially from the underlying material (viral and epidemiological) nature of the Covid-19 disease; also important are its origins in human institutions. In section 4 we turn to an analysis of governmental responses to Covid-19. We focus on the Chinese case as it was both the earliest response and also, to a greater or lesser extent, the template for responses elsewhere, some of which have actively sought to replicate it, while others have to varying degrees rejected or departed from it. Then in section 5 we discuss how far the Chinese experience can be thought of as exceptional in the light of the history and recent practice of disease control. Here we make the point that measures taken in China were largely based on precedents from experience in other regions of the world including western Europe in general and the UK in particular, and on guidance from the World Health Organization which embedded these lessons in international standards. In section 6 we offer a concluding assessment. We return to theory and consider some of the lessons of the period of institutional learning that can so far be observed around Covid-19, and evaluate implications of the crisis for the future of the social state.

## **2. A theory of governance for Covid-19**

### **A. Governance within and beyond the state**

In defining governance as the process through which, in a given entity or polity, resources are allocated, decisions made and policies implemented with a view to ensuring its continuing effectiveness, we have deliberately chosen a broad and generic reading of the term. Narrower definitions exist for particular subfields such as ‘corporate’, ‘public’ or ‘contractual’ governance, in which emphasis is placed on field-specific mechanisms of accountability and control. Our reading of ‘governance’ is intended to convey a wider sense of the processes through which social and economic life is organised and reproduced over time in a range of settings.<sup>25</sup>

What we have just referred to as ‘processes’ have been described using various other terms, including ‘institutions’, ‘systems’ and ‘conventions’. These alternative formulations place varying degrees of emphasis, respectively, on the normative, adaptive and epistemic aspects of governance. Thus the term ‘institution’, following Ostrom, North and Aoki,<sup>26</sup> can be usefully deployed to refer to routines, practices and discourses, of differing degrees of formality, which have a rule-based or other normative character. Luhmann’s concept of ‘system’<sup>27</sup> captures the self-organising and adaptive quality of discourses and practices which adjust over time to changes in their external context or environment, influencing it in their turn. This is far from being an automatic process, nor does it produce results which are optimal or, indeed, in any sense linear, and so is far removed from notions of ‘evolution to efficiency’ which

continue to dominate certain governance sub-fields such as the neoclassical economic analysis of law.<sup>28</sup> ‘Conventions’ in the sense identified by Lewis<sup>29</sup> are norms and practices which embed and retain common knowledge among members of a community. Although these distinct approaches make different assumptions about objects of study and modes of inquiry, they share a focus on cognition, or the organisation of knowledge, as the basis of social order, and on evolution, or the mutual adjustment of systems and environment, as the mechanism of social change. These are concepts which can serve a unifying role across the otherwise disparate field of governance research.<sup>30</sup>

The ‘state’ is a contested concept in research on governance, but in practice is never far away. ‘Governance’ is closely related both to ‘government’, indicating the directive and coordinating function of the state, and to what Foucault calls ‘governmentality’, the art or technique of government, which includes embedding in governed populations the assumptions and beliefs which make such public action possible.<sup>31</sup> Thus both ‘governance’ and ‘governmentality’ are concerned with the state, understood as a central sovereign agent with unique powers of rule-making and enforcement,<sup>32</sup> without restricting their attention to it. Beyond the state there are many other forms of order including social norms, customs and routines; ‘informal institutions’ in North’s sense,<sup>33</sup> or conventions in Lewis’.<sup>34</sup> These sources of normativity, sometimes termed ‘informal’ to distinguish them for the more ‘formal’ apparatus of the state, coexist with, and may complement or oppose, as the case may, the operation of publicly instituted norms including those created by the legal system.<sup>35</sup>

Foucault’s notion of governmentality seeks to bring into the open the ‘biopolitical’ techniques used by the state to induce compliance among the population of the governed, and to identify the sources and effects of the state’s power.<sup>36</sup> The concept of biopolitics refers here to the assumption by the state of means of control over the conditions of living of populations. Both the ‘prison’<sup>37</sup> and the ‘clinic’<sup>38</sup> exemplify the state’s disciplinary reach. But Foucault’s account of ‘power’ is nuanced: it is not simply ‘repressive in character’, but ‘linked to the generation of new ways living’ and ‘the production of knowledge’.<sup>39</sup>

Among the mechanisms or modes of ‘private’ governance, market-based exchange occupies a distinct, and in contemporary governance theory as well as in practice, an elevated position. In certain recent traditions of social and political theory, the market is seen as a mode of resource allocation which is not just separate from but superior to and opposed to the state. The terms ‘neoliberal’ and ‘libertarian’ which are often used in association with these claims are contested to the point where some have suggested that it is not helpful to use them.<sup>40</sup> In his lectures on ‘The Birth of Biopolitics’, given at the Collège de France in 1979, Foucault identified neoliberalism in terms of what it stood against: it was a



reaction, in the United States, to Roosevelt's New Deal, and in Europe to the use of Keynesian economics employing the techniques of demand management, along with related forms of 'legal 'interventionism'<sup>41</sup> which were driven by the need for post-1945 reconstruction. Neoliberalism saw these interventions as departures from the *laissez-faire* tradition of the nineteenth century, which it sought to restore; thus *neoliberalism* was a renewal of liberal forms of governmentality which had been merely suspended under the 'emergency' conditions of global depression and war.<sup>42</sup>

At the same time, neoliberalism had an affirmative dimension. Neoliberal policies were informed by theories which to varying degrees argued for the priority of the market, exemplified by the price mechanism, over the state, exemplified by centralised planning, in the allocation of resources.<sup>43</sup> But while the concept of a limited state was central to the way in which neoliberal theories constructed their account of government, practice was different. Thus a core message of Foucault's notion of 'governmentality' is that the market order is far from being 'natural' or self-sustaining; it must be actively created by the state.<sup>44</sup> Hence to talk of a 'neoliberal state' is far from being a contradiction in terms.

What is contradictory within neoliberal thought and practice is the idea that these ends can be achieved by modelling the state on the market.<sup>45</sup> In the 'law and economics' and 'public choice' schools, the market model is generalised to the point where it becomes the organising principle for all other social domains, including the state.<sup>46</sup> This position can be contrasted with 'systemic' and 'institutionalist' positions, in which the market and the state, if connected through their coevolution, are nonetheless distinct in their modes of operation. Luhmann's theory of social systems emphasises their separation, noting that attempts to infuse the legal system (and by extension the state more generally) with an economic (that is, exchange-orientated) logic often encounter resistance. Law itself 'must not belong to the type of goods or services that can be bought in the economic system'; the law is one of the 'conditions which make money transactions possible' but which operates according to its own logic of adjudication and legislation.<sup>47</sup> Luhmann's systemic perspective on coevolution makes the point that the market ultimately depends for its mode of operation on non-market forms of economic and social organisation. From a somewhat different methodological perspective, Aoki's 'comparative institutional analysis' arrives at a similar conclusion: the internal logic of the market domain, in which agents trade private endowments, is distinct from that of the state or 'polity', in which government acts as a central agent with a set of action choices that are 'asymmetric' to those of private agents.<sup>48</sup>

These contributions emphasise the importance for governance and governmentality of institutional arrangements which posit or assume a state-market division or ‘public-private divide’. Where exactly the boundary between the state and the market is drawn, and whether the boundary between them is seen as in varying degrees as ‘watertight’ or ‘porous’, will vary in practice according to the institutional histories of particular societies and entities. The contemporary erosion of the public-private divide, which is visible in the extension of the market logic of resource allocation into the public realm as a consequence of ‘new public management’ and ‘quasi-market’ modes of organisation, is a source of weakness in the neoliberal state, which threatens to undermine the capacity to provide a range of collective goods, including those which the market itself relies on to operate.<sup>49</sup>

## **B. Cognition, evolutionary learning, and collective action**

Governance can have many purposes, depending on context: ensuring efficiency in the allocation of resources, maximising returns to certain ‘stakeholders’, aligning social and economic outcomes with policies, and so on. However, a more generic understanding of the function of governance would be that it is the means by which a given entity or polity (organisation, company, state) ensures the effectiveness of its modes of operation, and hence its survival, in the face of a changing context. Put this way, there is a relationship of mutual interaction between the internal modes of operation of a ‘system’ and the risks (‘threats’, ‘hazards’ ‘challenges’ and ‘shocks’) present in its ‘environment’. A system’s capacity for cognition – that is, its capacity to translate and retain information from its environment, and thereby to embed the lessons of past successes and failures in its internal processes – determines what Luhmann,<sup>50</sup> adapting a biological concept, refers to as its autopoiesis or capacity for self-reproduction. Aoki captures a similar idea when he refers to the corporation as an economic institution with ‘self-organising’ properties based around the ‘collective cognition’ of its members.<sup>51</sup>

Although governance can serve many ends, an overarching goal, which describes numerous more specific or concrete applications, is to arrive at solutions to *the collective action problem*. This arises in any context where, as Ostrom puts it, ‘individuals in inter-dependent situations face choices in which the maximization of short-term self-interest yields outcomes leaving all participants worse off than feasible alternatives’.<sup>52</sup> As she explains, the problem has been referred to in many ways: the ‘public goods problem’, ‘free-riding’, ‘credible commitments’, ‘hostages’, ‘tragedy of the commons’, ‘exchanges of threats’. It also has multiple applications including domestic politics, international relations, the theory of the firm, contractual performance, management practice, environmental protection, labour protection, and child rearing.<sup>53</sup> A pandemic raises collective action

problems at multiple levels: in the responses of populations to control measures; in the willingness of citizens to fund, through taxation, the interventions needed for a coordinated response; and in the preparedness of states to cooperate in steps taken to address the disease's global-level effects.

Collective action has been theorised using numerous models, of which the much-studied prisoner's dilemma game, in which individual and collective interests radically diverge, is just one. Although a static analysis of the prisoner's dilemma can lead to the conclusion that social cooperation of the kind needed to resolve the collective action problem is diminishingly rare, it is not hard to find empirical evidence of solutions to what Ostrom, generalising from the original prisoner's dilemma model, refers to as 'social dilemmas'.<sup>54</sup> In the synthesis of evolutionary and epistemic game theory presented by Gintis, the mutual defection scenario commonly associated with the prisoner's dilemma can be avoided where there is a 'high degree of intersubjective belief consistency', enabling players to coordinate their responses.<sup>55</sup> While there is nothing in *static* game theoretical models to guarantee this, in repeated games agents can learn to correlate their behaviour, taking their cue from public signals which serve as repositories of common knowledge.<sup>56</sup>

Thus public representation systems, such as those of the law, are one of the preconditions for reconciling individual autonomy with social cooperation.<sup>57</sup> As a result, the need to find solutions to the collective action problem inevitably involves the state; indeed, it can be thought of as providing the 'core of the justification' for it.<sup>58</sup> At the same time, the multifarious solutions to the collective action problem draw on social practice as a source of learning: 'successive generations have added to the stock of everyday knowledge about how to instil productive norms of behaviour... and to craft rules to support collective action that produces public goods'.<sup>59</sup> From this point of view, the interdependence of norms originating in social practice with those embedded in the formal institutions of the state becomes the focus of attention.

The capacity of the state, as the 'focal' or 'sovereign' agent, to retrieve, store and disseminate information which originates in social and customary practices, thereby becomes a critical determinant of the effective resolution of risks and shocks. In this process, the role of the state is not simply to record the preferences of social actors or to ratify the probabilistic ('Bayesian') updating of their beliefs in response to new information. The state's monopoly over force gives it a role in stabilising norms as well as in allowing for their adjustment over time: if the lessons of history are to be embedded in practice, knowledge retention and transmission must be at least partially static. At the same time, the state has the power to alter social practices, by shifting perceptions of what counts as normatively appropriate behaviour, and by shifting the balance of costs and

benefits from compliance with the publicly enunciated norms of the legal system.<sup>60</sup>

The state's role in the accumulation and retention of learning is emphasised by North in his historical analysis of the role of institutions in the rise of capitalism. In his account, human beings 'come to understand their environment' though 'mental constructs derived from experience, contemporary and historical'.<sup>61</sup> He was referring here not just to the experience of individuals but to the 'cumulative learning of a society embodied in language, human memory, and symbol storage systems [including] beliefs, myths, ways of doing things that make up the culture of a society'. Human learning, so defined, determines 'societal performance' including 'the performance of economies'.<sup>62</sup>

North's account directs our attention to systems which allow for the retention and preservation of knowledge, understood as information which has been applied to a particular context and embeds the lessons of that experience. Hayek's theorisation of the price mechanism as embedded learning in this sense has been particularly influential for its emphasis on the private and decentralised nature of the knowledge underlying complex social systems such as the market. In 'The use of knowledge in society' Hayek argued that the knowledge underlying economic exchange is decentralised, in the sense of belonging to individual agents: 'each individual has some advantage over all others in that he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation'.<sup>63</sup> At the same time, the effectiveness of any individual's action depends on 'events which happen beyond the horizon of his immediate knowledge'. Prices convey the information needed for rational action in a shorthand form which encapsulates a necessarily more complex context. Price is a 'kind of symbol' which transmits 'only the most essential information' to those who need it.<sup>64</sup>

Hayek describes the knowledge embedded in prices as 'by its nature' beyond anything that can be captured by statistics and thereby 'conveyed to any central authority in statistical form'.<sup>65</sup> It is essential to its successful operation that the price system works in the absence of centrally coordinated action, 'without an order being issued', and that it is not itself a mechanism that has been consciously designed: it is 'one of those formations' – other terms used by Hayek include 'formulas', 'symbols', 'rules', 'habits' and 'institutions' – which society 'had learned to use... after stumbling upon it without first understanding it'.<sup>66</sup> In his later works, including *The Constitution of Liberty*<sup>67</sup> and *Law, Legislation and Liberty*,<sup>68</sup> this idea matured into a fully-fledged theory of social order which unremittingly emphasised the need to place limits on government action. Because centralised direction could not mobilise information on the scale of

decentralised or ‘spontaneous’ orders of the kind exemplified by the price mechanism, state intervention in the economy was bound to be ‘ad hoc’ and ‘arbitrary.’<sup>69</sup> It was not possible ‘to improve a spontaneous order by revising the general rules on which it rests’ or by introducing specific rules which would ‘deprive its members of the possibility of using their knowledge for their own purposes’.<sup>70</sup> The welfare state, as it presupposed specific interventions across a range of economic and social settings, made the arbitrary exercise of power inevitable, setting societies on a ‘road to serfdom’.<sup>71</sup>

Hayek’s theorisation of spontaneous order is open to question, however, in locating social learning entirely beyond the state. Information and knowledge may begin as individually-held and decentralised, but the institutions through which they are ‘stored’ often have a collective or public character.<sup>72</sup> Markets which come closest to the competitive ideal in the sense of allocating scarce resources to alternate uses at least overall cost are also those, as Coase points out, ‘for which an intricate system of rules and regulations would normally be needed’.<sup>73</sup> What he refers to as ‘governmental regulation’<sup>74</sup> might be just one potential source; self-regulation by economic actors is another and, historically, was the initial mode of governance of most stock exchanges. But even this form of self-regulation, which depended significantly on internal governance and the effects of reputation in a limited circle of traders, co-existed with public protection of property and contract rights. Today’s financial markets, which operate at a national or transnational scale and rely heavily on anonymised and even automated trading, are also intensively regulated through a combination of contractual and statutory norms.<sup>75</sup>

A second case of spontaneous order discussed by Hayek is private law, with a focus on the English-origin common or judge-made law. Just as prices in a market emerge from the interaction of buyers and sellers, so rules in a common law system are derived from decisions of judges in individual cases. The common law is, in Hayek’s terminology, a type of ‘catallaxy’ in which decentralised decision making ensures a rich information content to rules. Statutory interventions or commands upset the coherence of the common law and reduce its informational content.<sup>76</sup>

Hayek’s theory is consistent with many observed features of the common law, including the presence of mechanisms of knowledge retention (legal precedent) and error correction (appeal and litigation) which enable it to adapt to changing features of its economic and political context without the apparent need for centralised direction.<sup>77</sup> However, since the common law, and private law more generally, are an emanation of the legal system and hence of the state,<sup>78</sup> the idea that private law and the market are mutually supportive forms of spontaneous order highlights again the importance of the joint constitution of state and market.

A Hayekian response might be that the state is not monolithic: there are elements of emergent order within the legal system and the state more generally, and these need to be preserved in the face of tendencies for governments to use ‘command and control’ regulation to achieve their goals. Yet this is clearly not the whole story. Judge-made law may have certain adaptive features, but beyond knowledge retention and error correction these also include ‘frozen accidents’<sup>79</sup> and ‘path dependencies’<sup>80</sup> which end up triggering statutory interventions.

In so far as the judge-made law has something in common with other instances of evolutionary adaptation in society and nature, it is part of a family of forms which use ‘blind’ or, as it is sometimes called, ‘direct’ fitting, implying repeated iterations based on variation, selection and retention, to encode features of the external environment in their internal modes of operation. Processes of this kind ‘produce solutions that are *mistakenly* interpreted in terms of elegant design principles but in fact reflect the interdigitation of “mindless” optimisation processes and the structure of the world’ (Hasson et al., 2019: 417; our emphasis).<sup>81</sup> Direct-fit approaches to learning can be remarkably effective in finding solutions which match an ‘encoding architecture’ to its context, but to work they require several far from trivial conditions: ‘overproduction with variation’, ‘inheritance’ or ‘retention’ involving the inter-temporal storing of information, and ‘selection’ through environmental or external influence of some kind. Even then, they are not bound to produce optimal outcomes: variations may be too limited in their range and number, or selective pressures too weak or contingent in their timing, to purge errors. When approximately effective solutions do emerge they will often reflect a range of localised responses to a global problem. Thus the best that can be expected from ‘direct fitting’ is a range of outcomes of different degrees of optimisation which may not be transferrable across context: diversity, but not necessarily optimality.<sup>82</sup>

Evolutionary adaptation in nature is ‘an interactive optimisation process’ which has produced a rich diversity of speciation but *only* ‘over trillions of generations and billions of years’.<sup>83</sup> Human societies have by necessity developed modes of institutional evolution which work on much shorter time spans. Examples of rapid adjustment through legal and governmental responses to external shocks, or ‘punctuated equilibria’,<sup>84</sup> to use the relevant biological analogy, alongside more incremental modes of adaptation, are not hard to find. Yet part of the success of legal and other variants of human-institutional evolution lies in their use of multiple mechanisms alongside ‘direct fitting’: these forms of what might be called ‘*directed* fitting’ include legislation and administrative intervention to correct evolutionary ‘dead ends’.<sup>85</sup> These mechanisms rely on the state’s ‘focal’ power or ‘authority’ to stabilise knowledge retention and transmission. In contrast to the paradigmatically ‘horizontal’ transmission mechanisms of the market, in which information circulates between traders operating on a ‘level playing field’ of

formal equality, the state depends on vertical modes of knowledge reception and transmission to achieve its effects. Even under conditions of contemporary globalisation, the world isn't truly 'flat'.<sup>86</sup>

*Social* evolution is never entirely 'blind': it is precisely because human minds can observe attempts at direct fitting and recognise how far they fall short of optimisation that other modes of adaptive change have come to be at policy makers' disposal. This is why 'spontaneous orders' in Hayek's sense account for a small and diminishing proportion of the rules and policies developed by contemporary states for dealing with social, economic and environmental risks in their environments, regardless of whether systems have a common law (that is, English and American) or civil law legal origin.<sup>87</sup>

### **C. From governance to governmentality: contradictions and pathologies of the neoliberal state**

Three decades or so after the fall of the Berlin Wall and the resulting emergence of the 'Washington consensus' around the virtues of market-led economic growth, virtually all countries are 'market states'<sup>88</sup> which seek to use the institutional means at their disposal to create, embed and, to varying degrees, regulate private-sector market activity. No market of any significant scale or scope operates without the support of the state in some form or another, but the role of state is not confined to protecting property rights which in some sense pre-exist it.<sup>89</sup> The state defines property for its own purposes of taxation and regulation,<sup>90</sup> and supports technological innovation through subsidies and procurement.<sup>91</sup> States differ in their regulatory capabilities, with the more highly-developed industrial economies tending also to have the greater state capacity, and in their willingness to regulate market transactions ex ante through consumer and worker protection laws and to alter them ex post through taxation and redistribution. These 'varieties of capitalism'<sup>92</sup> notwithstanding, in today's world markets and states are virtually everywhere intertwined: markets depend on states to guarantee their conditions of existence. This includes a multiplicity of public goods extending from the collective provision of health and education to a functioning rule of law. The mid-twentieth century 'welfare' or 'social' state has to that extent been subsumed into the wider remit of maintaining the market order; but managing the risks arising from industrialisation in a way that makes a capitalist economy more sustainable has always been part of its mode of operation.<sup>93</sup> Conversely, the welfare state, no less than other state operations, depends on the surpluses generated by industry and trade for its fiscal stability and hence for the means to finance the public goods which it provides.<sup>94</sup>

The market state may have become virtually ubiquitous under conditions under conditions of globalisation since the 1990s, but this does not mean that it is stable.

Particularly unstable are states in which neoliberal theories and practices dominate to the point of marginalising alternatives. A Foucauldian perspective on ‘governmentality’ highlights some of neoliberalism’s contradictions. Neoliberal thinking elevates the market over the state in ways which threaten to undermine its core capabilities. When influential modes of thought deny the existence of a public or collective ‘interest’,<sup>95</sup> characterise public officials as ‘knaves’,<sup>96</sup> and refer to the state as the ‘grabbing hand’,<sup>97</sup> something more than a simple mischaracterisation is occurring. The neoliberal state seems compelled to deny the need for its own existence, while all the time extending the scope and reach of its interventions.

The neoliberal state is of necessity an interventionist one because the goal of pure or perfect competition, not being in any sense a natural situation but one which must be actively instituted, is forever receding from view. Indeed, since Foucault first formulated his theory of governmentality in the 1970s, the ‘juridification’ of social and economic life through regulatory interventions has only intensified.<sup>98</sup> The results include self-contradictions such as ‘libertarian paternalism’,<sup>99</sup> in which targeted regulatory interventions seek to reproduce the autonomous exchanges which individuals *would have arrived at* had they been capable of the rational action which economic theory ascribes to them. The one choice which is never open to the individual in the neoliberal state is to opt out of the market-instrumental logic which is its default mode of governance.

The dilemmas of the market state reach the point of becoming pathologies when there is no longer a meaningful boundary between the public and private spheres. Presented by neoliberal theories as a way of protecting the market from the state,<sup>100</sup> the concept of the public-private divide, which has a long history in western social and political thought, also protected the state from the market.<sup>101</sup> Once the ‘exchange conceptualisation’ of government and law takes hold,<sup>102</sup> the public sphere becomes an extension of the market, and subject to the same logic of resource allocation through private exchange and the principle of willingness to pay.

The founding beliefs of the ‘Virginia’ and ‘Chicago’ Schools moved from the academy to the practice of the executive and judicial branches of government in the United States from the 1970s onwards and spread from there to achieve global influence after the fall of the Soviet Union and its satellites.<sup>103</sup> As the state is colonised by the logic of the market in this way, it starts to lose the capabilities it needs to support the market’s functioning. Even as basic a state operation as the protection of property rights is undermined if the norm of legality in adjudication, implying the general application of abstract legal rules, is replaced by the market principle of willingness to pay – and hence, the economic power of the dominant party – as the basis for resolving disputes.<sup>104</sup> In this context, what is called ‘corruption’ and routinely identified with an excess of state power,<sup>105</sup> is better



understood as the intrusion of the market into the domain of the state, a consequence of the erosion of the public-private divide.<sup>106</sup> In the wake of the experience of transition systems exposed to ‘shock therapy’ in the early 1990s, even some of the foremost advocates of shrinking the state in the name of economic freedom came to the belated realisation that market was not self-sustaining: ‘privatization is meaningless if you don’t have the rule of law’.<sup>107</sup>

While the extremes of ‘shock therapy’ were confined to transition systems, the ‘austerity’ pursued across the global North following the global financial crisis of 2008-9 followed a similar pattern of cutting back state capacity in the name of protecting the market. If milder in their effects than the reforms administered to the former command economies, austerity policies diminished the risk-bearing capacity of the state by shrinking the provision of collective goods, including systems of public health.<sup>108</sup> Thus the emergence of Covid-19 at the end of 2019 came at a point when the neoliberal state was already in crisis.<sup>109</sup>

### **3. Covid-19 as Anthropogenic risk**

We now turn to a consideration of the nature of the risks to human health and the wider social order posed by Covid-19. The essential point is that the Covid-19 pandemic is not a random occurrence. Nor is it a ‘black swan’ event, indicating an ‘outlier’ that is ‘outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility’.<sup>110</sup> On the contrary, epidemics and pandemics such as Covid-19 have a recurring pattern throughout history which makes them statistically predictable.<sup>111</sup> Pandemics are the combined effect of patterns in biological (genetic and phylogenetic) and human (social and institutional) evolution.<sup>112</sup> More precisely, they are ‘Anthropogenic’ events in the sense of being triggered by the interaction of human activity with the wider environment, and the feedback effects engendered by over-use of natural resources.<sup>113</sup>

While the genetic mutation which produced the Covid-19 virus may have been a random occurrence, the epidemic which then ensued was not. Epidemics on or near the scale of Covid-19 have occurred at numerous points in the past, and are correlated to particular features of human activity which are themselves interconnected: commercial exploitation of natural resources, the spread of trade, movements of populations, and widening social inequalities.<sup>114</sup>

The combined biological-institutional origins of the Covid-19 pandemic can be identified with some precision. SARS-CoV-2 is one of a family of ‘zoonotic’ viruses which originate in animal species indigenous to densely forested parts of tropical and sub-tropical regions. Others include HIV, which is currently thought to have emerged in central Africa several decades before its appearance in the

west; the original SARS virus of 2003 (SARS-1); the 2009 H1N1 influenza virus; and the MERS virus which originated in the Middle East in 2015.<sup>115</sup> These viruses circulate widely among animal populations and have a high rate of mutation, but on the whole they are not pathogenic to their hosts, with which they have coevolved across multiple generations.<sup>116</sup>

Because it has not previously been present in human hosts, and so has not coevolved with genetic and phylogenetic features of the human species, there is a much more than trivial possibility that a novel zoonotic virus such as Covid-19 will turn out to be pathogenic in varying degrees to human carriers. There have almost certainly been numerous mutations in the past in the same family of viruses which had more or less insignificant impacts on their human hosts, and so went unnoticed.<sup>117</sup> SARS-CoV-2 is much less lethal than SARS-1, but much more so than seasonal influenza.<sup>118</sup> It is also far more infective than the original SARS virus, and hence more difficult to control, since the peak period of human-to-human transmission occurs before its carriers show any symptoms.<sup>119</sup> While these features of Covid-19 are the results of mutations which can be thought of as random events, what is not random is the exposure of human populations to the kind of risk which the virus represents.

The precise chain of animal to human transmission in the case of Covid-19 is still not fully understood, but it is likely to have involved commercial exploitation of wild animals with their dense packing in markets in close proximity to large numbers of people over prolonged periods of time.<sup>120</sup> This form of exploitation has radically changed the risk profiles of novel viruses capable of ‘jumping’ into human populations.<sup>121</sup> While human communities have coexisted with forest environments for millennia, traditional practices of crop and animal husbandry allowed for some degree of mutual accommodation between the human and animal species which shared these habitats. Modern agricultural and industrial uses of the natural environment, by treating shared habitats as a resource available for human use, increase the risk of exposure to features of those environments which are pathogenic for human communities. Put simply, the risk of a mutation producing a pathogen with the properties of Covid-19 is a function of increasing human *exploitation* of the natural environment.<sup>122</sup>

The factors behind the transmission of SARS-CoV-2 within human populations should also be understood as the combined result biological and human-institutional factors. In common with earlier pandemics including the plague which first arrived in Europe in 1346, the smallpox pandemic which began in the seventeenth century, the cholera outbreaks which began in Europe in the 1820s, and the so-called ‘Spanish’ influenza of 1918-19, the worldwide spread of SARS-CoV-2 would not have been possible without the existence of human transmission routes in the form of transnational trade and the cross-border movement of

populations.<sup>123</sup> The Covid-19 pandemic occurred at a time when trading between east Asia and the rest of the world was more open than it had been for several centuries.<sup>124</sup> A combination of international business travel and tourism appears to have been responsible for the transmission of Covid-19 from China to Europe and then on to north America.

The relationship between inequality and Covid-19 is complex but is becoming clearer over time as the epidemic unfolds. It is not just that the virus has an unequal impact on groups by reference to their income, resources and socio-economic status and hence comorbidity exposure;<sup>125</sup> pre-existing inequalities have exacerbated the spread of the disease in a number of ways, making it more difficult to control.<sup>126</sup> The incidence of the disease appears to be disproportionately high among populations exposed to low-quality housing and poor working conditions. This is for a number of reasons including the ease with which the virus spreads in multi-member households and densely occupied working environments.<sup>127</sup>

Thus in accounting for Covid-19 as a global epidemic and not simply an isolated viral mutation, social and human factors must be considered alongside biological ones. Covid-19 can be thought of as an ‘Anthropogenic’ event in the sense of arising from human activities which are of a type and scale to produce feedback effects in the natural environment. Climate change is one such event, which has relatively recently (since the middle decades of the twentieth century) shown signs of negative feedback which is sufficiently serious to begin to render certain regions barely inhabitable, or least not sustainably so. Pandemics have a longer history which is approximately coterminous with beginnings of Eurasian proto-industrialisation in the late Middle Ages.<sup>128</sup> The Anthropocene is the core case of a process in which biological and material aspects of evolution interact with social and institutional ones.<sup>129</sup> To institute a market economy is also to ‘organise nature’;<sup>130</sup> thus as with climate change, Covid-19 is endogenous to social and institutional arrangements which permit the ‘exploitation’ of the natural world in the specific sense of the systematic under-pricing of environmental harms.<sup>131</sup>

Anthropogenic risks such as those posed by Covid-19 raise issues of governance and governmentality in a highly acute form. Market states in general, including those of a more neoliberal orientation, must address these risks if they are to maintain their own modes of operation and so ensure their self-reproduction; but neoliberal states can only do so by calling into question some core features of those modes of operation. Not just a single collective response, but multiple responses, addressing the combined social and environmental causes of the pandemic, are required. Yet the possibility of collective action on this scale is an outcome which the dominant philosophies of the neoliberal state have already dismissed as infeasible: if the public interest is an illusion, state intervention is a

zero-sum game, and systems will self-correct in response to external shocks, the scope for concerted or directed action is necessarily limited. These philosophies, moreover, are not simply cultural artefacts. Over the course of the past four decades they have become increasingly, if not necessarily uniformly, embedded in mechanisms of governance and government in the workings of market states of all kinds, but above all those which most enthusiastically embraced the theory and practice of neoliberalism. The same philosophy has informed work of the agencies charged with achieving international coordination. These influences are apparent in the responses so far observed to the Covid-19 crisis.

#### **4. Governing Covid-19: the public health response**

##### **A. The Wuhan measures: ‘all-of-government, all-of-society’**

We focus our analysis on the Chinese response to Covid-19 as it was not only the first in time but to varying degrees has provided the template for other countries’ reactions, if only, in some cases, by way of counter-response to or rejection of the Chinese model. The Chinese government’s account of events is set out in a ‘White Paper’, published by the State Council Information Office in June 2020.<sup>132</sup> The document largely incorporates the conclusions of a fact-finding mission conducted jointly by officials of the World Health Organization and the Chinese government in February 2020 (the ‘Joint Report’).<sup>133</sup> The WHO delegation included representatives from several countries including the USA.

Neither the White Paper, nor the Joint Report, can be regarded as a definitive factual account of what occurred in Wuhan, and future research will be needed to verify some of the claims they make.<sup>134</sup> It should be clear that the accounts they contain were framed by the institutional priorities of the organisations responsible for compiling them: the Chinese government and the WHO, respectively. Our purpose in analysing them here, therefore, is not to present them as an objective history of events (although they both contain information of considerable interest), but as evidence of the interpretations which the Chinese authorities and the WHO have placed on the Wuhan episode; in other words, as evidence of ‘governmentality’ in Foucault’s sense of the state’s understanding of its own practice.<sup>135</sup>

### **(i) The Wuhan measures: overview**

The basic picture presented in the Joint Report and set out in more detail in the Chinese government's White Paper identifies a series of stages to the response. In the first stage the virus was identified and the first steps taken to establishing its biological nature and effects.<sup>136</sup> According to these two documents, the virus was first reported at the end of December 2019 in Wuhan, where medical professionals at one of the city's hospitals identified a cluster of cases of pneumonia of an unknown cause.<sup>137</sup> On 27 December a number of cases of a new SARS-type infection were notified to the Wuhan Jiangnan Centre for Disease Prevention and Control and the Wuhan City Health Commission (WCHC). On 30 December the National Health Commission (NHC) began to undertake research into the virus and the following day it sent a team of experts to Wuhan to guide its response. By 8 January the NHC had identified a novel coronavirus as the source of the disease and on 9 January it informed the WHO. By 13 January a diagnostic test for the virus had been developed and was in use in Wuhan hospitals to screen for the disease. On 15 January the virus' genome sequence was shared with the WHO. On 19 January a team of experts sent to Wuhan by the NHC established that the virus was spreading through human-to-human transmission.

The second stage is characterised by the White Paper as involving 'initial progress in containing the virus'.<sup>138</sup> A national level decision to impose travel restrictions within and around Wuhan and the wider Hubei Province was taken on 22 January and implemented in the early hours of 23 January through a public notice issued by the Wuhan city authorities.<sup>139</sup> This declared the closure of the city's outbound routes from railway stations and airports from 10 a.m. the same day. Later that day the national Ministry of Transport issued an emergency circular suspending the movement of passenger traffic into Wuhan by air and water. On 25 January the NHC issued national guidelines on disease prevention governing tourism, households, public places, public transport and monitoring of private residences ('home observation'). From 2 February the Wuhan authorities implemented a test and trace programme under which 'four categories of persons – confirmed cases, suspected cases, febrile patients who might be carriers, and close contacts' – were put under 'classified management in designated facilities'. This meant taking action 'to conduct mass screenings to identify people with infections, hospitalise them, and collect accurate data on case numbers'.<sup>140</sup> Two emergency hospitals were constructed to deal with serious cases, eventually providing for 9,000 beds; in addition, 16 temporary treatment centres or 'shelter hospitals' were set up for those with mild or no symptoms.<sup>141</sup> The temporary treatment centres received 12,000 patients, over 8,000 of whom were discharged, while a further 3,500 were transferred to hospitals. According to the White Paper, while they were in operation the temporary centres had 'zero cases of [new]

infection, death or relapse'.<sup>142</sup> In the same period, two rounds of community-based mass screening of Wuhan's population were carried out, covering 4.1 million households. Further mass testing of the population of Wuhan was to occur later in 2020 when a small number of new infections were reported.<sup>143</sup>

The Wuhan-level responses were supported by a national-level mobilisation of resources. Beginning on 24 January, medical support teams were dispatched to Wuhan from around the country. The White Paper reports that over the 'ensuring period' (unspecified), a total of '346 medical teams composed of 42,600 medical workers and 965 public health workers from across the country and the armed forces' were sent to Hubei Province.<sup>144</sup> During the peak of the testing carried out in Wuhan in February, there were over 1,800 teams of epidemiologists, with a minimum number of five people each, between them tracing tens of thousands of contacts. According to the Joint Report, 'contact follow-up is painstaking, with a high percentage of identified close contacts completing medical observation'.<sup>145</sup> Across several other cities and provinces, a contact tracing rate of approaching 100% was reported, with around 70% of those contacted subsequently undergoing medical treatment, with a reported infection rate for this group of between 1% and 5%.

In the third stage, as levels of infection began to fall both in Wuhan and in the rest of the country, the response took the form of the coordination of 'epidemic control with economic and social development' along with the organisation of 'an orderly return to work and daily life'.<sup>146</sup> By 14 February the number of reported daily cases outside Hubei had been continuously falling for 10 days, and by 18 February the number of cured and discharged patients was greater than those being admitted. By 19 February this pattern was also observed in Wuhan. On 21 February traffic restrictions outside Wuhan and Beijing began to be lifted, and on 24 February the provincial trunk road system was reopened. At the point the WHO declared Covid-19 a pandemic on 11 March, the Chinese authorities had already restored normal internal travel arrangements, while at the same time taking steps to impose quarantine and health checks at its external borders.

## **(ii) The Joint Report's assessment**

The WHO-China Joint Mission issued its report on 29 February; it is dated 16-24 February. The report concluded that 'in the face of a previously unknown virus, China has rolled out perhaps the most ambitious, agile and aggressive disease effort containment in history'.<sup>147</sup> The key steps were identified as 'extremely proactive surveillance to detect cases, very rapid diagnosis and immediate case isolation, rigorous tracking and quarantine of close contacts, and an exceptionally high degree of population understanding and acceptance of these measures'. On this last point, the Joint Report describes a 'deep commitment of the Chinese

people to collective action in the face of this common threat'<sup>148</sup> although without going into detail on precisely what 'collective action' means in this context or on how a high rate of community-level compliance with control measures was secured. The report does not hold back from ascribing impacts to the measures taken, although again in a somewhat broad-brush way: the response had 'changed the course of a rapidly escalating and deadly epidemic'. It was a 'rather unique and unprecedented public health response' and at the same time one with 'vital lessons' beyond China, since the steps taken there were 'the only measures currently proven to interrupt or minimise transmission chains in humans'.<sup>149</sup>

### **(iii) The White Paper's assessment**

The Chinese government's White Paper, published a few months later in June 2020, goes into more detail in its evaluation of the response. This part of the document, labelled an 'assessment', can be understood as the Chinese government's evaluation of its own performance. As such, it is an attempt to justify its approach, to differentiate it from those of countries which had, as was already clear by June, followed a different path, and to address emerging criticisms, in particular the complaint that it had not shared information with the WHO or other countries during the early stages of the epidemic. As already noted,<sup>150</sup> while the White Paper contains a large amount of factual information, it cannot be taken at face value as a description of events. It is, on the other hand, revealing for what it says about the Chinese state's understanding of the way in which Covid-19 was, in a broad sense, 'governed': the document was intended by the Chinese government as 'to keep a record of China's efforts in its own fight against the virus, to share its experience with the rest of the world, and to clarify its ideas on the global battle'.<sup>151</sup>

The first aspect of governance to be emphasised in the White Paper is what the document calls 'centralised and efficient command'.<sup>152</sup> This is defined as a system in which 'the central authorities exercise overall command while local authorities and all sectors follow the leadership and instructions of the central authorities'.<sup>153</sup> The stress here is on the leadership role played by national officials including the state President and Premier, and core committees of the party, above all the Chinese Communist Party central committee.

The second aspect of the response to receive emphasis is what the White Paper calls 'a tight prevention and control system involving all sectors of society'.<sup>154</sup> Here the focus is on the role of community-based monitoring of the health of the population. Screening was carried out across the country with 'all residents... required to report their health condition on a daily basis', while 'community workers for their part visited households door-to-door to collect and verify this information'.<sup>155</sup> The strictness of the cordon sanitaire around Wuhan is held to

be responsible for ‘effectively [stopping] the virus from spreading nationwide’.<sup>156</sup> The extension of the Chinese New Year holiday in January, the postponement of the spring semester in schools and the closure of cinemas, theatres, internet cafés and gyms are also cited here, along with the introduction of protective procedures for essential public spaces and facilities including the disinfection of buildings. The strictness of control measures in the areas affected by quarantine are highlighted:

In Wuhan, rigorous 24-hour access control was enforced in all residential communities. No residents were allowed to leave and no non-residents allowed to access the community area other than for essential medical needs or epidemic control operations. Community workers were responsible for purchase and delivery of daily necessities according to residents’ needs. This approach was also applied in communities and villages in other parts of China, where all residents had to register and undergo temperature checking when leaving or entering the residential area or village.<sup>157</sup>

At the same time, the White Paper sees the element of ‘control’ in its response as complemented, and to some degree mitigated, by several other factors. The first is community-level involvement in the implementation of the restrictions. Thus ‘strict access control and grid-based management were exercised in communities and human and material resources were channelled down to the community level’; similarly, it was by ‘securing full implementation of response measures down to the lowest level’ that communities and villages were made safe.<sup>158</sup>

The second factor to offset the restrictive nature of quarantines is the extensive find, test, trace, isolate and support system through which the epidemic was managed. As already noted,<sup>159</sup> this included the provision of food and other necessary supplies to communities in quarantine; mass testing of the population of the affected areas; community based tracing of those with symptoms; isolation and treatment of those testing positive in the ‘shelter hospitals’. In addition, medical insurance policies were adjusted to ensure that patients receiving treatment for Covid-19 did not have to meet additional costs.<sup>160</sup> By these various means, what the report calls an ‘all-out effort to treat patients and save lives’ was achieved.<sup>161</sup>

The third offsetting factor is that the restrictive measures were enacted and implemented according to formal legal interventions of various kinds. Specific legal measures highlighted include the enactment of emergency regulations for infection control, the passage of laws to ensure market order against price-gouging and counterfeit goods, and the introduction of measures to facilitate the resumption of normal business activity. According to the White Paper, the



quarantine and travel restriction laws were ‘consistent with relevant provisions of international law and other domestic laws’, while ‘the law is enforced in a strict, impartial, procedure-based, and non-abusive way’.<sup>162</sup>

The final element to receive emphasis is the role of expert advice in determining the nature and extent of the restrictions: ‘prevention and control efforts have been based on science’. Reference is made to reliance on ‘timely analyses and assessments by scientists and public health experts’. As additional knowledge of the virus became available, the response was tailored to new information: ‘China has modified and optimised its response measures in a timely manner to make them more effective’.<sup>163</sup> This resulted in the production of medical protocols, technical manuals on infection control, and work plans on psychological counselling. It is under the heading of science and technology that the role of ‘big data and artificial intelligence’ in epidemic control receives a discussion.<sup>164</sup>

The Joint Report makes an explicit endorsement of the Chinese approach and of its relevance for other countries: ‘China’s uncompromising and rigorous use of non-pharmaceutical measures to contain transmission of the COVID-19 virus in multiple settings provides vital lessons for the global response’.<sup>165</sup> The tone of the White Paper is more cautious on the wider lessons to be drawn, mindful that by this point ‘certain countries’ which had ‘ignored’ information coming from China about its response were now blaming China ‘for their own failure to respond to the epidemic and protect their people’s lives’.<sup>166</sup> Against this background, the White Paper stops short of suggesting that the Chinese experience should be replicated elsewhere, largely limiting itself to making calls for enhanced international cooperation in addressing the pandemic. Nor does it claim that the measures taken, with the possible exception of the shelter hospitals, were new. Citing comments made at the press conference to launch the Joint WHO-China Report in Beijing in February, it refers to an ‘all-of-government, all-of-society approach’ which had ‘prevented at least tens of thousands, but probably hundreds of thousands of cases of Covid-19 in China’ as ‘very old-fashioned, too old in some ways’.<sup>167</sup>

## **B. Wuhan as ‘exception’: libertarian and critical readings of state power**

The reference to the Wuhan measures as ‘too old’ does not appear in the published version of the Joint Report, and beyond China these measures were represented from an early stage as being far from ‘old-fashioned’, but in various ways novel and exceptional. This process began immediately following the publication of the Joint Report at the end of February 2020. An article which appeared in the journal *Science* on 3 March 2020 to mark the publication of the Report highlighted not just the scale and strictness of the Wuhan measures but their novelty.<sup>168</sup> The head of the WHO mission was reported as characterising the

response as unusual in the context of his ‘20, 30 years in this business’. The article cited a US-based epidemiologist who thought that the Chinese experience ‘poses difficult questions for all countries currently considering their response to Covid-19’, and an American legal scholar who saw ‘very good reasons for countries to hesitate using these kinds of extreme measures’. This was because ‘China is unique in that it has a political system that can gain public compliance with extreme measures’. Another US-based legal scholar and China specialist referred to ‘things that would work to stop an outbreak that we would consider abhorrent in a free and just society’. A public health expert from the UK was quoted as saying of the Joint Report, ‘the one thing that’s completely glossed over is the human rights dimension’.<sup>169</sup>

Notwithstanding these doubts, by the end of March other countries were implementing quarantines and travel restrictions, in some cases across national territories (as in most of western Europe at this point) or at state or provincial level (as in several US states). These national responses differed in their degree of strictness and in their resulting implications for normal social and commercial activity.<sup>170</sup> Many countries adopted elements of the Wuhan measures, although the practice of using shelter hospitals to care for those infected with only mild or no symptoms does not appear to have been widely followed elsewhere.

In east Asian countries, nationwide quarantines and travel restrictions were largely avoided, with emphasis placed instead on community-based test and trace systems to identify regional clusters and the use of localised restrictions within countries alongside external border controls to limit transmission. The rapid responses of these countries, which began in January 2020 shortly after the first reports of fatalities in Wuhan, and their early success in limiting the spread of the virus and subsequently controlling it, have been attributed in part to their experience of managing the SARS 1 epidemic in 2002-3,<sup>171</sup> although a full assessment of this and other possible explanations must await further research. In Europe, control measures were not implemented until the start of March. They included the mandating of self-isolation for those reporting symptoms, the encouragement of social distancing, banning of public events, school closures, and quarantines (‘lockdowns’). The first country to implement a nationwide lockdown, in on 11 March, was Italy; the UK was one of the last, on 24 March.<sup>172</sup>

When the worldwide response is considered, what stands out is not only the wide degree of variation in responses, but the presence of a significant number of countries in which control measures were actively resisted in some periods and half-heartedly implemented in others, on the grounds that they were exceptional, unnecessary and counter-productive. While few if any countries were entirely inactive, some limited their interventions out of a conscious preference for allowing decentralised solutions to take effect. This was frequently coupled with

a belief that the virus would run its course, with limited or manageable consequences, if left alone to do so.

In the USA claims of this type were promoted by ‘free market’ think tanks and in branches of academic scholarship to which they are closely connected, including the economic analysis of law. Articles published under the auspices of the Hoover Institution<sup>173</sup> from March 2020 argued that the exercise of police powers in response to the virus was an example of regulatory overreach.<sup>174</sup> ‘Adaptive’ processes which would ensure a natural decline in infection and mortality rates were contrasted with ‘coercive measures’:

we are flirting with a social meltdown. The best way to minimize that problem is to rely more heavily on private responses to the difficulty and to be relatively cautious in applying broad coercive measures that will shut down the productive institutions of society by government fiat. The Hayekian insight about how decentralized institutions have a comparative advantage in dealing with complex issues should not be forgotten, even in a legal system that has long recognized the legitimate interests of the state police power to deal with health and safety issues.<sup>175</sup>

The practical implication of this position was that lockdowns then underway should not be unduly extended: ‘the only solution that has a prayer of working is to ease restrictions as quickly as possible in those areas where the risks are lower, such as virtually all rural areas, and major centers that have only a low incidence of reported deaths’.<sup>176</sup> The early lifting of quarantines and travel restrictions in the US South and Mid-West which began in the first week of May 2020 was subsequently linked to a revival in infection and mortality rates in those parts of the country.<sup>177</sup>

In the UK, delays in implementing quarantines and social distancing in the middle of March seem to have been linked to a similar belief in the self-adjusting properties of the epidemic. On 3 February the UK Prime Minister gave a speech at Greenwich in which he observed that

we are starting to hear some bizarre autarkic rhetoric, when barriers are going up, and when there is a risk that new diseases such as coronavirus will trigger a panic and a desire for market segregation that go beyond what is medically rational to the point of doing real and unnecessary economic damage, then at that moment humanity needs some government somewhere that is willing at least to make the case powerfully for freedom of exchange... of the right of the populations of the earth to buy and sell freely among each other.<sup>178</sup>

In the second week of March the UK government scaled back its Covid-19 test and trace programme.<sup>179</sup> At the same time senior officials publicly endorsed the idea of pursuing a ‘herd immunity’ strategy for allowing the effects of the virus to abate of its own accord, without the need for a directed response.<sup>180</sup> It seems that during this period of delay, which is now thought to have had a significant impact on the resulting high infection and fatality rate, the view in government circles was that behavioural ‘nudges’ would suffice to achieve a ‘controlled’ outcome.<sup>181</sup>

When, a few days later, the UK government’s policy shifted towards the implementation of a nationwide ‘lockdown’ involving a mixture of quarantining, social distancing and restrictions on travel, the suggestion that it had ever been its intention to pursue ‘herd immunity’ was formally denied.<sup>182</sup> However, in common with the USA but in contrast to several other countries, the UK has at no point adopted a nationwide policy of seeking to suppress the virus as opposed to containing its effects.<sup>183</sup>

In mainland Europe, lockdowns were challenged from a perspective which, while having a very different foundation (critical theory), arrived at a similar conclusion on the illegitimate nature of the state’s response. The ‘police’ measures taken in response to the crisis were seen as an instance of a ‘state of exception’, in which the rule of law is set aside, in conditions of emergency, by the executive power of the sovereign.<sup>184</sup> The response to the virus was ‘frenetic, irrational and entirely unfounded’.<sup>185</sup> In mid-March, as cases in Italy peaked, it was suggested that control measures there were ‘clearly showing that the state of exception, which governments began to accustom us to years ago, has become an authentically normal condition’. This was one in which ‘men have become so used to living in conditions of permanent crisis and emergency that they don’t seem to notice that their lives have been reduced to a purely biological condition’.<sup>186</sup> This view nonetheless remained an outlier with no significant take up in official circles, in contrast to the explicit adoption of libertarian narratives by the US and British governments.

Those narratives did not prevent the governments concerned from taking and exercising the very ‘coercive’ powers which libertarian critics had warned against. However, the neoliberal state, like the laissez-faire state of the nineteenth century,<sup>187</sup> has never lacked the ability to exercise disciplinary and even punitive powers when the occasion demands.<sup>188</sup> What it lacks, as the Covid-19 emergency shows, is the capacity to organise a combined community and state level response of the kind needed to manage the risks posed by the infectious disease in an effective way. This very absence increases the likelihood of the state resorting to ‘emergency’ measures of a highly coercive kind. By the early autumn of 2020, a

number of regions within the UK were once again experiencing a strict version of lockdown in response to a second wave of the epidemic, and national level lockdowns of varying degrees of length and severity were being considered.<sup>189</sup> The British government's consideration of the 'blunt tool'<sup>190</sup> of a second national lockdown in October 2020 was understood to be the unavoidable result of its failure to organise an effective find, test, trace, isolate and support system during the interval provided by the first one.<sup>191</sup> At the start of the second wave, fines for non-compliance with self-isolation orders were increased and steps taken to supply individual test and trace data to local police forces.<sup>192</sup> The practice of requiring customers in shops and restaurants and employees generally to download and activate mobile test and trace apps was also becoming widespread.<sup>193</sup>

In this respect, again, the Chinese experience is easily misunderstood if it seen only in terms of its 'stringency'. China has only applied lockdowns to specific cities and regions, and they have been of shorter duration than those operating in the UK and other European countries.<sup>194</sup> Mass testing and concerted support systems have made it unnecessary for the Chinese authorities to resort to lockdowns of the British type.<sup>195</sup> Nor can this be said to be a function of China's system of one-party rule; general lockdowns have also been avoided in democracies which have managed the virus successfully in east Asia (Korea and Taiwan), South America (Uruguay) and Europe (Denmark, Norway and Finland), among others.<sup>196</sup>

## **5 Learning from (and forgetting) history**

### **A. Antecedents of Wuhan: Florence 1629, Eyam 1665, London 1853, Leicester 1892**

In *Discipline and Punish*, published in 1975, Foucault vividly describes the history of 'the plague-stricken town, traversed throughout with hierarchy, surveillance, observation, writing; the town immobilized by the functioning of an extensive power that bears in a distinct way over all individual bodies – that is the utopia of the perfectly governed city'.<sup>197</sup> Publicly-enforced quarantines and cordons sanitaires are indeed among the oldest means used to check the spread of infectious disease. Quarantines are first recorded in the city ports of the Adriatic coast around the turn of the fifteenth century.<sup>198</sup> The earliest examples of their use in England date from the sixteenth century, when the Tudor monarchs applied continental methods of disease control, initially to protect themselves and their court, but increasingly with a view to limiting outbreaks in the population. Orders in council were issued by Elizabeth I's government in 1573; in them, 'sanitation replaced prayer, Galenic bodily regimens aimed at balance replaced religious fasting, quarantine replaced mandatory church attendance, and the orders were

enforced by justices of the peace not clergy'.<sup>199</sup> James I's Plague Act of 1604,<sup>200</sup> which prioritised the public relief of the those affected by disease in in order to make quarantining effective, set the template for public disease control for the rest of the century.<sup>201</sup>

Plague was the 'first pathogen successively defeated by human action in Europe'.<sup>202</sup> Today, it is treatable by antibiotics, but scientific discoveries were not the reason for its decline. Its spread was limited, before modern medical interventions became possible, by systematic quarantining and monitoring which became widespread on the mainland of Europe during the course of the seventeenth century. Critical also was the use of public support measures to complement quarantines. When the plague struck Florence in 1631, the measures implemented by the city's authorities included home confinement, daily health checks for residents of affected areas, and the forced hospitalisation of those showing symptoms. The rules were enforced through a mixtures of fines and imprisonment. At the same time, the city organised the distribution of food to residents unable to leave their homes, using public funds for this purpose. Partly because of the extensive support it could provide to its residents, Florence's enforcement of plague regulations was stricter, and went on for longer, than in other Italian city states, but the city also experienced a lower mortality rate.<sup>203</sup> The English approach to the implementation of similar control and support measures was less effective, which is thought to be why London experienced repeated episodes of plague, resulting in a mortality rate of up to a fifth of the population, until the last major outbreak in 1665-6.<sup>204</sup>

The history of epidemic control tells us that debates about the balance to be struck between state enforcement and community-level self-organisation are nothing new. How far the experience of the Derbyshire village of Eyam, whose population self-isolated when the plague spread from London in 1665, was entirely down to community action, has been questioned.<sup>205</sup> Quarantining of towns and villages was not unusual at this time, and was sometimes imposed by neighbouring communities in return for the provision of food supplies.<sup>206</sup> Eyam may best be thought of as representing a combination of public pressure and community-level response which is not so far removed from what was undertaken, if on a vastly larger scale, in Wuhan; in the spring of 2020, Chinese commentators were among those making this comparison.<sup>207</sup>

Infectious disease continued to be the major cause of death in British towns and cities into the nineteenth century, and births only began to outnumber of deaths in London from 1800; until that point, the city's population growth was entirely the result of inward migration from the countryside and towns.<sup>208</sup> Smallpox throughout the eighteenth century, cholera in the nineteenth, and tuberculosis well into the twentieth, were major causes of death in the UK. However, by the

middle of the twentieth century the ‘epidemiological transition’<sup>209</sup> which had begun in the seventeenth was largely complete: from this point, not just in western Europe but increasingly at global level, mortality rates from infectious disease began to flatline and fall, and national life expectancies, with few exceptions, showed consistent and prolonged increases.

The histories of smallpox and cholera are instructive. They became endemic in English towns and cities during the eighteenth and nineteenth centuries respectively. ‘Endemicisation’, in this sense, means that a pathogen becomes permanently present in a population. Over time, deaths from both smallpox and cholera stabilised and parts of the population achieved an immunity, but mortality rates continued at a high level, in particular for the young: exposure during infancy reduced the death rates among those who survived childhood.<sup>210</sup>

Smallpox in England was eradicated after 1800 through a combination of vaccination and disease control. Inoculation against the disease had been introduced in the early eighteenth century following a practice first adopted in the Ottoman Empire, and became more widespread after Jenner’s refinement of the technique to produce the world’s first vaccine in 1796.<sup>211</sup> There were isolated outbreaks of smallpox as late as the 1890s. In the Midlands city of Leicester, a smallpox epidemic in 1893-4 was brought under control through a combination of hospitalisation and home-based quarantine. Affected families were confined to their homes for 16 days under external supervision, during which time the wages of the principal earner were paid by the local government authority, at this time the city corporation.<sup>212</sup> An account of what became known as the ‘Leicester method’ was contained in the final report of the Royal Commission on Vaccination in 1896,<sup>213</sup> and half a century later became the basis for the WHO’s worldwide programme of smallpox eradication, the only one so far to result in the effective global elimination of a major pathogen.<sup>214</sup>

Cholera was brought under control through a mixture of public health interventions and scientific discoveries which established its nature as a water-borne disease. What would be now be called ‘community tracing’ was first used in London in 1853 to establish the sources of the disease in inadequate sanitation of the water supply, some twenty years after the city’s first Cholera outbreak.<sup>215</sup> In the following decades, systems of communication, at first nationwide and then extended along transnational shipping routes, were put in place to track the spread of the disease. Other water-borne diseases including typhus and malaria, which had become endemic in parts of the English countryside, were suppressed through a combination of water drainage and agricultural improvements. Malaria was common in the fen country adjacent to the city of Cambridge until the final quarter of the nineteenth century.<sup>216</sup> The steady decline in tuberculosis in British cities during the first half of the twentieth century appears to have owed as much



to rising living standards, improvements in nutrition and reductions in residential overcrowding, as it did to the medical advances which resulted in the widespread availability of antibiotic treatments.<sup>217</sup>

In so far as the control of disease can be understood in ‘biopolitical’ terms, the coevolution of growing state capacity, on the one hand, and falling trends in infectivity and mortality rates on the other, should be part of that understanding. The measures taken to mitigate the effects of novel pathogens and ultimately to bring them under control were not just a function of the degree of control exercised by governments. More important than stringency was the mobilisation of knowledge on the part of the state. In the seventeenth century, diseases such as the plague were barely understood, and the measures taken to address them did not in any practical sense address their transmission through poor sanitation and residential over-crowding. By the middle of the nineteenth century this was changing: cholera was no longer thought to be the result of a diffuse and uncontrollable ‘miasma’ of conditions,<sup>218</sup> but specifically sourced to impurities in the water supply.<sup>219</sup> From this point on, disease control was increasingly organised around the collection of statistics, not just on the incidence of disease and the conditions of health among populations, but on societal vectors of transmission including rates of poverty and relative deprivation. As Foucault himself put it in a lecture series presented after the publication of *Discipline and Punish*, and which reflects the evolution of his conception of the state, the result was:

a medicine whose main function will now be public hygiene, with institutions to coordinate medical care, centralize power, and normalize knowledge. And which also takes the form of campaigns to teach hygiene and medicalize the population. So, problems of reproduction, the birth rate, and the problem of the mortality rate too.<sup>220</sup>

This shift in the practice of medicine, which can be summed up in the idea of ‘public health’ as a collective good financed through and supplied by the state, was accompanied by wider changes in governmentality, understood as the practice of government, and in the form of law. This was epitomised by the transformation of the workhouse, an institution designed to coerce the poor and contain the diseased, to the public hospital, funded from social insurance and general taxation.<sup>221</sup> Juridically, it was marked by the transition from the disciplinary ‘poor law’ to the modern law of ‘social security’, constructed on the principle of the sharing of risks on a population-wide basis.<sup>222</sup> These developments, through which nation states consolidated their power and legitimacy, had their counterparts at international level.



## **B. Transnational knowledge diffusion: the role of the WHO**

Beginning in the middle decades of the nineteenth century, attempts were made to embed the emerging lessons of disease control in international protocols and standards. Early experiments in information sharing and coordination of national responses to cholera took the form of international sanitary conferences, the first of which was held in Paris in 1851. These initiatives gradually assumed a more institutionalised and permanent form which culminated with the founding of the World Health Organization in April 1948.<sup>223</sup> The WHO's Health Emergencies Programme, updated in 2019, seeks to ensure that 'all countries are equipped to mitigate risk from high-threat infectious hazards' and that 'all countries assess and address critical gaps in preparedness for health emergencies, including in core capacities'.<sup>224</sup> Recognising that 'stronger and more resilient national health systems will be backed by the regional and global alert and response mechanisms that will provide early warning and coordinate the international support required to contain and mitigate the impact of health emergencies', the Organization is committed to working 'with partners to identify and coordinate the research, development and innovation needed to better detect, prevent and respond to new and emerging diseases and other sources of risk'.<sup>225</sup>

As an international agency, however, the WHO lacks precisely those coercive powers which are available to states engaged in the practice of 'biopolitics'. The International Health Regulations ('IHRs'), adopted in 1969 and revised in 2005, are intended to 'prevent, protect against, control, and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks and that avoid unnecessary interference with international traffic and trade'.<sup>226</sup> In their legal form the Regulations are a treaty, and so binding upon their state parties (nearly 200 countries) as a matter of international law. In practice, however, there are few steps that the WHO can take in response to a country's failure to comply with the IHRs concerning disease notification.<sup>227</sup> The form of the notification process gives rise to a 'social dilemma' in which a country experiencing an outbreak will be reluctant to report it because of the risk it will then be barred from access to international trade and free movement of people and resources.<sup>228</sup> Having no sanctions at its disposal, the WHO's response has been to place emphasis instead on the provision of resources and support to increase states' capabilities for monitoring and responding to health risks.<sup>229</sup>

With specific reference to zoonotic diseases, the WHO has developed a series of indicators which benchmark states' levels of readiness by reference to factors which include food safety standards, in-service training capacities, and resourcing of emergency response teams. Information on the indicators and their implementation in practice is diffused through a process described as a Joint

External Evaluation Tool ('JEE'), first published in 2005 and revised in 2018. A core identifying feature of this process is that it is not mandatory for the member state taking part in it, and that its effects operate largely at the level of information exchange and peer review: 'JEEs have a number of important features including: **voluntary** country participation; a **multisectoral** approach by both the external teams and the host countries; **transparency** and openness of data and **information sharing**; and the **public release** of reports'<sup>230</sup> (emphasis in original).

In their stress on seeking to achieve compliance through information generation rather than sanctioning, the JEEs embed some of the lessons of contemporary governance research, including the limits of what can be achieved through coercive control in the absence of community action.<sup>231</sup> The WHO, in common with other UN agencies with a social mandate such as the International Labour Organization, has no option but to operate through consensus and persuasion, because it has been denied the power to do otherwise. Powers of enforcement are available, on the other hand, to agencies charged with responsibility for the maintenance of the global trading system. The World Trade Organization, formally established outside the framework of the United Nations, has been granted powers of adjudication and enforcement which are designed to penalise breaches of its rules. The World Bank and International Monetary Fund, agencies of the UN but more generously funded than the WHO or ILO, are able through the principle of 'conditionality' to use the resources at their disposal to ensure compliance with policy recommendations.<sup>232</sup>

This is not to suggest that the monitoring and information diffusion role of the WHO should be neglected. The WHO's response to SARS 1 in 2003 is widely thought to have been timely and effective, and the lessons from that episode were embedded in its protocols and in pandemic planning in a number of countries. The experience of the SARS 1 epidemic, in particular the need for speed of response as well as the value of early restrictions on travel both within and between countries, informed the WHO's guidance on the response to Covid-19, and appears to have been a factor in the suppression strategy adopted by several East Asian countries in the early weeks of 2020.<sup>233</sup>

It can be no surprise that the WHO has been criticised for being too slow to notify countries of the dangers of the SARS-Covid-2 pathogen after it was alerted to its properties in January 2020, and for only declaring Covid-19 a pandemic in March. This criticism, however, needs to be understood in the context of the WHO's limited capacities. Its inability, in common with other international agencies with a social remit, to mobilise the power of 'government' of the kind associated with nation states is the result of deliberate design.<sup>234</sup>

Criticisms of the WHO notwithstanding, the Organization has a principal role in the Covid-19 crisis as the global repository of information and source of guidance on best practice, and has been performing that role since the very beginning of the emergency.<sup>235</sup> Very few of the control measures and public health interventions made by governments during 2020 are new, the Chinese shelter hospitals being one of the few of which this could be said;<sup>236</sup> the remainder have their origins in standards formulated and developed by WHO and its international predecessors on the basis of national experiences, the ‘Leicester method’ being just one, particularly pertinent, example.<sup>237</sup>

## **6. Assessment and Conclusion**

We are still in the early stages of a pandemic episode whose eventual trajectory cannot be straightforwardly predicted. The difficulty in knowing how the pandemic will play out is not just the result of limitations in the understanding of its virology and epidemiology. There is as yet no consensus on how it will or should be governed. We see not just a wide divergence in states’ reactions, but in the characterisation of the control and support measures taken in countries which have so far been successful in repressing the virus. In many countries, influential voices, within and beyond government, see control measures of this kind as, in varying degrees, unnecessary and counter-productive. The view that control interventions are unnecessary tends to go hand in hand with the idea that complementary support mechanisms should also be limited in their scale and duration.<sup>238</sup> At the root of this view is a particular understanding of the role of governance and of government: self-adjusting mechanisms in society, politics, and law, mirroring those in nature, will ensure an optimal resolution to the pandemic. State intervention and planning, if pursued at scale and over any significant duration of time, are likely to degenerate into coercion and control.

In the preceding sections of this paper we reviewed and assessed the emerging evidence on the nature of states’ responses, with a focus on the Chinese case. The measures taken in Wuhan in early months of 2020, far from being unprecedented, were in line with, and in a very real sense the culmination of, public health responses which, over the course of several centuries, achieved an epidemiological transition and mortality revolution in the countries of the global North. Industrialisation, urbanisation and the growth of trade, along with movements of populations, created the conditions for the major pandemics of the modern era, but made it possible for them to be managed and brought under control. They produced a type of state, a social or welfare state, which had the capacity to respond to the risks posed by infectious diseases, and, over time, to control and suppress them. At the core of both developments – the rise of industry and commerce, on the one hand, and the emergence of a state with the resources and capabilities to manage the risks they created – was the systematic application

of knowledge. Alongside the privately held and decentralised knowledge of the market, the social state mobilised knowledge that was publicly organised and centralised. As this process continued, there was a related shift in the form of the state: its capacity to act through the application of knowledge grew in inverse proportion to its use of coercion to achieve its ends.

When we understand the history of pandemic control in this way, we can begin to formulate some likely scenarios for the trajectory of the current crisis. ‘Normalising’ Covid-19 by treating it as a natural event which will eventually recede without the need for concerted action will not work very well for any state attempting it. In that event, the disease will become endemic: as with smallpox and cholera in the relatively recent past. Covid-19 will become stable and in a sense manageable, but still a serious health risk to certain parts of the population, and a continuing drain on scarce resources.

But it is also important to stress that policies which treat the virus and society alike as self-adjusting systems will not in practice lead to the hoped-for minimisation of state control. In the absence of a concerted public health response based on the logic of ‘find, test, trace, isolate and support’, periodic waves of the virus will be met by repeated lockdowns. These are likely to be accompanied by a renewed emphasis on the disciplining and control of the population. The same process will also give rise to new variants of the idea that populations, not governments, are to blame for the persistence of the pandemic and its associated social and economic costs. The neoliberal state is one in which outcomes are attributed to the decisions taken by individuals. If Covid-19 becomes endemic in societies organised according to this principle, it will not be seen as the responsibility of government, but of the groups within the population which are most exposed to its effects, above all those at risk through poverty, overcrowding and dangerous working conditions.

There is an alternative path, one in which the risks associated with Covid-19 are recognised and governed in a systematic and concerted way. Of necessity this will involve new, or renewed, understanding of the importance of public governance delivered by a democratically constituted and accountable state. The social state of the middle decades of the twentieth century solved the collective action problem inherent in the industrial capitalism of the time by constructing a consensus around the need for a society-wide, cross-generational pooling of risks. That achievement was eroded away by several decades of neoliberal theorising and policy making, but not to the extent that reconstruction is impossible. The history of social security, as of labour law, is one of alternating cycles,<sup>239</sup> and the Covid-19 emergency will provide opportunities to institute a new, progressive phase in the evolution of the social state.

To manage risks they must first be recognised as humanly created, rather than purely natural or material events, and social, that is to say collective, in their origins and effects, as opposed to being solely the result of individual decision making. Thus to recognise risk in the case of Covid-19 means seeing the pandemic not as a natural event, or as a chance occurrence, but as the result of human action and institutions. Pandemics are a predictable result of the rise of industry, the globalisation of commerce and trade, and the movement of goods and peoples. They are a structural consequence of a system which undervalues the environment and fails to price in the effects of its degradation. This system is not just social and economic, but also legal: it is the result of legal institutions which permit and legitimise the commodification of the natural world.

At the same time, to recognise the risk of pandemic as Anthropogenic – as the result, that is, of feedback from the natural environment in response to human activity – is to begin to make it amenable to governance through law and other human institutions. The history of the management of pandemics since the late medieval period shows that they can be contained, managed and finally suppressed through concerted action. At the core of this process is the application of knowledge of various kinds, in some contexts, decentralised and private, but in others centralised and public.

Does placing a renewed emphasis on the role of the state in systems of governance put us on a pathway to authoritarianism; according to alternative theoretical priors, a ‘road to serfdom’ or ‘state of exception’? It is not mistaken to identify in the neoliberal state, or states more generally, the possibility of a coercive response to the Covid-19 crisis. However, this outcome is, we suggest, less likely in contexts where the disease is brought under systematic control through the public interventions which are characteristic of a functioning social state. In those countries where the disease is allowed to become endemic through inaction, as a result (among other things) of a preference for neoliberal modes of governance, we are likely to see the state assuming new ‘biopolitical’ powers. The future of the neoliberal state will be an increasingly coercive one. But it will also be ineffective: if a system of governance is ultimately successful according to how far it is able to process external risks to its mode of operation, the experience of Covid-19 to date is that neoliberal systems are inherently ill-equipped to manage the risks of the Anthropocene era.

Finding an alternative path should begin with rethinking currently influential accounts of governance and governmentality which see the ‘prison’ and the ‘clinic’ as lying on the same continuum, and view authoritarianism as the preordained outcome of the welfare or social state. These theories precisely invert the relationship between knowledge and coercion that we can observe in the evolution of the social state. It was through the systematic organisation of

knowledge that the state was able to reduce its reliance on coercion for the management of risks to human populations; social insurance replaced the poor law, and the hospital superseded the workhouse. A century ago, this process culminated in an epidemiological turning point and unprecedented stabilisation of human mortality rates. Essential to this process was the realisation that poverty and disease were neither natural phenomena, nor the result of individual choices, but the consequences of human institutions, and that as such they had to be addressed institutionally. This achievement, which is in danger of being forgotten, can be a template for the future governance of Anthropogenic risks, of which Covid-19 is likely just the harbinger.

## Notes

<sup>1</sup> A. Gorbalenya, S. Baker, R. Baric *et al.*, ‘Severe Acute Respiratory Syndrome-Related Coronavirus: the species and its viruses—a statement of the Coronavirus Study Group’ *bioRxiv* 2020, published online Feb 11 2020, DOI:2020.02.07.937862 (preprint). On the term ‘SARS-CoV-2 virus’ see S. Jiang *et al.* ‘A distinct name is needed for the new Coronavirus’ (2020) 395 *Lancet* 949; Y. Wu, W. Ho and Y. Huang, *et al.*, ‘SARS-CoV-2 is an appropriate name for the new coronavirus’ (2020) 395 *Lancet* 949.

<sup>2</sup> World Health Organization, ‘Coronavirus Disease 2019’ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

<sup>3</sup> On the origins of the coronavirus pandemic, see N. Zhu, D. Zhang and W. Wang, *et al.*, ‘A novel coronavirus from patients with pneumonia in China, 2019’ (2020) 382 *New England Journal of Medicine* 727; P. Zhou, X. Yang, X. Wang, *et al.*, ‘A pneumonia outbreak associated with a new coronavirus of probable bat origin’ (2020) 579 *Nature* 270; F. Wu, S. Zhao, B. Yu, *et al.*, ‘A new coronavirus associated with human respiratory disease in China’ (2020) 579 *Nature* 265; K. Andersen, *et al.*, ‘The proximal origin of SARS-CoV-2’ (2020) 26 *Nature Medicine* 450; Q. Li, X. Guan, P. Wu, *et al.*, ‘Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia (2020) 382 *New England Journal of Medicine* 1199; C. Huang, Y. Wang, X Li, *et al.*, ‘Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China’ (2020) 395 *Lancet* 497.

<sup>4</sup> On the appearance of the disease in Europe, see F. Lescure, L. Bouadma, D. Nguyen, *et al.* ‘Clinical and virological data of the first cases of COVID-19 in Europe: a case series’ (2020) 20 *Lancet Infectious Diseases* 697. On the modelling of the spread of the disease in the UK see N. Ferguson, D. Laydon, G. Nedjati-Gilani *et al.*, ‘Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand’. London: Imperial College COVID-19 Response Team, March 16, 2020, <https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf>.

<sup>5</sup> E. Holmes, R. O'Connor, V. Perry et al., 'Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science' (2020) 7 *Lancet Psychiatry* 547; C. Figueroa and A. Aguilera, 'The need for a mental health technology revolution in the COVID-19 pandemic' (2020) 11 *Frontiers in Psychiatry* 593; S. S. Lee, J. Huang and N. Schwarz, 'Risk overgeneralization in times of a contagious disease threat' (2020) 11 *Frontiers in Psychology* Article 1392 doi: 10.3389/fpsyg.2020.01392.

<sup>6</sup> In particular, mortality rates vary across age groups. Data reported by the Oxford-based Centre for Evidence-Based Medicine in October 2020 reported that the median case fatality rate by age cohort was 0.32% for those aged 20-49 years and 1.3% for those between 50 and 59, but 14.8% for those aged over 80: <https://www.cebm.net/covid-19/global-covid-19-case-fatality-rates>. In the UK, mortality rates differ markedly by region, ethnic origin and social class, with the severest impact on those already most exposed to social and economic risks: K. Ewing and J. Hendy, 'Covid-19 and the failure of labour law: part I' (2020) 49 *ILJ* forthcoming.

<sup>7</sup> E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: CUP, 1990), ch. 1.

<sup>8</sup> See below, Section 3.

<sup>9</sup> In the last two decades alone, major epidemics include SARS, Ebola, the H1N1 influenza virus, and MERS as well as Covid-19. See below section 3.

<sup>10</sup> See A. Supiot, *Grandeur et misère de l'État social* (Paris: Fayard, 2013); F. Ewald, *L'État Providence* (Paris: Grasset, 1989), now available in English as *The Birth of Solidarity* trans T. Johnson, ed. M. Cooper (Durham, NC: Duke UP, 2020).

<sup>11</sup> See below, Section 4.



<sup>12</sup> F Peng, et.al., 'Management and Treatment of COVID-19: The Chinese Experience' (2020) 35 *Canadian Journal of Cardiology* 915-930, at p. 915: 'Although some measures have been supported by weak descriptive data, their effectiveness is still unclear pending well controlled clinical trials'. The authors go on, however, to suggest that 'in the end, it was the enforcement of drastic quarantine measures that stopped SARS-CoV-2 from spreading. The earlier the implementation, the less likely resources will be depleted. The most critical factors in stopping a pandemic are early recognition of infected individuals, carriers, and contacts and early implementation of quarantine measures with an organised, proactive, and unified strategy at a national level. Delays result in significantly higher death tolls.' On the effectiveness of the Wuhan measures in preventing exponential growth of infections in China, see B. Maier and D. Brockmann, 'Effective containment explains subexponential growth in recent confirmed COVID-19 cases in China' (2020) 368/6492 *Science* 742-746.

<sup>13</sup> Although see T. Hale, A. Hale, B. Kira et al., 'Global assessment of the relationship between government-response measures and COVID-19 deaths' *medRxiv preprint* posted 6 July 2020 doi: <https://doi.org/10.1101/2020.07.04.20145334>. Using the Stringency Index developed by the Oxford University Blavatnik School of Government, the authors report that 'a lower degree of government stringency and slower response times were associated with more deaths from COVID-19' (at p. 3). They also acknowledge shortcomings with existing data (at p. 7).

<sup>14</sup> The issue of where exactly the virus *originated* has become subject to number of conflicting narratives. See Y. Huang 'How the origins of Covid-19 became politicised' *Think Global Health* blog 14 August 2020 <https://www.thinkglobalhealth.org/article/how-origins-covid-19-became-politicized>.

<sup>15</sup> Scepticism about data supplied by China goes back to the early weeks of the Covid-19 emergency. See e.g. 'CIA hunts for authentic virus totals in China, dismissing government tallies' *New York Times* 2 April 2020 <https://www.nytimes.com/2020/04/02/us/politics/cia-coronavirus-china.html>. At the time of writing (October 2020), virtually all data on infection and fatality rates depend on the reports made by national governments. What does not seem to be in dispute is that China largely suppressed community-based transmission during the first wave of the virus. See below section 4.1.

<sup>16</sup> These data are taken from the Johns Hopkins Coronavirus Resource Centre <https://coronavirus.jhu.edu/map.html>. On basis of the calculation of UK data on deaths and infections, see Office for National Statistics, ‘Coronavirus (COVID-19) Latest data and analysis on coronavirus (COVID-19) in the UK and its effect on the economy and society’ <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases>.

<sup>17</sup> See below, section 4.2.

<sup>18</sup> See below, Section 4.1.

<sup>19</sup> J. Zhe, ‘The “China virus” and its mutation’ (2020) 60 *Monde Chinois Nouvelle Asie* 134.

<sup>20</sup> B.Y. Chan, ‘Asian countries are managing this crisis better than the West’ *El País*, March 22, 2020 English translation available at <https://www.readingthechinadream.com/byung-chul-han-coronavirus.html>; X. Jilin, ‘Culture and the coronavirus’ *Financial Times* (Chinese edition), April 13, 2020, English translation available at <https://www.readingthechinadream.com/xu-jilin-culture-and-coronavirus.html> (both translations by David Ownby).

<sup>21</sup> See the data reported by the Johns Hopkins Coronavirus Resource Centre: <https://coronavirus.jhu.edu/map.html>.

<sup>22</sup> It should nonetheless be borne in mind that at the time of writing (October 2020) the pandemic is still at an early stage and that it is therefore premature to ascribe lasting ‘success’ to any particular approach. The problem facing countries which were able to suppress community transmission in the first wave of the virus is that since their populations have had minimal exposure, there are no ‘firebreaks’ in place should there be new infections. Since these can occur through the movement of goods and materials, even if the movement of persons is strictly controlled, they remain potentially exposed to future waves. This is the logic behind the Swedish position of limiting the scale of quarantines and lockdowns during the first wave. See J. Geisecke, ‘The invisible pandemic’ (2020) 395 *Lancet* e98 [https://doi.org/10.1016/S0140-6736\(20\)31035-7](https://doi.org/10.1016/S0140-6736(20)31035-7): ‘a hard lockdown does not protect old and frail people living in care homes—a population the lockdown was designed to protect. Neither does it decrease mortality from COVID-19, which is evident when comparing the UK’s experience with that of other European countries.’ On the potential downside of the approach taken in New Zealand, see E. Crampton, ‘Prepare for the worst’ *Spinoff* blog 20 October 2020: ‘too many advocates of elimination have not reckoned with what is required in scaling up capacity at the border if [the emergency] winds up lasting for years... Scaling up is critical, lest New Zealand increasingly be left behind in a world where face-to-face contact still matters. The alternative would see New Zealand increasingly isolated, with worsening poverty, and with awful humanitarian consequences for families separated by lack of capacity at the border – but at least without the virus’ <https://thespinoff.co.nz/society/vodafone/20-10-2020/covid-19-has-changed-new-zealand-forever-the-experts-explain-how/>.

<sup>23</sup> See below, section 5.1.

<sup>24</sup> See below, section 5.2.

<sup>25</sup> In similar vein, the 2020 UN Global Compact defines ‘the systems and processes that ensure the *overall effectiveness* of an entity—whether a business, government or multilateral institution’ (<https://www.unglobalcompact.org/what-is-gc/our-work/governance>) while the OECD defines public governance as ‘the formal and informal arrangements that determine how *public decisions* are made and how public actions are carried out, from the perspective of *maintaining a country’s constitutional values* when facing changing problems and environments’: Policy Framework for Investment Users’ Toolkit (Paris: OECD, 2011) <http://www.oecd.org/investment/toolkit/policyareas/publicgovernance/41890394.pdf>.

<sup>26</sup> E. Ostrom, *Understanding Institutional Diversity* (Princeton, NJ: Princeton University Press, 2005); D. C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge: CUP, 1990); M. Aoki, *Toward a Comparative Institutional Analysis* (Cambridge, MA: MIT Press, 2001).

<sup>27</sup> N. Luhmann, *Law as a Social System* trans. K. Ziegert, eds. F. Kastner, R. Nobles, D. Schiff and R. Ziegert (Oxford: OUP, 2004).

<sup>28</sup> On which, see P. Rubin, 'Why is the common law efficient?' (1977) 6 *Journal of Legal Studies* 51; G. Priest, 'The common law process and the selection of efficient rules' (1977) 6 *Journal of Legal Studies* 65.

<sup>29</sup> D. Lewis, *Convention: A Philosophical Study* (Cambridge, MA: Harvard University Press, 1969).

<sup>30</sup> Thus our approach here is intended to be integrative, in contrast to the approach often taken of identifying differences between schools of thought. The disciplinary fragmentation of the social and human sciences is, in practice, a major barrier not just to understanding societal phenomena, but to applying the knowledge these fields generate. For other field-unifying contributions, see M. Bevir, *Governance* (Oxford: OUP, 2012); F. Fukuyama, 'What is governance?' (2013) 26 *Governance: An International Journal of Policy, Administration and Institutions* 347-68.

<sup>31</sup> M. Foucault, *The Birth of Biopolitics: Lectures at the College of France, 1978-79* trans. G. Burchell, ed. M. Sennelart (London: Palgrave Macmillan, 2008). Foucault's focus was on the 'art of government' not only as a practice, but on the way in which this practice was reflected in thought in and about government: 'I have tried to grasp the level of reflection in the practice of government and on the practice of government... I wanted to study government's consciousness of itself' (ibid., at p. 2). On the possibility of using the concept of 'governmentality' to go beyond narrow and static accounts of 'governance', see T. Lemke, 'An indigestible meal? Foucault, governmentality and state theory' (2007) 8 *Scandinavian Journal of Theory* 43, stressing the failure of governance-based approaches to take divergences of interests sufficiently seriously; to similar effect is J. Fudge, 'The future of the standard employment relationship: labour law, new institutional economics and old power resource theory' (2017) 59 *Journal of Industrial Relations* 374.

<sup>32</sup> In Aoki's neo-institutionalist language, the state (or 'polity') is a 'focal' agent with 'unique' powers (*Toward a Comparative Institutional Analysis*, at p. 20). The emergence of such a state is an historical process; for Foucault, the state 'is the correlative of a particular way of governing. The problem is how this way of governing develops, what its history is, how it expands, how it contracts, how it is extended to a particular domain, and how it invents, forms and develops new practices' (*The Birth of Biopolitics*, at p. 6). Luhmann notes the historical specificity of the model of the state to which the theory of legal positivism corresponds: *Law as a Social System*, at p. 262.

<sup>33</sup> D. North, 'Institutions' (1991) 5 *Journal of Economic Perspectives* 1, 1: 'Institutions are the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions and codes of conduct) and formal rules (constitutions, laws, property rights)'.

<sup>34</sup> A Lewisian convention depends on the presence of common knowledge, in a given community, that a particular practice will be widely followed. The formation of such knowledge is the result of iteration and hence of precedent: *Convention*, at p. 36. While a convention in this sense originates in the practice of a community, it may come to be embodied in more formal, legal norms, which can be thought of a public representation of that practice: M. Aoki, *Corporations in Evolving Diversity* (Cambridge: CUP, 2010), at p. 67.

<sup>35</sup> In Aoki's account, laws can 'anticipate, facilitate, or confirm a certain direction of change in the strategic choices of agents' (*Corporations*, at p. 140) but will not be effective in practice if 'appropriate cognitive assets in the economic domain and competences in legal enforcement in the public domain have not been accumulated' (p. 136). Critical here is the idea that the legal system is just one of a number of domains in which strategic interactions play out; it is not just that 'public processes act together with the strategic play of the societal games, but that 'in fact they are a part of it' (p. 140).

<sup>36</sup> By 'biopolitics' Foucault meant, more specifically, 'the attempt, starting from the eighteenth century, to rationalise the problems posed to governmental practice by phenomena characteristic of a set of living beings forming a population: health, hygiene, birthrate, life expectancy...'. *The Birth of Biopolitics*, at p. 317.

<sup>37</sup> M. Foucault, *Discipline and Punish: The Birth of the Prison* trans. A. Sheridan (Harmondsworth: Penguin, 1977).

<sup>38</sup> M. Foucault, *Birth of the Clinic: An Archaeology of Medical Perception* trans. A Sheridan (London: Routledge and Kegan Paul, 1973).

<sup>39</sup> R. Diaz-Bone, 'Economics of convention meets Foucault' (2019) 44 *Historical Social Research* 308, 310.

<sup>40</sup> 'The label "neoliberalism" doesn't explain much': M. Hesselink, 'The myth of a neoliberal European private law: contribution to an online symposium on P. Kjær (ed), *The Law of Political Economy: Transformations in the Function of Law (CUP 2020)*' *VerfBlog*, 2020/9/01, <https://verfassungsblog.de/the-myth-of-a-neoliberal-european-private-law/>. The term may have been overused recently, but it has a long history and was first adopted by its proponents: see, for example, M. Friedman. 'Neoliberalism and its prospects' *Farmand*, 17 February 1951, 89.

<sup>41</sup> *The Birth of Biopolitics*, at p. 166.

<sup>42</sup> *Ibid.*, pp. 78-79.

<sup>43</sup> *Ibid.*, 216-17.

<sup>44</sup> 'Broadly speaking, in the liberal regime, in the liberal art of government, freedom of behaviour is entailed, called for, needed, and serves as a regulator, but it also has to be produced and organised': *The Birth of Biopolitics*, at p. 65.

<sup>45</sup> Foucault notes the difference here in the American account of the state-market relation as represented in the law and economics (Chicago) and public choice (Virginia) schools, and the German ordo-liberal one; in the latter, the state assumes the responsibility for maintaining effective competition, which is not seen as 'natural'. At the same time, the ordo-liberal approach seeks to construct a state, and a wider society, of the kind that will realise this competitive vision of the market; in that sense, it accepts that the 'market economy can in fact serve as the principle, form and model for [the] state: *ibid.*, at p. 117.

<sup>46</sup> *Ibid.*, at p. 243.

<sup>47</sup> *Law as a Social System*, at p.391.

<sup>48</sup> *Comparative Institutional Analysis*, at p. 20.

<sup>49</sup> A. Supiot, *Homo Juridicus: On the Anthropological Function of Law* trans. S. Brown (London: Verso, 2007), ch. 5.

<sup>50</sup> *Law as a Social System*, at p. 80.

<sup>51</sup> *Corporations*, at pp. 5-6.

<sup>52</sup> E. Ostrom, 'A behavioral approach to the rational choice theory of collective action' (1998) 92 *American Political Science Review* 1, 1.

<sup>53</sup> *ibid*, 1.

<sup>54</sup> *Governing the Commons*, ch. 1.

<sup>55</sup> H. Gintis, *The Bounds of Reason: Game Theory and the Unification of the Behavioral Sciences* (Princeton, NJ: Princeton UP, 2009), at p. 41.

<sup>56</sup> 'Cultural systems... serve as symbolic cues for higher-order beliefs and expectations. Common priors, then, are the result of common culture': *ibid.*, at pp. 140-41.

<sup>57</sup> Aoki, *Corporations*, at p. 134, referring to common priors as 'historically accumulated common knowledge'.

<sup>58</sup> Ostrom, 'A behavioral approach', at p. 1. Ostrom's work demonstrates the possibility of multiple modes of governance 'beyond market and state' but it is important to recognize that she regarded the state as one potential source of solutions to the collective action problem. E. Ostrom, 'Beyond markets and states: polycentric governance of complex economic systems' (2010) 100 *American Economic Review* 641.

<sup>59</sup> *Ibid.*

<sup>60</sup> On the argument that the state does not simply lend its powers of enforcement to norms and practices which have a communitarian or customary origin, see S. Deakin, D. Gindis, G. Hodgson, K. Huang and K. Pistor, 'Legal institutionalism: capitalism and the constitutive role of law' (2015) 45 *Journal of Comparative Economics* 188.

<sup>61</sup> D. North, *Understanding the Process of Economic Change* (Princeton, NJ: Princeton University Press, 2005), at p. viii.

<sup>62</sup> *Ibid.*

<sup>63</sup> F. A. Hayek, 'The use of knowledge in society' (1945) 35 *American Economic Review* 519, 521-22.

<sup>64</sup> *Ibid.*, at p. 527.

<sup>65</sup> *Ibid.* at p. 524.

<sup>66</sup> *Ibid.*, at p. 528.

<sup>67</sup> F. A. Hayek, *The Constitution of Liberty* (Chicago: University of Chicago Press, 1960).

<sup>68</sup> *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*, 3 Volumes (London: Routledge 1982).

<sup>69</sup> *The Constitution of Liberty*. at p. 228.

<sup>70</sup> *Law, Legislation and Liberty, Volume I: Rules and Order*, at p. 51.

<sup>71</sup> As already anticipated in F.A. Hayek, *The Road to Serfdom* (London: Routledge, 1944).

<sup>72</sup> Aoki, *Corporations*, at p.127.

<sup>73</sup> R.H. Coase, 'The firm, the market and the law' in R.H. Coase (ed.), *The Firm, the Market and the Law* (Chicago: University of Chicago Press) at p. 9.

<sup>74</sup> *Ibid.*

<sup>75</sup> K. Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton, NJ: Princeton University Press, 2019).

<sup>76</sup> *Law, Legislation and Liberty, Volume II: The Mirage of Social Justice*, pp. 108-9.

<sup>77</sup> S. Deakin, 'Law as evolution: evolution as social order: common law method reconsidered', in S. Grundmann and J. Thiessen (eds.) *Law in the Context of Disciplines: Interdisciplinary Approaches in Legal Academia and Practice* (Tübingen: Mohr Siebeck, 2015).



- <sup>78</sup> H. Kelsen, *Introduction to the Problems of Legal Theory* trans. B. Litschewski Paulson and S. Paulson, (Oxford: Clarendon Press, 2002 [1934]).
- <sup>79</sup> S. Deakin, 'Evolution for our time: a theory of legal memetics' (2002) 55 *Current Legal Problems* 1.
- <sup>80</sup> M. Roe, 'Chaos and evolution in law and economics' (1996) 109 *Harvard Law Review* 641.
- <sup>81</sup> U. Hasson, S. Nastase and U. Goldstein, 'Direct fit to nature: an evolutionary perspective on biological and artificial neural networks' (2020) 105 *Neuron* 416, 417.
- <sup>82</sup> Deakin, 'Evolution for our time', at p. 37.
- <sup>83</sup> Hasson et al., 'Direct fit to nature', at p. 427.
- <sup>84</sup> S.J. Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: Belknap Press, 2002), ch. 9.
- <sup>85</sup> Deakin, 'Evolution for our time', at p. 38.
- <sup>86</sup> Cf. T. Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Strauss and Giroux, 2005); G. Hadfield, *Rules for a Flat World* (Oxford: OUP, 2016).
- <sup>87</sup> B. Ahlering and S. Deakin, 'Labor regulation, corporate governance and legal origin: a case of institutional complementarity?' (2007) 41 *Law & Society Review* 865; E. McGaughey, 'Introduction: a social law beyond *public v private*', in E. McGaughey ed. and trans. 'The social role of private law (Otto van Gierke 1889)' (2018) 19 *German Law Journal* 1017.
- <sup>88</sup> P. Bobbitt, *The Shield of Achilles: War, Peace and the Course of History* (London: Penguin, 2002).
- <sup>89</sup> Deakin et al., 'Legal institutionalism'.
- <sup>90</sup> G. Hodgson, *Conceptualizing Capitalism: Institutions, Evolution, Future* (Chicago: University of Chicago Press, 2015).

<sup>91</sup> M. Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (London: Anthem, 2013).

<sup>92</sup> P. Hall and D. Soskice (eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford: OUP, 2001).

<sup>93</sup> F. Ewald, *The Birth of Solidarity: The History of the French Welfare State* trans. T. Scott Johnson, ed. M. Cooper (Durham, NC: Duke University Press, 2020), originally published as *L'État Providence* (Paris: Grasset, 1986); S. Deakin and F. Wilkinson, *The Law of the Labour Market: Industrialization, Employment, and Legal Evolution* (Oxford: Oxford University Press, 2005).

<sup>94</sup> Ewald, *The Birth of Solidarity*, Part II (explaining the emergence of a public regime of social security based on the principle of 'universal insurance against risk'); Deakin and Wilkinson, *The Law of the Labour Market*, ch 3 (discussing the parallel process in Britain).

<sup>95</sup> 'In the absence of individual interest, there is no interest': J. Buchanan, 'The constitution of economic policy' Nobel Prize Lecture, 8 December 1986 <https://www.nobelprize.org/prizes/economic-sciences/1986/buchanan/lecture/>.

<sup>96</sup> J. Le Grand, 'Knights, knaves or pawns? Human behaviour and social policy' (1997) 26 *Journal of Social Policy* 149, 167: 'The old welfare state was largely based on the assumptions that, in welfare-related situations, people would behave either like knights or like pawns. This article has discussed 'new' forms of welfare, some based on the assumption that people are knaves, some on the assumption that we can convert knaves into knights, and some on the assumption that we are ignorant about the mainsprings of human motivation.'

<sup>97</sup> A. Shleifer, and R. Vishny, *The Grabbing Hand. Government Pathologies and their Cures* (Cambridge, MA: Harvard University Press, 1998): 'in many countries, public sector institutions impose heavy burdens on economic life'.

<sup>98</sup> S. Simitis, 'Juridification of labor relations', in G. Teubner (ed.) *Jurification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporate, Antitrust, and Social Welfare Law* (Berlin: De Gruyter, 1986).

<sup>99</sup> R. Thaler and C. Sunstein (eds.) *Nudge: Improving Decisions about Health, Wealth and Happiness* (London: Penguin, 2008).

<sup>100</sup> Hayek, *The Constitution of Liberty*.

<sup>101</sup> Supiot, *Homo Juridicus*, ch. 5; D. Chen and S. Deakin, ‘On heaven’s lathe: state, rule of law, and economic development’ (2015) 8 *Law and Development Review* 123; although see also McGaughey, ‘A social law beyond *public v private*’, discussing the use of the concept of the public-private divide, in US constitutional law and theory, to push back against the regulatory state.

<sup>102</sup> Buchanan, ‘The constitution of economic policy’: ‘The exchange conceptualization of politics is important in the derivation of a normative theory of economic policy... Agreement itself emerges, again conceptually, from the revealed choice behavior of individuals. Commonly shared agreement must be carefully distinguished from any externally-defined definition or description of that “good” upon which persons “should agree”’.

<sup>103</sup> S. Teles, *The Rise of the Conservative Legal Movement: The Battle for Control of the Law* (Princeton, NJ: Princeton University Press, 2008).

<sup>104</sup> A. Supiot, *L’Esprit de Philadelphie: la justice sociale face au marché total* (Paris: Seuil, 2010).

<sup>105</sup> Shleifer and Vishny, *The Grabbing Hand*.

<sup>106</sup> J. Hamilton and S. Deakin, ‘Russia’s legal transitions: Marxist theory, neoclassical economics, and the rule of law’ (2015) 7 *Hague Journal of the Rule of Law* 283.

<sup>107</sup> M. Friedman, “‘Privatization’ isn’t enough’, foreword to J. Gwartney and R. Lawson, (eds.), *Economic Freedom of the World: 2002 Annual Report* (Vancouver: Fraser Institute, 2002).

<sup>108</sup> D. Dorling, *Peak Inequality* (Bristol: Policy Press, 2018).

<sup>109</sup> States of the kind we have characterised as ‘neoliberal’ do not become less so through the adoption of ‘populist’ rhetoric. The corrosion of the state by private economic interests which we have identified as a core feature of neoliberal governance is also present in contemporary ‘populism’ in the USA (E. McGaughey, ‘Fascism lite in America (or the social ideal of Donald Trump)’ (2018) 7 *British Journal of American Legal Studies* 291) and central and eastern Europe (D. Sallai and G. Schnyder, ‘What is ‘authoritarian’ about authoritarian capitalism? The dual erosion of the public-private divide in state-dominated business systems’ (2020) *Business and Society* DOI: [10.1177/0007650319898475](https://doi.org/10.1177/0007650319898475)), as it was in fascist regimes of the 1930s (F. Neumann, *Behemoth* (London: Victor Gollancz, 1942)).

<sup>110</sup> N. Taleb, *Black Swan: The Impact of the Highly Improbable* (London: Penguin, 2nd ed., 2010), at p. xxii.

<sup>111</sup> J. Norman, Y. Bar-Nam and N. Taleb, ‘Systemic risk of pandemic via novel pathogens – coronavirus: a note’ New England Complex Systems Institute (26 January 2020), <https://necsi.edu/systemic-risk-of-pandemic-via-novel-pathogens-coronavirus-a-note>; S. Szreter, ‘Covid-19 is not a black swan: predictable shocks need fully-funded, resilient public services’ *History and Policy* blog <http://www.historyandpolicy.org/opinion-articles/articles/covid-19-is-not-a-black-swan-predictable-shocks-need-fully-funded-resilient-public-services>.

<sup>112</sup> J. Lloyd-Smith, D. George, K. Pepin, et al., ‘Epidemic dynamics at the human-animal interface’ (2009) 326 (5958) *Science* 1362; C. Machalaba, P. Daszak, W. Karesh and C. Romanelli, ‘Anthropogenic drivers of emerging infectious diseases’ Brief for GSDR 2015 <https://sustainabledevelopment.un.org/content/documents/631980-Machalaba-Anthropogenic%20Drivers%20of%20Emerging%20Infectious%20Diseases.pdf>

<sup>113</sup> For an overview of the development of the concept of the Anthropocene as a distinct geological era characterized by the growing impact of human beings on the Earth system, and its implications for law and legal scholarship, see J. Viñuales, ‘Law and the Anthropocene’ (2016) *C-EENRG Working Paper 2016-5* <https://www.ceenrg.landecon.cam.ac.uk/working-paper-files/wp08>. The Anthropocene can be identified by reference to a number of ‘geochemical markers’ including the growing concentration of greenhouse gases in the troposphere, it is also associated with ‘human markers’ in the form of particular technologies and institutions; included in the latter are ‘forms of social organisation, capitalistic production and exchange processes, urbanisation, legal systems’: ‘Law and the Anthropocene’, pp. 3-4.

<sup>114</sup> On the very long run, see L. Shaw-Taylor, ‘An introduction to the history of infectious diseases, epidemics, and the early phases of the long-run decline in mortality (2020) 73 *Economic History Review* E1, at p. E15: ‘At least as far back as the Plague of Justinian in the sixth century, epidemics have crossed the Eurasian landmass. From the late sixteenth century, European expansion led to the microbial unification of the world, laying the foundations for truly global pandemics’; on the present day context, see F. Snowden, *Epidemics and Society: From the Black Death to the Present* (New Haven, CT: Yale University Press, 2020), foreword: ‘A world with nearly eight billion people, the majority of whom live in densely crowded cities and all linked by rapid air travel, creates innumerable opportunities for pulmonary viruses. At the same time, demographic increase and frenetic urbanization lead to the invasion and destruction of natural habitat, altering the relationship of humans to the natural world.’

<sup>115</sup> A. Dobson, S. Pimm, L. Hannah et al., ‘Ecology and economics for pandemic prevention’ (2020) 369 (6502) *Science* 379.

<sup>116</sup> J. Hassell, M. Begon, M. Ward and E. Fèvre, ‘Urbanization and disease emergence: dynamics and the wildlife-livestock-human interface; (2017) 32 *Trends in Ecology and Evolution* 55; A. Dobson, E. Milner-Gulland, D. Ingram and A. Keane, ‘A framework for assessing impacts of wild meat hunting practices in the tropics’ (2019) 47 *Human Ecology* 449.

<sup>117</sup> Dobson et al., ‘Framework’.

<sup>118</sup> The mortality rate of Covid-19 is thought to be somewhere between 0.5 and 1%. SARS 1 had a mortality rate of 10%; seasonal flu generally has a rate of 0.1%. Covid-19, ‘when seen in historical context, has a low case mortality rate’: Shaw-Taylor ‘History’, at p. E16. The ‘Spanish’ flu outbreak of 1918-19 had a rate of 2.5%, while for much of the nineteenth century cholera had a rate of between 20% and 50%.

<sup>119</sup> Norman et al., ‘Systemic risk’: asymptomatic infection coupled with increased transport connectivity makes Covid-19 an ‘extreme fat-tailed process’ which increases the spread of the disease in a non-linear fashion.

<sup>120</sup> Zhou et al., ‘Pneumonia outbreak’.

<sup>121</sup> C. Johnson, P. Hitchens, P. Pandit et al., ‘Global shifts in mammalian population trends reveal key predictors of virus spillover risk’ (2020) 287 *Proceedings of the Royal Society B* 20192736 <https://royalsocietypublishing.org/doi/10.1098/rspb.2019.2736>.

<sup>122</sup> Dobson et al., ‘Ecology’.

<sup>123</sup> See generally Snowden, *Epidemics and Society*, and on the 1918-19 flu pandemic, L. Spinney, *Pale Rider: The Spanish Flu of 1918 and How it Changed the World* (London: Jonathan Cape, 2018).

<sup>124</sup> Norman et al., ‘Systemic risk’.

<sup>125</sup> For the UK, ‘sharp differences in death rates’ from Covid-19 have been reported. According to a study published by the Institute of Fiscal Studies in June 2020, age-adjusted death rates in the most deprived tenth of areas were twice those in the least deprived tenth. While mortality rates are generally higher in more deprived areas, this effect is exacerbated during the pandemic. The report describes this effect as the result of a number of interacting factors: ‘underlying health conditions that put more deprived people at higher medical risk to the virus, as well as differences in occupations and working conditions..., modes of transport and living environment that increase their risk of infection’. There is also evidence that the impact of the disease is greater for certain ethnic minority groups. These effects are independent of the impact of lockdown and other control measures, which also have an unequal impact. See R. Blundell, M. Costa-Diaz, R. Joyce and X. Xu, *Covid-19 and Inequalities* (London: IFS, 2020), <https://www.ifs.org.uk/inequality/covid-19-and-inequalities/>.

<sup>126</sup> F. Ahmed, N. Ahmed, C. Pissarides and J. Stiglitz, ‘Why inequality could spread Covid-19’ (2020) 5 *Lancet Public Health* e240 /doi.org/10.1016/S2468-2667(20)30085-2.

<sup>127</sup> According to press reports in early September 2020, a leaked report by Public Health England had identified deprivation caused by overcrowding in homes and factories as a factor in difficulties in controlling the spread of Covid-19 in a number of towns and cities in the north and midlands of England. ‘Covid-19 “could be endemic in deprived parts of England”’ *The Observer* 5 September 2020 <https://www.theguardian.com/world/2020/sep/05/covid-19-could-be-endemic-in-deprived-parts-of-england>. An increase in infection rates in the city of Leicester during the earlier of the summer had been traced to poor working conditions in its garment district. ‘Leicester lockdown: Sharma to investigate unsafe factories claim and Covid-19 rates’ *The Guardian* 1 July 2020 <https://www.theguardian.com/uk-news/2020/jul/01/leicester-lockdown-sharma-to-investigate-unsafe-factories-claim-and-covid-19-rates>.

<sup>128</sup> The timing of the start of the Anthropocene era is a matter of some debate and depends on exactly which geological and human markers are used to define it. See Viñuales, ‘Law and the Anthropocene’, at pp. 2-3.

<sup>129</sup> S. Deakin, ‘The law of the Anthropocene’, in S. Besson and S. Jubé (eds.) *Concerter les civilisations: mélanges en l’honneur d’Alain Supiot* (Paris: Seuil, 2020).

<sup>130</sup> J. Moore, *Capitalism in the Web of Life: Ecology and the Accumulation of Capital* (London: Verso, 2015).

<sup>131</sup> B. Kunkel ‘The Capitalocene’ (2017) 39 *London Review of Books* 22.

<sup>132</sup> The English-language version was published as *Fighting Covid-19 China in Action* (Beijing, June 2020) [http://www.xinhuanet.com/english/2020-06/07/c\\_139120424.htm](http://www.xinhuanet.com/english/2020-06/07/c_139120424.htm) (henceforth ‘White Paper’).

<sup>133</sup> World Health Organization, *Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)* (Geneva, 16-24 February 2020) <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf> (henceforth ‘Joint Report’).

<sup>134</sup> A literature is starting to emerge which assesses the Chinese interventions from a number of perspectives; we note this, below, where relevant.

<sup>135</sup> See above, section 2.3.

<sup>136</sup> *Joint Report*, pp. 4-5; *White Paper*, pp. 7-10.

<sup>137</sup> The WHO later reported that the first identified case of the disease can be dated to 8 December, and there are suggestions that the virus may have been circulating in China in November: ‘Coronavirus: China’s first Covid-19 case traced back to November 27’ *South China Morning Post*, 13 March 2020 <https://www.scmp.com/news/china/society/article/3074991/coronavirus-chinas-first-confirmed-covid-19-case-traced-back>.

<sup>138</sup> *White Paper*, pp. 10-17; *Joint Report*, p. 15.

<sup>139</sup> On the significance of the gap between the notification of the infection to the central Chinese authorities on 27 December, the first recorded death on 9 January, and the introduction of control measures only on 22 January, with the result that ‘the most favorable time for containing the spread of the virus was lost amidst the rapid large-scale flow of travelers to and from Wuhan during China’s busiest spring festival season’, see A. He, Y. Shi and H. Liu, ‘Crisis governance Chinese style: distinctive features of China’ response to the Covid-19 pandemic (2020) *Policy Design and Practice* DOI: 10.1080/25741292.2020.1799911, at p. 3.

<sup>140</sup> *Ibid.*, p. 14.

<sup>141</sup> On the shelter hospitals and the case for seeing them as an innovation, see S. Chen, Z. Zhang et al., ‘Fangcang shelter hospitals: a novel concept for responding to public health emergencies’ (2020) 395 *Lancet* 1305.

<sup>142</sup> *White Paper*, p. 38.

<sup>143</sup> W. Fan, ‘Wuhan tests nine million people for coronavirus in 10 days’, *Wall Street Journal*, 25 May 2020 <https://www.wsj.com/articles/wuhan-tests-nine-million-people-for-coronavirus-in-10-days-11590408910>; N. Lanese, ‘Wuhan tested millions of people for COVID-19 in just days. Could US cities do the same?’ *Live Science*, 28 May 2020 <https://www.livescience.com/pooled-sampling-covid19-in-wuhan-and-us-cities.html>.

<sup>144</sup> *White Paper*, p. 12.



<sup>145</sup> *Joint Report*, p. 8.

<sup>146</sup> *White Paper*, p. 17; *Joint Report*, pp. 15-16.

<sup>147</sup> *Joint Report*, p. 16.

<sup>148</sup> *Ibid.*, p. 17. For analysis of state-community interactions in China, Q. Hu, H. Zhang, N. Kapucu and W. Chen, 'Hybrid coordination for coping with the medical surge from the COVID-19 pandemic: paired assistance -programs in China' (2020) 80 *Public Administration Review* 985-901; B. Dai, D. Fu, G. Meng et al., 'The effects of governmental and individual predictors on COVID-19 protective behaviors in China: a path analysis model' (2020) 80 *Public Administration Review* 797-804. On the role of community action in responding to the virus in another Chinese province, see Y. Cheng, J. Yu, Y. Shen and B. Huang, 'Coproducting responses to COVID-19 with community-based organizations: lessons from Zhejiang Province, China' (2020) 80 *Public Administration Review* 866-873.

<sup>149</sup> *Ibid.*, p. 19.

<sup>150</sup> See above, this section.

<sup>151</sup> *White Paper*, p.4.

<sup>152</sup> *Ibid.*, p. 30.

<sup>153</sup> *Ibid.*

<sup>154</sup> *Ibid.*, p. 31.

<sup>155</sup> *Ibid.*, p. 32.

<sup>156</sup> *Ibid.*, p. 33.

<sup>157</sup> *Ibid.*, p. 34.

<sup>158</sup> *Ibid.*

<sup>159</sup> See above, this section.

<sup>160</sup> *Ibid.*, at p. 40.

<sup>161</sup> Ibid., at p. 37.

<sup>162</sup> Ibid., p. 36.

<sup>163</sup> Ibid.

<sup>164</sup> Ibid., p. 43.

<sup>165</sup> *Joint Report*, p. 19.

<sup>166</sup> *White Paper*, p. 63.

<sup>167</sup> *White Paper*, at p. 19. The Joint Report recommends the ‘all-of-government, all-of-society’ approach for other countries as ‘needed to contain COVID-19’: p. 21. The WHO’s Thirteenth General Programme of Work 2019-2023 had already called for ‘health policies that engage the governance and social structures, and that focus on multisectoral “whole-of-government”, “whole-of-society” and Health in All Policies approaches that deal comprehensively with all health determinants’: *Promote Health, Keep the World Safe, Protect the Vulnerable* (Geneva: WHO, 2019), at p.10.

<sup>168</sup> K. Kupferschmidt and J. Cohen, ‘Can China’s Covid-19 strategy work elsewhere?’ (2020) 367 (6482) *Science* 1061.

<sup>169</sup> All quotations cited in this paragraph are from Kupferschmidt and Cohen, *ibid.*

<sup>170</sup> The most comprehensive source so far available on states’ control measures and other responses is the Coronavirus Government Response Tracker created by researchers at Oxford University’s Blavatnik School of Government. This records daily responses in 170 countries and benchmarks them according to a ‘Stringency Index’: <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker> . For an early analysis of the dataset, suggesting that there is a statistical correlation between the stringency of measures taken at state level and death rates across countries, see Hale et al., ‘Global assessment’.

<sup>171</sup> R. Anderson, H. Heesterbeek, D. Klinkenberg and T.D. Hollingsworth, ‘How will country-based mitigation measures influence the course of the COVID-19 epidemic?’ (2020) 356 (10228) *Lancet* 931.

<sup>172</sup> See S. Flaxman, S. Mishra., A. Gandy et al. ‘Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe’ (2020) 584 *Nature* 257, Extended Data Figure 4.

<sup>173</sup> The Hoover Institution supports a programme of research in economics which is concerned with ‘the principles and practice of free markets, as well as policy issues such as regulation, monetary policy, and public finance’: <https://histories.hoover.org/hoover-today/#group-Fellows-and-Research-ZwC30urW0l>. The less well-known American Institute for Economic Research provided the location for the announcement of the Great Barrington Declaration of 4 October 2020, which called for a ‘focused protection approach’ involving shielding of the most vulnerable groups, allowing ‘those who are not vulnerable’ to ‘resume life as normal’: <https://gbdeclaration.org/>.

<sup>174</sup> R. Epstein, ‘Coronavirus perspective’ 16 March 2020 <https://www.hoover.org/research/coronavirus-pandemic>; revised version 6 April 2020, <https://www.hoover.org/research/coronavirus-perspective-revised>. According to press reports, the March version of the article was widely circulated in the Trump administration at the point in March when it was considering loosening measures on social distancing which had been introduced just days before. ‘Trump weighs restarting the economy despite warnings from US public health officials’ *Washington Post* 24 March 2020 [https://www.washingtonpost.com/politics/trump-signals-growing-weariness-with-social-distancing-and-other-steps-advocated-by-health-officials/2020/03/23/0920ea0a-6cfc-11ea-a3ec-70d7479d83f0\\_story.html](https://www.washingtonpost.com/politics/trump-signals-growing-weariness-with-social-distancing-and-other-steps-advocated-by-health-officials/2020/03/23/0920ea0a-6cfc-11ea-a3ec-70d7479d83f0_story.html). Among other articles by Professor Richard Epstein to appear on the Hoover Institution website in March and April 2020 are ‘Playing politics with coronavirus’ 9 March 2020 <https://www.hoover.org/research/playing-politics-coronavirus> (which attributes the virus to, among other things, ‘activities of the Chinese government’); ‘Coronavirus overreaction’ 20 March 2020 <https://www.hoover.org/research/coronavirus-overreaction>; and ‘The grim costs of total lockdowns’ 30 March 2020 <https://www.hoover.org/research/grim-costs-total-lockdowns>.

<sup>175</sup> Epstein, ‘The grim costs’.

<sup>176</sup> *Ibid.*

<sup>177</sup> The Oxford study which is so far the only one to evaluate the impact on mortality rates of the degree of stringency of measures taken at state level found that of a sub-sample of five countries representative of the range of responses reported in their dataset, ‘The United States... shows the slowest and weakest response and also the highest and most delayed path to epidemic control’. The other countries in this sub-sample were Botswana, Colombia, Korea and Spain. Hale et al., ‘Global assessment’. See also S. Pei, S. Kandula and J. Shaman, ‘Differential effects of intervention timing on COVID-19 spread in the United States’ *medRxiv* preprint doi: <https://doi.org/10.1101/2020.05.15.20103655>: delays in introducing and reintroducing lockdowns in a number of US states may have increased mortality rates by up to 50%.

<sup>178</sup> ‘PM Speech in Greenwich’ 3 February 2020 <https://www.gov.uk/government/speeches/pm-speech-in-greenwich-3-february-2020>.

<sup>179</sup> Why precisely this was done is still unclear but it may have been related to the realisation across government that the necessary testing capacity did not exist. See R. Horton, *The COVID-19 Catastrophe: What’s Gone Wrong and How to Stop it Happening Again* (Cambridge: Polity Press, 2020), ch. 6.

<sup>180</sup> ‘The UK chief science advisor’s statement, repeated in interviews, [was] that the way out of this epidemic was to get to 60% or more of the population recovered from infection and thus approach “herd immunity”’: D. Hunter, ‘Covid-19 and the stiff upper lip: the pandemic response in the United Kingdom’ (2020) 382:31 *New England Journal of Medicine* DOI: 10.1056/NEJMp2005755. This is not to suggest that herd immunity should not be a goal of government policy; it has been achieved in the relatively recent past for other infectious diseases, although not through inaction but via the development of vaccines combined with public health and social policy interventions to improve housing and working conditions for exposed groups. See below, section 5.

<sup>181</sup> Hunter, 'Covid-19', *ibid.*: 'The other argument for "Keep Calm and Carry On" was that behavioral scientists were warning that "fatigue" with strict infection-control measures would set in if they were triggered too soon. The newspapers have sourced this advice to a government "nudge unit." The Nudge Unit referred to is the Behavioural Insights Team. Initially set up within a UK government department, was privatised in 2016 and now supplies advice to a number of governments on a commercial basis. See <https://www.gov.uk/government/organisations/behavioural-insights-team> and <https://www.bi.team/>. Its 'international panel of world-leading academic affiliates includes Professor Richard Thaler, winner of the 2017 Nobel Prize in Economics': *ibid.*

<sup>182</sup> Hunter, 'Covid-19'.

<sup>183</sup> A. Pollock, P. Roderick, K. Cheng and B. Pankhania, 'Covid-19: why is the UK ignoring the WHO's advice?' (2020) 368 *British Medical Journal* m1284, noting that the cancellation of the UK's track and trace programme in the second week of March 2020 was linked to 'a shift from "contain" to "delay" in the government's action plan'. Suppression of the virus has been the explicit policy of the Scottish government (health care is one of the matters which falls under its devolved powers): 'we have been consistently clear that we are seeking to create the conditions for a sustained recovery in our economy and broader society through continued suppression of the virus'. Scottish Government, 'Coronavirus (COVID-19) Phase 3: Scotland's route map update – 20 August 2020' <https://www.gov.scot/publications/covid-19-framework-decision-making-scotlands-route-map-through-out-crisis-phase-3-update-20-august-2020/>.

<sup>184</sup> On the idea that contemporary liberal states have normalised a Schmittian 'state of exception' see G. Agamben, *Homo Sacer: Sovereign Power and Bare Life* trans. D. Heller-Roazen (Palo Alto, CA: Stanford University, 1998). On the origins of the concept of the state of exception in debates over the rule of law in Weimar Germany, see L. Vinx, *The Guardian of the Constitution: Hans Kelsen and Carl Schmitt on the Limits of Constitutional Law* (Cambridge: Cambridge University Press, 2015).

<sup>185</sup> G. Agamben, 'L'invenzione di un'epidemia' *Quodlibet* website 26 February 2020 <https://www.quodlibet.it/giorgio-agamben-l-invenzione-di-un-epidemia>; English translation available at <https://www.journal-psychoanalysis.eu/coronavirus-and-philosophers/>.

<sup>186</sup> G. Agamben, 'Clarifications' trans. A. Kotsko *An und für Sich* website 17 March 2020 <https://itself.blog/2020/03/17/giorgio-agamben-clarifications/>.

<sup>187</sup> Szereter, 'Covid-19 is not a black swan', discussing the use of the workhouse in nineteenth century Britain and Ireland in response to the Cholera epidemics of the 1830s and 1840s.

<sup>188</sup> 'In ordinary times, the classical liberal approach favors strong property rights and limited government. But it is less widely known that this same theory, like virtually every other general political approach, advocates strong government controls in any emergency situation that poses an immediate peril to life and health': Epstein, 'Playing politics with coronavirus'. To similar effect: 'the government would have the function of relieving misery and distress. Our humanitarian sentiments demand that some provision should be made for those who "draw blanks in the lottery of life". Our world has become too complicated and intertwined, and we have become too sensitive, to leave this function entirely to private charity or local responsibility. It is essential, however, that the performance of this function involve the minimum of interference with the market'. Friedman, 'Neoliberalism', at p. 4.

<sup>189</sup> By the third week of October 2020, 'tier 3' lockdowns were in force in large parts of England, and similarly strict controls were being introduced in parts of Scotland and Wales and in Northern Ireland. 'Local COVID alert levels: what you need to know' <https://www.gov.uk/guidance/local-covid-alert-levels-what-you-need-to-know?priority-taxon=774cee22-d896-44c1-a611-e3109cce8eae>; 'Coronavirus: what you can and cannot do' <https://www.gov.scot/publications/coronavirus-covid-19-what-you-can-and-cannot-do/>; 'Local lockdown' <https://gov.wales/local-lockdown>; 'Coronavirus (COVID-19) regulations guidance: what the restrictions mean for you' <https://www.nidirect.gov.uk/articles/coronavirus-covid-19-regulations-guidance-what-restrictions-mean-you>.

<sup>190</sup> A. Costello, 'A "circuit breaker" in England will work only if test and trace is urgently reformed' *The Guardian* 14 October 2020 <https://www.theguardian.com/commentisfree/2020/oct/14/circuit-breaker-england-test-and-trace-reform-lockdown-sage>.

<sup>191</sup> A paper published in *The Lancet* at the end of September had noted shortcomings of the test and trace programme in the UK and ‘the enormous potential for resurgence if comprehensive safeguards are not in place’ there and in other European countries: E. Han, M. Tan, E. Turk et al., ‘Lessons learned from easing Covid-19 restrictions: an analysis of countries and regions in Asia-Pacific and Europe’ *Lancet Health Policy* published online 24 September 2020 <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2932007-9>. On the need to embed test and trace systems at community level, and related criticism of the reliance of the UK government on ‘call centre epidemiology’ delivered by the private sector, see K. Friston ‘How should we respond to an upsurge in Covid-19 cases’ *BMJ Opinion* 24 September 2020 <https://blogs.bmj.com/bmj/2020/09/24/karl-friston-how-should-we-respond-to-an-upsurge-in-covid-19-cases/>.

<sup>192</sup> ITV News, ‘Covid: police to get access to test and trace data of people told to self-isolate’ 17 October 2020 <https://www.itv.com/news/2020-10-17/covid-police-will-have-access-to-test-and-trace-data-of-people-told-to-self-isolate>.

<sup>193</sup> On the coercive implication of the use of mobile test and trace apps, see R. Bernard, G. Bowsher and R. Sullivan, ‘COVID-19 and the rise of participatory SIGINT: an examination of the rise in government surveillance through mobile applications’ (2020) *American Journal of Public Health* <https://doi.org/10.2105/AJPH.2020.305912>: ‘The COVID-19 pandemic has triggered a significant growth in government surveillance techniques globally, primarily through the use of cell phone applications. However, although these applications can have actionable effects on public health efforts to control pandemics, the participatory or voluntary nature of these measures is obscuring the relationship between health information and traditional government surveillance techniques, potentially preventing effective oversight’.

<sup>194</sup> Wuhan’s lockdown, the longest, lasted 76 days. ‘White Paper’, above.

<sup>195</sup> In October 2020, as the UK was considering a return to a nationwide lockdown, the authorities in the Chinese city of Qingdao responded to a Covid-19 outbreak by organising a mass testing programme for the city’s nine million residents. Only certain hospitals were quarantined. CGTN, ‘East China’s Qingdao to complete city-wide COVID-19 testing within five days’ 12 October 2020 <https://news.cgtn.com/news/2020-10-12/Qingdao-to-complete-citywide-COVID-19-testing-within-5-days-UwPChcYhOw/index.html>.

<sup>196</sup> See Han et al., ‘Lessons learned’, and on Korea, J. Moon, ‘Fighting COVID-19 with agility, transparency, and participation: wicked policy problems and new governance challenges’ (2020) 80 *Public Administration Review* 651–656, and S. Lee, C. Hwang and M. Moon (2020) ‘Policy learning and crisis policy-making: quadruple-loop learning and COVID-19 responses in South Korea’ (2020) 39 *Policy and Society* 363–381 ; on Norway, T. Christensen and P. Lægreid, ‘Balancing governance capacity and legitimacy: how the Norwegian government handled the COVID-19 Crisis as a high performer’ (2020) 80 *Public Administration Review* 774–779.

<sup>197</sup> Foucault, *Discipline and Punish*.

<sup>198</sup> E. Tognotti, ‘Lessons from the history of quarantine, from Plague to Influenza A’ (2013) 19 *Emerging Infectious Diseases* 254. The term ‘quarantine’ derived from the 40 days of isolation deemed necessary to avoid the spreading of infection, a period which appears to have had a religious origin rather than one based on observation (ibid.).

<sup>199</sup> R. Totaro, ‘Introduction’, in R. Totaro and E. Gilman (eds.) *Representing the Plague in Early Modern England* (London: Routledge, 2012), at p. 11.

<sup>200</sup> 2 James I c. 31 (‘for the charitable relief and ordering of persons infested with the plague’).

<sup>201</sup> P. Slack, *The Impact of Plague in Tudor and Stuart England* (London: Routledge and Kegan Paul, 1985).

<sup>202</sup> Shaw-Taylor, ‘History’, at p. E9.

<sup>203</sup> J. Henderson, *Florence Under Siege: Surviving Plague in an Early Modern City* (New Haven, CT: Yale University Press, 2019).

<sup>204</sup> Ibid., pp. E9–E10.

<sup>205</sup> P. Wallis, ‘A dreadful heritage: interpreting epidemic evidence at Eyam, 1666–2000’ (2006) 61 *History Workshop Journal* 18–26. At the same time, there is evidence that the quarantine and social distancing measures used at Eyam were effective in preventing the spread of the disease to nearby towns as well the major population centres of the English North and Midlands: X. Didelot, ‘Historic sacrifice or tragic mistake: revisiting the Eyam plague, 50 years on’ (2016) 21 *Significance* 21.



<sup>206</sup> Wallis, ‘A dreadful heritage’.

<sup>207</sup> ‘In our narrative, Wuhan is not “Chernobyl,” but instead the English village of Eyam, that sacrificed itself in the fight against the plague. “Eyam village” and “Chernobyl” have particular symbolic meanings in Western discourse. Comparing Wuhan to Eyam village serves to demolish the Western narrative according to which the closure of Wuhan meant that “the people were deprived of their freedom.” The reason why closing Wuhan worked was because of a conscious, voluntary sacrifice on the part of the people. Wuhan was a much larger version of Eyam village, and the choice to lock down the city was an exalted sacrifice, paid voluntarily by free people, it displayed the glory of humanity!’ Y. Zhao, ‘The claims are flooding in, and it is urgent to rebuild the core narrative of China’s fight against the virus’, originally published on 10 April 2020 on the *Aixiang* website (<http://m.aisixiang.com/data/120808.html>), republished on the *Beijing Cultural Review* website on 21 April 21 2020 (<http://mmmono.com/g/meow/1734627/>), text available in English on the *Reading the China Dream* website (translation by David Ownby) <https://www.readingthechinadream.com/zhao-yanjing-chinas-narrative.html>.

<sup>208</sup> Shaw-Taylor, ‘History’, at p. E6.

<sup>209</sup> Ibid., at p. E8; R. Davenport, ‘Urbanization and mortality in Britain c.1800–1850’ (2020) *Economic History Review* Online Early <https://doi.org/10.1111/ehr.12964>.

<sup>210</sup> Shaw-Taylor, ‘History’, at pp. E10-11.

<sup>211</sup> Ibid., at p. 12.

<sup>212</sup> H. Pennington, ‘The smallpox precedent’ *LRB* blog 28 July 2020 <https://blog.lrb.co.uk/blog/2020/july/the-smallpox-precedent>.

<sup>213</sup> That Leicester was a centre of the nineteenth century anti-vaccination movement may have provided the context for the development of a system based on quarantining of cases and community-based contract tracing: S. Fraser, 'Leicester and smallpox: the Leicester method' (1980) 24 *Medical History* 315. However, vaccination also played a part in the Leicester method as it 'involved quarantining anyone suspected of having smallpox and vaccinating suspected contacts. All those working at the quarantine hospital were vaccinated as well as the guards posted on the roads. This anticipated the ring vaccination approach used by the WHO which ended smallpox, which involves locating cases of smallpox and vaccinating anyone who might have come in contact with them'. J. Harrison, 'Rapid response to "Should measles vaccination be compulsory"' (2019) 365:2359 *British Medical Journal* <https://www.bmj.com/content/365/bmj.l2359/related>.

<sup>214</sup> F. Fenner, D. Henderson, I. Arita et al. *Smallpox and its Eradication* (Geneva: World Health Organization, 1988) <https://apps.who.int/iris/handle/10665/39485>.

<sup>215</sup> A. McKinlay, 'Foucault, plague, Defoe' (2009) 15 *Culture and Organization* 167.

<sup>216</sup> Shaw-Taylor, 'History', at p. E13; M. Dobson, *Contours of Death and Disease in Early Modern England* (Cambridge: Cambridge University Press, 1997).

<sup>217</sup> Shaw-Taylor, 'History', at pp. E13-14.

<sup>218</sup> Didelot, 'Historic sacrifice', at p. 23.

<sup>219</sup> Shaw-Taylor, 'History'; McKinlay, 'Foucault, plague, Defoe'.

<sup>220</sup> M. Foucault, *Security, Territory, Population: Lectures at the Collège de France 1977-1978* trans. G Burchell (London: Palgrave Macmillan, 2004).

<sup>221</sup> K. Williams, *From Pauperism to Poverty* (London: Taylor and Francis, 2018 [1981]).

<sup>222</sup> Deakin and Wilkinson, *The Law of the Labour Market*, ch. 3. Contrary to Luhmann's prediction that the infusion of social and environmental policy into private law would lead to a disintegration of legal concepts and processes (N. Luhmann, *Ecological Communication* trans. J. Bednarz (Chicago: University of Chicago Press, 1989), the types of 'social' law generated by the welfare state retained a recognizable juridical form, if nonetheless one which had mutated in response to political and economic pressures: F. Ewald, 'Justice, equality, judgement: on "social justice"', in G. Teubner (ed.) *Jurification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporate, Antitrust, and Social Welfare Law* (Berlin: De Gruyter, 1986); S. Deakin, 'Juridical ontology: the evolution of legal form' (2015) 40 *Historical Social Research* 170.

<sup>223</sup> World Health Organization, 'History of WHO' <https://www.who.int/about/who-we-are/history>.

<sup>224</sup> WHO, *Thirteenth General Programme of Work*, at p. 24.

<sup>225</sup> *Ibid.*, at p. 23.

<sup>226</sup> IHR, Art. 2.

<sup>227</sup> The obligation of a state party to notify the WHO of ‘events which may constitute a public health emergency of international concern’ arises under Art. 6 IHR. The WHO’s powers to make temporary recommendations in response to an emergency are set out in Part III and Arts. 48-49, the latter providing for the convening of an emergency committee for this purpose. Following criticism of the WHO’s role during the Ebola outbreak of 2013 an independent review argued that the Organization ‘should also publicly disclose lists of countries that implement trade and travel restrictions when WHO Temporary Recommendations advise against them and countries that do not provide a science or public health rationale for such measures (as required by the International Health Regulations)’, while recognising that ‘doing so will require a delicate balancing act between WHO’s role as trusted interlocutor with governments on sensitive outbreak-related information, and its role as guardian of the International Health Regulations’: S. Moon, D. Sridhar, M. Pate et al., ‘Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard-LHSTM Independent Panel on the Global Response to Ebola’ (2015) 386 (10009) *Lancet* 2204-21, at p. 2209. The WHO’s powers to name and shame non-compliant states are more limited than those of the ILO, which has significant capacity to mobilise its system for supervising and monitoring compliance with international labour standards: M. Menashe, ‘The race to the bottom revisited: international labour law, global trade and evolutionary game theory’ (2020) 40 *Oxford Journal of Legal Studies* 53.

<sup>228</sup> In the context of the Ebola outbreak of 2013, the WHO’s temporary recommendations ‘did not succeed on two fronts: the Ebola-affected countries’ health systems did not have the resources to implement WHO temporary recommendations; and States Parties, because of domestic political pressure, disregarded temporary recommendations and did not discourage private disruptions of travel and trade, such as airlines cancelling flights’: L. Gostin, M. DeBartolo and E. Friedman, ‘The International Health Regulations ten years on: the governing framework for global health security’ (2015) 386 *Lancet* 2222-26, at p. 2225.

<sup>229</sup> *Thirteenth General Programme of Work*, at pp. 23-24.

<sup>230</sup> WHO, *Joint External Evaluation Tool* 2<sup>nd</sup>. ed (Geneva: World Health Organization, 2018), at p. 9.

<sup>231</sup> See above, section 2.

<sup>232</sup> See A. Supiot, 'The tasks ahead of the ILO at its centenary' (2020) 159 *International Labour Review* 117, 122: the institutional structure of globalisation 'has led to a conflict of legal logics at the international level, juxtaposing the principles and rules of international trade and finance, which treat work, medicines, culture and natural resources as mere economic assets in competition on an open market, with the principles and standards of the ILO, the World Health Organization (WHO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO)'.

<sup>233</sup> See above, Section 3.1.

<sup>234</sup> Supiot, 'The tasks of the ILO'.

<sup>235</sup> Between January and August 2020 the WHO has published 209 situation reports, and from August began to publish weekly operational and epidemiological updates. WHO, 'Coronavirus disease (COVID-19) weekly epidemiological update and operational update' <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>.

<sup>236</sup> See above, Section 4.1.

<sup>237</sup> See above, Section 5.1

<sup>238</sup> Thus at the time this article went to press, the UK government was proposing to scale back the support given to workers and businesses affected by the strictest ('tier 3') lockdowns. The result was a delay in the implementation of control measures widely seen as necessary to address a 'second wave' of the epidemic. See J. Halliday and H. Pidd, 'North England mayors come together in opposing tier 3 strategy' *The Guardian* 16 October 2020 <https://www.theguardian.com/world/2020/oct/16/northern-mayors-come-together-in-opposing-tier-3-strategy-covid>. On the scaling back of the measures contained in the Coronavirus Job Retention Scheme in the UK and the failure to dovetail that scheme and its successor, the Job Support Scheme, with features of the UK's employment protection and social security systems, see Ewing and Hendy, 'Covid-19 and the failure of labour law'.

<sup>239</sup> Deakin and Wilkinson, *The Law of the Labour Market*; Supiot, *Grandeur et misère de l'État social*.