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*Special Issue: Critical Explorations of Crisis: Politics,
Precariousness, and Potentialities*

RESEARCH

Crisis and society: developing the theory of crisis in the context of COVID-19

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The theory of crisis and society is advanced by developing a complex systems analysis and is applied to the COVID-19 pandemic. Five issues are identified, discussed and resolved: the definition of crisis; whether a crisis is treated as real or as a socially constructed narrative, or both; the underlying concept and theory of society and its alternative forms; and the different kinds of change in relationship between crisis and society (recuperation, intensification, transformation and catastrophe). This complex systems approach to crisis is applied to the COVID-19 pandemic, analysing the cascade of the crisis through institutional domains and the consequent changes to multiple regimes of inequality.

Key words crisis • COVID-19 • pandemic • complexity theory • society

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Introduction

The concept of ‘crisis’ is an important way of thinking about some forms of contemporary social change (Walby, 2015; Bergman–Rosamond et al, 2020). It is relevant to social change associated with security (Buzan et al, 1998; Bergman–Rosamond, 2011), climate (Urry, 2011; Hamza and Corendea, 2012), migration and refugees (Gammeltoft–Hansen and Tan, 2016), the economy (Gramsci, 1971), and disasters (Klein, 2007; Fassin, 2012; Hamza, 2015; Rydstrom, 2020). By foregrounding sudden, uneven forms of change, the concept of crisis challenges the notion that change is usually gradual, such as is often found in modernisation theory (Inglehart, 1997).

Developing a theory of crisis requires consideration of five issues. One concerns the definition of crisis and its relationship to adjacent and overlapping concepts, such as the critical turning point and tipping point (Gladwell, 2000). A second concerns the understanding of crisis as real or as socially constructed through discourse or narrative (Buzan et al, 1998; Agamben, 2005; Roitman, 2014). A third concerns the wider understanding of the concept of ‘society’, as if crisis is to produce a change, it is necessary to identify what is being changed (Klein, 2007). A fourth concerns the extent to which, how and why a crisis reshapes society or not (Haas, 1958; Polanyi, 1957; Perrow, 1999 [1984]). This requires the concept of ‘cascade’. A fifth concerns the theoretical tools to address these issues and includes complex systems thinking.

Walby (2015), in debate with other theorists of crisis, has developed a theory of crisis and society that offers answers to these five issues. While many examples of crisis, from environmental to economic, were drawn upon in the development of the theory, the main example used to illuminate the argument was the financial crisis of 2008 that cascaded through societal domains during the following decade. In this article, this theory of crisis is applied to the COVID-19 pandemic, and the implications of the extension to this example are discussed. The article addresses the definition of crisis, the extent to which the crisis is considered real and/or socially constructed, the varieties of society, the varied impact of crisis on society, and the relevance of complexity theory.

Theory of crisis

Definition of crisis

A clear definition of ‘crisis’ is needed to enable development of the field. It is necessary to be clear as to what is included and excluded. Definitions vary in the scope of what is included and in the components that are considered important. These vary across the different disciplines and fields that mobilise the concept of crisis or something that is close or overlapping. There is potentially tension between a simple short definition that can aid clarity and one that is longer and references a wider range of possible inclusions. Bergman-Rosamond et al (2020: 15) identify the key features of crisis as ‘temporality, spatiality and scale’, ‘multi-layeredness, processuality and contradictions’, and ‘gender, intersectionality and social inequalities’. Walby’s (2015) definition is more minimal and thus more generally applicable to a wider range of cases. Further, Walby emphasises the lack of proportionality between the event and its consequences as key to the definition of the concept.

A crisis is ‘an event that has the potential to cause a large detrimental change to the social system and in which there is lack of proportionality between cause and consequence’ (Walby, 2015: 14). This definition contains three key elements: temporality, lack of proportionality and scale. The crisis is an event of relatively short duration that has consequences for a much longer duration. There is lack of proportionality between the event and its consequences: the consequences are large as compared with the event. The consequences need to be at scale, in terms of spatiality or scope, for the concept of crisis to be appropriate.

Walby explicitly addresses the distinctiveness of crisis in its disproportional impact on society. Much social science analyses changes as gradual and understands causes as generally proportionate to their consequences. For example, this can be found in modernisation theory (Lipset, 1959; Inglehart, 1997). It can also be found in the work

of Braudel, who suggests that there are three different scales of change, that is, events and episodes, social structural, and the long durée: 'All events against the prevailing tide of history – which is not always obvious – are doomed to failure' (Braudel, 1966 [1949]: 1244). Not all social science accepts the assumption of proportionality between cause and effect. Abbott (1988) argues that the assumption of 'general linear reality' is flawed. The concept of crisis offers a way of challenging this assumption of proportionality in cause and effect in analyses of social change. It allows for both forms of social change: one that is gradual and proportionate change; another that is sudden and disproportionate change.

The concept of crisis is relevant to many disciplines and fields. Multiple terms have been used to capture the concept of crisis, which differ by discipline and field but share core characteristics. Different disciplines approach the issues involved in crisis in different ways and use a variety of terms to capture this. Bringing these different approaches together in the same intellectual space, with the aims of developing a shared conceptual vocabulary and engaging in comparisons, will aid learning and development for them all. Bergman-Rosamond et al (2020) made the case for an 'interdisciplinary' field of 'crisis studies'. Bergman-Rosamond et al (2020) reference two major (sometimes overlapping) fields where the concept of crisis is important: security (Bergman-Rosamond, 2011; Gammeltoft-Hansen and Tan, 2016); and climate, conflict and migration (Ramasar, 2014; Hamza, 2015; Kinnvall and Rydstrom, 2019). Walby (2015) had an empirical focus on the 2008 financial crisis, while including a wider range of fields when addressing the theorisation of crisis. These included: risk, especially in relation to possible environmental catastrophe because of the technological advances of modernity (Beck, 1992; 2009); accidents, which can become catastrophes in closely coupled high-technology systems (Perrow, 1999 [1984]); environmental changes that can result in the ending of civilisations (Chase-Dunn and Hall, 1997); climate change as potentially catastrophic (Urry, 2011); disaster (Gilbert, 1998; Yodmani, 2001); revolution and revolt (Moore, 1966; Skocpol, 1979; Goldstone, 1991); political economy (Gramsci, 1971; Hay, 1996; Perez, 2002; 2009; Minsky, 2008 [1986]; Mirowski, 2013); and complex systems analysis (Bertalanffy, 1968; Kauffman, 1993). The range of overlapping terms includes 'risk', 'disaster', 'revolution', 'tipping point' and 'critical turning point'. The field of analysis of crisis may be described as much as multidisciplinary as one that is or might become interdisciplinary.

The concept of crisis lies at the centre of multiple disciplines and fields. Walby's short definition offers a succinct way that might be useable across these different fields.

Real and/or socially constructed

A crisis may be treated as if it were real or as if it were socially constructed, or as both of these. Fields differ in the extent to which a crisis is presumed to be real or socially constructed. The concept of 'crisis' triggers reflection on alternative possibilities (Roitman, 2014). The notion that a crisis is 'real' is common in fields of risk (Beck, 1992; 2009), accidents (Perrow, 1999 [1984]) and disasters, even when there is contestation as to the level of harm of a crisis, as in the case of climate and environmental change (Urry, 2011). The visibility of the destruction of property and the loss of lives supports this approach. The notion that a crisis is socially constructed is common in the field of security, especially when the issue is centred on a threat rather than actual physical harm. The capacity of a state to acquire and mobilise

resources depends on the perception of a threat and its interpretation as harmful to national security (Buzan et al, 1998). The acquisition of powers by the executive to act outside of the normal checks and balances of the legislature and political processes is enhanced where there is the ability to declare a state of emergency – a state of exception (Agamben, 2005). The increased powers of the executive branch of a state due to the declaration of a state of emergency may be used to pursue a significant redistribution of resources and even structural change.

Walby's approach is that a crisis is both real and its meaning is contested. For example, there may be a real economic downturn, but its causes, implications and future development may be contested. Whether there really is a crisis and, if so, its nature can be subject to disagreement in public and political debate (Hay, 1996). In a financial crisis that is generating economic recession, there can be contestation as to the attribution of blame. In the case of the 2008 financial crisis and ensuing recession, there was contestation as to whether the cause lay in the lax regulation of finance or in overspending on welfare (Crouch, 2011; Mirowski, 2013). The interpretation of a crisis is significant for its outcome, as this affects how groups respond (Gramsci, 1971).

The analysis of a crisis involves both aspects: it is real and it is socially interpreted, which has effects. The interpretation of a crisis as permitting or requiring a state of emergency to be declared produces a centralisation of political power that can have consequences.

Society

A crisis can only be understood in the context of a society. Whether a crisis transforms a society from one form to another requires a theoretical and conceptual understanding of the varieties of society between which it might change. Why a crisis has small or large consequences depends on the nature of the social system.

While the focus is on the macro level, theories of varieties of society involve meso and micro levels, as well as the macro, to address change. Theories of society have tended to focus on either differentiation or inequalities; however, both types of system – institutional domains and regimes of inequality – are needed (Schwinn, 1998; Walby, 2020a). Walby (2009) distinguishes between the institutional domains of economy, polity, civil society and violence, as well as multiple regimes of inequality. Bergman-Rosamond et al (2020) address this wider issue of society through the lens of 'temporality, spatiality and scale', 'multi-layeredness, processuality and contradictions', and 'gender, intersectionality and social inequalities'. This recognises the multiple aspects of society that are engaged with crisis, though with a less systematic approach to the varieties of society at a macro level between which a crisis might drive societal change.

A theory of crisis needs to be able to identify the alternatives between which a crisis might move society. It needs to be able to distinguish the varieties of societal formation between which a crisis might move society. Classical sociologists (Marx, Weber and Durkheim) were centrally concerned with modernisation, that is, with the transition from premodern to modern forms of society, and although diverging on the mechanisms and concepts to address this change, including the extent to which crisis was a key mechanism of change, they nonetheless shared the view of the significance of the distinction between premodern and modern. Contemporary sociology has pluralised this debate with multiple trajectories of change to multiple

varieties of modernity (Moore, 1966; Esping-Andersen, 1990; Beck, 1992; 2009; Eisenstadt, 2002; Walby, 2007; Boatcă, 2015).

Walby (2009; 2015), building on this classical heritage of varieties of societal formation, distinguishes between the premodern and modern, and, within the modern, between neoliberal and social-democratic varieties. Recent work (Walby, 2018; 2020a; Shire and Walby, 2020) has addressed whether further distinctions need to be made to better encompass the turn to the right and countries beyond Europe and North America. While the concept of neoliberalism encompasses societal forms with authoritarian states, thus rendering unnecessary a separate category of authoritarian neoliberalism, there is scope for thinking through the identification of varieties of societal forms in a wider range of global regions.

A theory of crisis requires a theory of society – of varieties of societal formation. It requires the identification of the institutional domains through which a crisis may cascade and the regimes of inequality that shape the social forces.

Impact of crisis

A crisis can have more than one kind of impact on society. The reasons why one or another outcome of a crisis emerges depend on the nature of the system that is subject to the crisis and its relations to other systems. There are four main types of impact of crisis on society: first, a crisis may be recuperated, so that the possibility of significant or permanent change is not fulfilled; second, a crisis may intensify an existing set of social relations, that is, it may accelerate a trajectory of development; third, a crisis may lead to transformation of the societal system from one form to another; and, fourth, a crisis may lead to catastrophe and the ending of that form of society. A connecting concept is that of cascade, which includes a temporal element. It may appear at one moment in time as if one of these impacts is what has happened; however, whether a crisis that might appear to be absorbed will cascade into adjacent institutional domains may not be known at the time of study.

A crisis may be recuperated, so that it is little more than a short-term disruption and its potential for major change is not realised. If there were not a potential for major change, it would not be appropriate to call it a crisis. An example is an economic ‘bubble’, in which there is rapid growth in economic value and employment followed by a rapid slump and return to ‘business as usual’; this is common in the financial sector of the economy (Perez, 2002, 2009). Specific examples of bubbles are those in the price of assets, such as property and shares, and speculation that a new technology may generate much profit, in which exuberance is taken to excess and followed by a collapse in price (Keynes, 1936). A capitalist economic system, especially its financial system, is inherently unstable and liable to crises, which may be contained or not (Minsky, 2008 [1986]; Engelen et al, 2011). A larger-scale example of recuperation is to be found in Polanyi’s (1957) analysis of how the excessive commercialisation of land, labour and money, which has the potential to lead to destitution and starvation, is recuperated through a double movement in which civil society contests these excesses and, after a period of political struggle, re-embeds the economic into the social, thereby restoring society to equilibrium. In this example, the crisis (excessive commercialisation) disturbs society as a system but is met by forces (civil society) that return it to normal. The capacity of civil-societal forces to restore society to better functioning is also analysed by contemporary writers (Mason, 2013).

A crisis may lead to the intensification of a pre-existing set of social relations, that is, it may accelerate a trajectory of development. Klein's (2007) analysis of 'disaster capitalism' shows how disasters are moments in which neoliberal exploitation is deepened and expanded into new institutions during a crisis. A further example is the financial crisis of 2008, which led to the intensification of neoliberalism, despite early signs of a possible transformation to social democracy (Crouch, 2011; Walby, 2015). An example of the acceleration of a trajectory of development can be found in the analysis of economic crisis by Schumpeter (1954) as 'creative destruction': a moment in which the destruction of older, less productive parts of the economy frees up resources for newer, more productive industries to develop. This accelerates the trajectory of economic development that would otherwise have taken place more slowly. A further example, 'spillover', can be seen in the analysis by Haas (1958) of the European project, in which a series of crises in unstable economic institutions drove forward the integration of the political institutions in a process of 'ever-deeper union', which delivers, ultimately, a more peaceful Europe. These small economic crises accelerated the political development of Europe. In both examples, crises are opportunities in which institutions are restructured in ways that drive forward positive forms of societal development that would otherwise take place more slowly.

A crisis may lead to transformation, a revolution, a critical turning point or tipping point into a new form of society. A revolution is an event in a short space of time that has large consequences, often understood in the context of previously unstable social systems, involving mass action, violence and the seizure of state power. Revolutions can change the course of history, that is, the path of development, radically restructuring multiple institutions and relations of inequality. Gaining control over the state is frequently the proximate goal of a revolution, with the larger purpose being societal transformation. The classic understanding of revolution, drawing on Marx to theorise a political event in a context of economic instability due to development and inequality that restructures society in a short space of time, has been subject to extensive theoretical and empirical debate and development (Goldstone, 1991; Moore, 1966; Skocpol, 1979). The concept of 'critical turning point' is wider than the concept of revolution, including less coercive and less violent events. This includes events that have been described as 'historic compromise' and 'settlement', centred around political struggle but without violence and coercion. An example is the historic compromise between capital and labour that was the outcome of political struggles in Sweden in the 1930s that led to decades of social-democratic development (Korpi, 1983). In the same period and in the same continent of Europe, in other countries, including Germany and Italy, the outcome of the critical turning point was fascism. The concept of critical turning point is very similar to the concept of 'tipping point' (Gladwell, 2000): a tipping point is a simplified interpretation of the concept of critical turning point. In all these examples, a crisis is transformative of society.

A crisis may lead to catastrophe. The breakdown of the social system and large-scale loss of life is this type of crisis. It does happen (Chase-Dunn and Hall, 1997; Diamond, 2005). The risk of catastrophe lurks in the background of many discussions of crisis, even when it is averted or contained (Beck, 1992; 2009). A major example of crisis as catastrophe is found in writings on the environmental consequences of climate change brought about by the release of carbon dioxide into the atmosphere from the burning of fossil fuels (Urry, 2011; 2016). A further example concerns the plague,

in which microbes and viruses have killed large numbers of people at specific points in history, sometimes generating catastrophe for civilisations and societies (McNeill, 1998 [1976]). Whether the current plague, COVID-19, will cause a catastrophe or can be contained is an open question (Žižek, 2020). Many accounts of catastrophe concern the disturbance of the relationship between humanity and its environment; they engage with debates on how social science addresses the socio-technical and socio-biological (Latour, 2005). While Beck (1992) links the risk of catastrophe to modernity, McNeill (1998 [1976]) offers a much longer societal history that pre-dates modernity. The possibility of catastrophe shapes the discussion of crisis, even if it is considered to have a small likelihood of occurrence.

A crisis may cascade. A crisis may be contained or it may cascade through the social system; the cascade can be short-lived and minor, or it can be of long duration and major effect. The crisis may be contained (recuperation), have minor effects (intensification), have major effects (transformation) or be total (catastrophe). The outcome depends upon the nature of the social system, on how social systems are connected together and on its level of instability. The closeness or looseness of the coupling between systems makes a difference to the extent to which a crisis in one system will generate a crisis in an adjacent system. Perrow (1999 [1984]) analyses these potentialities for small or large change using the concept of coupling. In systems in which the relevant systems are tightly coupled together, there is more likely to be a spillover of the crisis from one system to another. The crisis in closely coupled systems is more likely to be major than those in which the relevant systems are loosely coupled, where a crisis in one system is less likely to spill over into an adjacent system. Haldane and May (2011), in thinking about the likelihood that a financial crisis could cascade from one institution to another, argued that if state financial regulation were at the macro level in addition to the micro level, it would be more likely to contain the effects of a crisis in one part rather than their spreading to other parts of the financial and economic system.

These four types of relationship between crisis and society coexist. In the middle of a crisis, the outcome is likely to be unclear. The concept of cascade is important in understanding crisis, as the impact of a crisis depends on the extent to which it cascades through society. The concept of cascade draws on a concept of society, in which institutional domains are linked rather than independent.

Complex systems

The theory of social change involves a way of theorising society that requires the mobilisation of new forms of systems theory. It requires a concept of society in order to be able to consider substantial rather than minor change; it requires a concept of society as a complex system in order to be able to consider changes in which cause and effect are not proportionate.

Complexity science offers the conceptual tool kit needed for these theoretical developments (Bertalanffy, 1968; Kauffman, 1993; Capra, 1997; Castellani and Hafferty, 2009). It provides a theoretical vocabulary that includes concepts for: when the system changes; what a system is; not assuming equilibrium; dynamics that reinforce or change systems (negative and positive feedback loops); understanding stability (multiple and punctuate equilibria); path dependency; and relations between systems (Walby, 2007; 2009; 2015).

Complexity science offers ways of conceptualising sudden changes in systems where there is a lack of proportion between cause and consequence, in particular, a ‘critical turning point’. A system is self-reproducing, repetitive and self-organising (Maturana and Varela, 1980). A key distinction is between a system and its environment: a system takes all other systems as its environment (Bertalanffy, 1968). This replaces the notion that a system should be analysed by examining the relationship between its parts, for example, in the work of Durkheim and Parsons. This conceptual innovation of distinguishing between the system and its environment allows social science a more fluid concept of society as a system than the previous one in which a system is a whole made up of parts. It allows for analysis in which systems can be partly overlapping, non-nested and non-congruent.

Complex systems analysis does not assume that systems return to equilibrium – this is possible but not a necessary feature of a system. This is important in the analysis of crisis in which a system moves away from equilibrium.

Feedback loops may be positive as well as negative. This is another way of saying that the response to a change in the system, a disturbance, may either escalate further change or restabilise the system. Positive feedback loops exacerbate the destabilisation of the system (Arthur, 1994). This gives rise to non-linear change, in which consequences are not proportionate to their causes.

There can be more than one form of stability, that is, more than one point of equilibrium. More than one variety of society can be stable. Change may be absent, sudden or gradual. The concept of ‘punctuated equilibria’ (Eldredge, 1986) captures the way in which there can be long periods of stability (equilibrium) punctuated by short periods of rapid change, or crises.

There can be more than one path of development. Paths of development may diverge, or bifurcate, during a crisis. Once started, a path of development may be ‘locked in’ through its sedimentation in institutions (North, 1990). The concept of path dependency, originating in complex systems science, has now become assimilated into social science (Mahoney, 2000; Pierson, 2000).

In complex systems science, the analysis of the relations between systems replaces the analysis of the relations between the parts of a system in the old systems approach. Complex systems mutually adapt as they interact. Systems do not have a simple impact of one on another, as in older forms of systems analysis. They shape each other, rather than mutually constituting each other (Walby, Armstrong and Strid, 2012). As a consequence, sequencing and temporality become important features of the analysis of system interaction (Luhmann, 1995).

Systems may be linked in ways that are close or loose. Perrow (1999 [1984]) shows how systems that are closely linked are more unstable in a crisis than those that are more loosely connected. The tighter the coupling, the more likely that a crisis will cascade into further systems, rather than being absorbed and recuperated.

Complex systems theory offers a vocabulary to rethink the notions of system and change in systems that extends beyond narrow specialisms. It offers a way of generalising the analysis of crisis into a broader field of enquiry.

COVID-19

The COVID-19 crisis has led to millions of deaths, multiple states of emergency, economic limitations and lockdown, and increases in violence. The COVID-19 crisis

swept around the world during 2020, with over 3 million dead by April 2021, though with substantial variation in rates between countries (John Hopkins University, 2021). In order to suppress the virus, there have been efforts to separate the non-infected from the infected, as well as to develop vaccines. The response to COVID-19 has involved emergency decision making in the polity and the restructuring and limiting of social and economic activities. The crisis thus cascades from the sickness and death into the polity, economy and civil society. It has cascaded still further into violence, with increases in the rate of domestic violence during lockdown and during political protests over the nature and consequences of the lockdown measures.

The application of the theory of crisis to COVID-19 involves consideration of definition, society, impact and complex systems. There is a significant caveat: the cascade of the COVID-19 crisis is far from over at the time of writing, so some of the potential for large-scale change is not yet resolved. The focus is on the COVID-19 crisis in the UK, with some comparisons with other countries.

Definition

The COVID-19 crisis largely fits the definition of crisis: 'an event that has the potential to cause a large detrimental change to the social system and in which there is lack of proportionality between cause and consequence' (Walby, 2015: 14). While it meets this definition, though there are two points for discussion: the first concerns the inclusion of the biological in the analysis of the social system; and the second concerns the interpretation of the concept of 'event' in relation to COVID-19.

COVID-19 is causing detrimental changes to humanity, with millions of additional deaths. COVID-19 requires social theory to include the bio-social (death). Although this may be a challenge to some forms of social theory that seek to restrict the analysis of the social to narrowly social facts (for example, Durkheim), this challenge has already been addressed by social theory that includes consideration of nature and the biological (see, for example, Foucault, 1977; McNeill, 1998 [1976]; Latour, 2005).

The interpretation of COVID-19 as an event requires consideration. There was an event when the virus jumped species, probably from bats, to humans in Wuhan in China in 2019. This meets the definition of a crisis as started by an event that has a short time frame. However, it is also possible to treat the COVID-19 event as the sickness and death from the virus, which generated a cascade of societal responses, rather than focus on the species jump. Both interpretations are used in the literature on COVID-19 (Delanty, 2021).

Real and/or socially constructed

The analysis of COVID-19 requires consideration of the issues of the real and socially constructed nature of the crisis: it may be real; it may be socially constructed; or it may be simultaneously both real and constructed. All three positions have been articulated in the discussions on COVID-19.

The reality of the COVID-19 crisis is demonstrated in the extent of sickness and death, reported, for example, in information from the World Health Organization (WHO 2020a; 2020b), data published by John Hopkins University (2021), the statistics of the UK Office for National Statistics (ONS, 2021), and media images of hospitals overflowing with people suffering from COVID-19 and coffins and

graves for those who have died. The pressing importance of the reality of the crisis to human life is articulated in writings in medical journals, including *The Lancet* (Horton 2020a) and the *British Medical Journal* (2020), and other writings by scientists Horton, (2020a).

The notion that the COVID-19 crisis is social constructed has been articulated by Agamben (2020) in a widely circulated text (Delanty, 2020; Foucault et al, 2020). Agamben (2020), drawing on his earlier work on the 'state of exception' and 'state of emergency' (Agamben, 2005), is concerned that the crisis has been exaggerated, if not invented, for the purpose of legitimating the concentration of power in the hands of the executive branch of government. He describes measures to combat COVID-19 as 'disproportionate', 'frenetic, irrational and entirely unfounded' (Agamben, 2020). He considers the invocation of a state of emergency to combat COVID-19 as a 'pretext' for the use of emergency powers. He states that he is on the side of a 'free' society and opposed to 'security' measures.

The third position – that the COVID-19 crisis is real but that the narrative as to its causes, consequences and remedies is contested – is the one that is best supported by the evidence. In the UK, the evidence of sickness and death is substantial (see ONS, 2020), and the interpretation of the implications of scientific evidence on the nature of COVID-19 for policy is highly contested (Costello, 2020a; 2020b; Independent SAGE, 2020; SAGE, 2020; Sridar, 2020). While the UK government set up a committee of scientific advisers, the Scientific Advisory Group for Emergencies (SAGE, 2020), and claimed to be following 'the science', an alternative interpretation of the implications of scientific evidence was articulated by the Independent SAGE (2020) and editorials and articles in the leading medical journals of *The Lancet* (Horton 2020a) and the *British Medical Journal* (2020). For example, the government rejected the advice of SAGE for a renewed lockdown in September. The COVID-19 crisis exemplifies the need to take account of both the 'real' nature of the crisis and the contested narrative that shapes societal responses.

Society

A theory of crisis addresses the forms of society between which it might be transformed. The issue here is whether the COVID-19 crisis introduces the need for distinctions between varieties of society beyond those identified earlier that were developed by Walby (2009; 2015; 2018; 2020a; 2020b). There are three issues: first, whether the distinction between premodernity and modernity is relevant to plagues in general and COVID-19 in particular; second, whether or not the distinction between freedom and authoritarianism introduced by some theorists of COVID-19 correctly overtakes the distinction between social democracy and neoliberalism; and, third, whether the distinctiveness of countries in Asia that have dealt successfully with COVID-19 is adequately addressed in the typology of varieties of modernity.

Is the distinction between modernity and premodernity relevant to the discussions on COVID-19? Is the plague a transhistorical phenomenon such that the distinction between premodern and modern has little significance? This might be the conclusion that could be drawn from the work of analysts of the plague in history, in which there have been large-scale deaths in both premodern and modern periods, and where the low-technology practice of the separation of infected and non-infected is the key

mode of suppression of the plague in both (Chase-Dunn and Hall, 1997; McNeill, 1998 [1976]; Diamond, 2005; Spinney, 2017). However, there are two reasons to consider an alternative conclusion: first, that modernity speeds the spread of the virus because of the technology of global transportation and the practice of global tourism; and, second, that the likelihood of a virus making the species jump into humanity is increased by the environmental degradation associated with modern forms of economic development (Quick and Fryer, 2018; Wolfe, 2011), which supports the notion that modernity generates increased risks to society (Beck, 1992; 2009).

Is the distinction between free and authoritarian forms of society, mobilised in some discussions of COVID-19 (Agamben, 2020; Delanty, 2020; Delanty, 2021; Habermas and Günther, 2020), sufficiently important to revise the distinctions between varieties of modernity articulated earlier? While the distinction is relevant to understanding the contested narratives about the COVID-19 crisis, it has the effect of distracting attention from the importance of the contested projects of social democracy and neoliberalism. In particular, it leaves out of scope the significance of the social-democratic public health project that seeks to intervene in the crisis by building the test, trace, isolate and support system. The structuring of the debate around Agamben's agenda has difficulty with the social-democratic public health project – is it to be allocated to the side of freedom or authoritarianism? The conclusion here is that the freedom–authoritarian distinction helps in the analysis of some of the narratives of the COVID-19 crisis; however, it is less helpful in the analysis of the forms of society that the crisis might trigger.

Does the typology of varieties of society need to be extended to adequately capture the variations between countries in the extent of suppression of the virus? While some countries that have been fairly successful are recognisable as having social-democratic forms of governance, such as New Zealand, others, such as China, are not social democracies. There is a case for thinking through whether an additional element in the typology of varieties of society is needed to better include countries in Asia (Shire and Nemoto, 2020).

Does COVID-19 alter the distinctions between societal forms that matter for the crisis? The distinction between premodern and modern varieties of society is not central, as plagues are relevant to both premodern and modern forms, but nonetheless remains relevant because of the significance of modernity in raising the risk of species jumps and the circulation of disease. The distinction between freedom and authoritarianism, while capturing some of the contested narratives concerning COVID-19, is overstated and underestimates the significance of the distinction between neoliberal and social-democratic varieties for potential societal restructuring. The significance of the success in suppressing COVID-19 in China supports the case for developing the typology beyond Europe and North America.

Impact of crisis on society

In general, a crisis may be recuperated, lead to an intensified version of its existing societal formation, lead to societal transformation or lead to catastrophe. Does the COVID-19 crisis revise this typology of the main forms of impact of crisis on society? There is a caveat to the following analysis, as it can only be partial since, at the time of writing in 2021, the COVID-19 crisis is still cascading.

A crisis may recuperate so that its impact is temporary. In a few countries, including China, COVID-19 has been suppressed, with little change to the nature of societies. This may be considered an example of recuperation.

A crisis may lead to the intensification of a previously existing societal form or the acceleration of its trajectory of development. An example is New Zealand, where the successful suppression of the virus led to the enhanced political credibility and legitimacy of the social-democratic government and an increased majority in an election that is likely to result in an acceleration of this path of development.

A crisis may lead to transformation of the form of society. While there currently appear to be no examples of societal transformation following from the COVID-19 crisis, this may be merely because of the early stage of the cascade of the crisis.

In many countries, the impact of the COVID-19 crisis on society is not yet clear (in April 2021). For example, in the UK, there are significant social and political struggles over the management of the crisis that might lead to one of several outcomes. In the UK, during the COVID-19 crisis, there has been both the extension of neoliberal practices into areas that were previously organised along social-democratic principles, and the generation of significant social-democratic contestation of these developments. The outcome might be either the intensification of neoliberalism or a critical turning point away from neoliberalism to a more social-democratic path of development. These contested developments are tentatively explored.

There is development of neoliberal practices in the area of public health. This occurred in the context of long-standing contestation over whether the health services were to be publicly run along social-democratic principles or to be increasingly subject to market processes. The COVID-19 crisis required the rapid increase of capacity to test, trace and isolate those who might be infected. Such testing and tracing of infectious diseases had previously been the remit of local public health entities, organised as a public service. During the emergency of the crisis, over £1 billion was spent on contracts for the development of these test and trace services, which were awarded without public competitive tendering to several large private firms, including Deloitte, PricewaterhouseCoopers, Ernst & Young, Edenred, Randox, Serco and Boots ([Sunday Times, 2020](#); [The Guardian, 2020a](#); [2020b](#); [2020c](#)), while a new body was set up to lead the programme outside of the existing public health infrastructure ([Department for Health and Social Care, 2020](#)). This outsourcing to large private companies of testing and tracing, which was previously a matter for local public health teams in local authorities, was a move from social-democratic to neoliberal principles of organisation.

There is the development of social-democratic practices. There was massive state expenditure to support people and businesses that were forced to close during the pandemic ([HM Government, 2020](#)) – a practice that is usually understood as a Keynesian and social-democratic practice. There is local community organising. The mayors in the large cities, mostly Labour, have developed their capacity to speak into national political debates, as well as to organise locally, arguing for more state expenditure to support those detrimentally affected by the limitations in economic activity and for intensified lockdowns ([Daily Mail, 2020](#); [The Independent, 2020](#)). In the autumn of 2020, there was a shift in public opinion away from the Conservative Party towards the Labour Party, according to polling by Ipsos MORI ([Huff Post, 2020](#)), followed by a shift back to the Conservative Party following early successes in vaccination (in April 2021).

The COVID-19 crisis is a catastrophe for the millions of people who have died from the virus. For society, COVID-19 is, currently, not yet a catastrophe, in the sense that life for the rest goes on. However, there is a possibility that it may yet become a catastrophe. This depends on two issues: whether there is full mobilisation to suppress the virus or not; and the extent of the cascade of the crisis through societal domains.

The crisis is still cascading through societal domains. It is not clear if the crisis in the UK will be absorbed and recuperated, lead to an intensification of neoliberalism or a transformation to social democracy, or lead to catastrophe.

In the case of the financial crisis of 2008, the crisis took several years to cascade through finance, to the economy, to the polity (austerity), to civil society (increased divisions), to increased violence and to the constitutional level of the polity (Brexit), the consequences of which have not yet (in 2020) taken place. For COVID-19 in the UK, there is the prospect of further a cascade beyond health and the economy. The impact of the crisis on the economy has only just started, partly because of the intervention by the polity to provide resources to soften the impact. The recession is likely to impact on civil society and on the polity. The outcome of the current contestations between political forces, including but limited to those aligned with the Labour Party and the Conservatives, is unknown. The cascade of this crisis is not over. The analysis of the COVID-19 crisis is illuminated by the typology of the types of impact of the crisis on society.

Complex systems

This analysis of the COVID-19 crisis has mobilised the concepts involved in complex systems analysis. There is no challenge from the example of the COVID-19 crisis to thinking with complexity concepts.

An example as to how complexity thinking can aid analysis of crisis concerns the notion that change can be non-linear as well as linear. The reproduction rate of the virus, summarised as 'R', is usually non-linear. If one person infects one person, the spread of the virus is linear, and R equals 1; but most of the time R is below or above 1. If one person is infecting, on average, more than one other person, the spread of the virus is non-linear, which means that the spread is accelerating. The spread of the virus is usually not linear, but non-linear, indeed, exponential.

Political responses that speak of 'balancing' economic and health components are using a vocabulary that invokes linearity. This invokes the notion that a unit of effort that benefits health has a unit of detriment to the economy. It mobilises an understanding of proportionately beneficial and detrimental effects. However, when R is above 1, the virus is not spreading proportionately; rather, it is spreading disproportionately. 'Balance', with its invocation of proportionality of effort and effect, is inappropriate in the context of COVID-19. Complex systems thinking, which facilitates thinking about non-proportionality and non-linearity, would aid decision making on policy priorities.

Conclusion

In developing a theory of crisis, it is important to address: the definition of crisis; the issue of reality versus social construction, or their combination; the type of impact of the crisis on society; the variety of society that might be changing; and the complex

systems involved. The application of Walby's early theory of crisis has illuminated the COVID-19 crisis. Some developments have been suggested to deepen the theory, for example, those concerning the biological and scientific aspects of crisis, which were previously underspecified.

The definition of crisis as an event in a short period of time and a longer period of consequences that cascades in non-linear form helps to make sense of developments related to COVID-19. A crisis is usually both real and socially constructed, in the sense that there is something of substance but that its interpretation by social actors makes a difference to the outcome. It might be, but is rarely, just one or another. Agamben was wrong to argue that the COVID-19 crisis is merely a social and political construction. However, the control over the interpretation of the science of COVID-19 makes a difference to the outcome.

If a crisis is to be understood to have the possibility of changing the form of society, then it is necessary to understand these alternative forms. The COVID-19 crisis has focused social-scientific attention on those societies that have managed to suppress the virus. The development of a typology of societies to more adequately include China has been shown to be important.

There is a range of forms of impact of crisis on society for COVID-19 as for other forms of crisis. It can be recuperated, lead to intensification/acceleration of neoliberal (or other) forms of society, lead to transformation (If so, to what?) and may yet be catastrophic. It is too early to be conclusive about the cascade of the COVID-19 crisis; nonetheless, some developments can be noted. There are very significant differences in the impact of the COVID-19 crisis between societal formations. It has been recuperated in a few countries but, currently, not most. In some countries, it is leading to an intensification of either neoliberal or social-democratic forms of governance. There are no current examples of transformation, though the extent of contestation over future societal forms is ongoing and this may be an outcome in some locations, pending the further cascade of the crisis through institutional domains. While COVID-19 has been catastrophic for the millions of people who have died, it is not yet catastrophic in the sense of the ending of a society; however, the cascade of the crisis is not yet complete.

Complex systems concepts are useful in the analysis of crisis, including COVID-19. These include that: systems are self-reproducing; a system takes all others as its environment; feedback loops are positive as well as negative; there is no necessary return to equilibrium; there are multiple possible points of equilibria; there is mutual adaptation of complex systems; there is non-linear as well as linear change; development is path dependent; and critical turning points are extremely important.

A theory of crisis has components of: definition; balance between the real and the socially constructed; concepts that distinguish between societal forms; the type of impact on society (recuperation, intensification/acceleration, transformation and catastrophe); and the mobilisation of complex systems. While the outcome of the cascade of the COVID-19 crisis is as yet unknown, its dynamics are illuminated by its theorisation as crisis.

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Conflict of interest

The author declares that there is no conflict of interest.

References

- Abbott, A. (1988) Transcending general linear reality, *Sociological Theory*, 6(2): 169–86. doi: [10.2307/202114](https://doi.org/10.2307/202114)
- Agamben, G. (2005) *State of Exception*, Chicago, IL: Chicago University Press.
- Agamben, G. (2020) The invention of an epidemic, www.journal-psychoanalysis.eu/coronavirus-and-philosophers/ (originally published in Italian on Quodlibet, www.quodlibet.it/giorgio-agamben-l-invenzione-di-un-epidemia).
- Arthur, W.B. (1994) *Increasing Returns and Path Dependence in the Economy*, Michigan, MI: University of Michigan Press.
- Beck, U. (1992) *Risk Society: Towards a New Modernity*, London: Sage.
- Beck, U. (2009) *World at Risk*, Cambridge: Polity.
- Bergman-Rosamond, A., Gammeltoft-Hanse, T., Hamza, M., Hearn, J., Ramsan, V. and Rydstrom, H. (2020) The case for interdisciplinary crisis studies, *Global Discourse*, 12(3–4): doi: [10.1332.204378920X15802967811683](https://doi.org/10.1332/204378920X15802967811683).
- Bergman-Rosamond, A. (2011) *Perspectives on Security in the Arctic Area*, Copenhagen: Danish Institute for International Studies.
- Bertalanffy, L. (1968) *General Systems Theory*, New York: George Braziller.
- Boatcă, M. (2015) *Global Inequalities beyond Occidentalism*, London: Routledge.
- Braudel, F. (1966 [1949]) *The Mediterranean and the Mediterranean World in the Age of Philip II*, Vol II, 2nd edn, Berkeley, CA: University of California Press.
- British Medical Journal (2020) The UK’s public health response to COVID-19, *BMJ*, 369: m1932.
- Buzan, B., Wæver, O. and de Wilde, J. (1998) *Security: A New Framework for Analysis*, Boulder, CO: Lynne Rienner.
- Capra, F. (1997) *The Web of Life*, London: Flamingo.
- Castellani, B. and Hafferty, F. (2009) *Sociology and Complexity Science: A New Field of Inquiry*, Berlin: Springer.
- Chase-Dunn, C. and Hall, T. (1997) *Rise and Demise: Comparing World-Systems*, Boulder, CO: Westview.
- Costello, A. (2020a) The government’s secret science group has a shocking lack of expertise, *The Guardian*, www.theguardian.com/commentisfree/2020/apr/27/gaps-sage-scientific-body-scientists-medical.
- Costello, A. (2020b) Six months into Covid, England’s quarantine programme is still a mess, *The Guardian*, www.theguardian.com/commentisfree/2020/aug/07/covid-uk-quarantine-government-coronavirus-isolate.
- Crouch, C. (2011) *The Strange Non-death of Neoliberalism*, Cambridge: Polity.
- Daily Mail (2020) 16 October, www.dailymail.co.uk/news/article-8846655/Coronavirus-UK-Northerners-dub-Andy-Burnham-new-King-North-social-media-memes.html.
- Delanty, G. (2020) *Critical Theory and Social Transformation*, London: Routledge.
- Delanty, G. (2021) Introduction, in G. Delanty (ed) *Pandemics, Society and Politics: Critical Reflections on Covid-19*, Berlin: De Gruyter.
- Department for Health and Social Care (2020) New chair of coronavirus test and trace programme appointed, 7 May, www.gov.uk/government/news/new-chair-of-coronavirus-test-and-trace-programme-appointed.
- Diamond, J. (2005) *Collapse: How Societies Choose or Fail to Survive*, London: Penguin.
- Eisenstadt, S. (ed) (2002) *Multiple Modernities*, New Brunswick, NJ: Transaction.

- Eldredge, N. (1986) *Time Frames: The Rethinking of Darwinian Evolution and the Theory of Punctuated Equilibria*, London: Heinemann.
- Engelen, E., Ertürk, I., Froud, J., Johal, S., Leaver, A., Moran, M., Nilsson, A. and Williams, K. (2011) *After the Great Complacency*, Oxford: Oxford University Press.
- Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*, Cambridge: Polity.
- Fassin, D. (2012) *Humanitarian Reason: A Moral History of the Present*, Berkeley, CA: University of California Press.
- Foucault, M. (1977) *Discipline and Punish: The Birth of the Prison*, London: Penguin Books.
- Foucault, M., Agamben, G., Nancy, J.L., Esposito, R., Benvenuto, S., Dwivedi, D., Mohan, S., Ronchi, R. and de Carolis, M. (2020) Coronavirus and philosophers, *European Journal of Psychoanalysis*, (in collaboration with *Antinomie* [see: <https://antinomie.it/>]), www.journal-psychoanalysis.eu/coronavirus-and-philosophers/.
- Gammeltoft-Hansen, T. and Tan, N.F. (2016) The end of the deterrence paradigm? Future directions for global refugee policy, *Journal of Migration and Human Security*, 5(1): 28–56. doi: [10.1177/233150241700500103](https://doi.org/10.1177/233150241700500103)
- Gilbert, C. (1998) Studying disaster: changes in the main conceptual tools, in E.L. Quarantelli (ed) *What Is a Disaster?*, London: Routledge, pp 3–12.
- Gladwell, M. (2000) *The Tipping Point: How Little Things Can Make a Big Difference*, London: Little, Brown.
- Goldstone, J. (1991) *Revolution and Rebellion in the Early Modern World*, Los Angeles, CA: University of California Press.
- Gramsci, A. (1971) *Selections from the Prison Notebooks of Antonio Gramsci*, London: Lawrence and Wishart.
- Haas, E. (1958) *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957*, Stanford, CA: Stanford University Press.
- Habermas, J. and Günther, K. (2020) J. Habermas: ‘What Concerns Me Is How Even Lawyers Are Now Relativizing the Right to Life’ – K. Günther: ‘No Constitutional Right Is Boundless. They Can Collide with Each Other’, doi: [10.13140/RG.2.2.22496.10246/1](https://doi.org/10.13140/RG.2.2.22496.10246/1).
- Haldane, A. and May, R. (2011) Systemic risk in banking ecosystems, *Nature*, 469: 351–5. doi: [10.1038/nature09659](https://doi.org/10.1038/nature09659)
- Hamza, M. and Corendea, C. (eds) (2012) *Climate Change and Fragile States: Rethinking Adaptation*, Munich: United Nations University and Munich-Re Foundation, SOURCE No. 16/2012.
- Hamza, M. (eds) (2015) *World Disasters Report*, Geneva: International Federation of the Red Cross and Red Crescent Society.
- Hay, C. (1996) Narrating crisis: the discursive construction of the ‘Winter of Discontent’, *Sociology*, 30(2): 253–77. doi: [10.1177/0038038596030002004](https://doi.org/10.1177/0038038596030002004)
- HM Government (2020) Our plan to rebuild: the UK government’s COVID-19 recovery strategy, www.gov.uk/government/publications/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy.
- Horton, R. (2020a) Offline: COVID-19 and the NHS ‘a national scandal’, *Lancet*, [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30727-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30727-3/fulltext). Cambridge: Polity Press.
- Horton, R. (2020b) *The COVID-19 Catastrophe: What’s Gone Wrong and How to Stop It Happening Again*, Cambridge: Polity Press.
- Huff Post (2020) Labour jumps to five point poll lead over the Conservatives, 30 October.

- Independent SAGE (2020) The Independent SAGE report, 12 May, www.independentsage.org/wp-content/uploads/2020/05/The-Independent-SAGE-Report.pdf.
- Inglehart, R. (1997) *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies*, Princeton, NJ: Princeton University Press.
- John Hopkins University (2021) Coronavirus resource centre, <https://coronavirus.jhu.edu/map.html>.
- Kauffman, S. (1993) *The Origins of Order: Self-Organization and Selection in Evolution*, Oxford: Oxford University Press.
- Keynes, J.M. (1936) *The General Theory of Employment, Interest and Money*, London: Macmillan.
- Kinnvall, C. and Rydström, H. (eds) (2019) *Climate Hazards, Disasters, and Gender Ramifications*, London: Routledge.
- Klein, N. (2007) *The Shock Doctrine: The Rise of Disaster Capitalism*, London: Allen Lane.
- Korpi, W. (1983) *The Democratic Class Struggle*, London: Routledge and Kegan Paul.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford: Oxford University Press.
- Lipset, S.M. (1959) Some requisites of democracy: economic development and political legitimacy, *American Sociological Review*, 53(1): 69–105.
- Luhmann, N. (1995) *Social Systems*, Stanford, CA: Stanford University Press.
- Mahoney, J. (2000) Path dependency in historical sociology, *Theory and Society*, 29(4): 507–48. doi: [10.1023/A:1007113830879](https://doi.org/10.1023/A:1007113830879)
- Mason, P. (2013) *It's Kicking Off Everywhere*, London: Penguin.
- Maturana, H. and Varela, F. (1980) *Autopoiesis and Cognition*, Dordrecht: Reidel.
- McNeill, W.H. (1998 [1976]) *Plagues and Peoples*, New York: Anchor Books.
- Minsky, H. (2008 [1986]) *Stabilizing an Unstable Economy, 2nd edn*, New York: McGraw-Hill.
- Mirowski, P. (2013) *Never Let a Serious Crisis Go to Waste: How Neoliberalism Survived the Financial Meltdown*, London: Verso.
- Moore, B. Jr (1966) *Social Origins of Dictatorship and Democracy*, Harmondsworth: Penguin.
- North, D. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- ONS (Office for National Statistics) (2021) Deaths, www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/previousReleases.
- Perez, C. (2009) The double bubble at the turn of the century: technological roots and structural implications, *Cambridge Journal of Economics*, 33(4): 779–805. doi: [10.1093/cje/bep028](https://doi.org/10.1093/cje/bep028)
- Perez, C. (2002) *Technological Revolutions and Finance Capital*, Cheltenham: Edward Elgar.
- Perrow, C. (1999 [1984]) *Normal Accidents: Living with High-Risk Technologies*, Princeton, NJ: Princeton University Press.
- Pierson, P. (2000) Increasing returns, path dependence, and the study of politics, *American Political Science Review*, 94(2): 251–68. doi: [10.2307/2586011](https://doi.org/10.2307/2586011)
- Polanyi, K. (1957) *The Great Transformation: The Political and Economic Origins of Our Time*, Boston, MA: Beacon Press.

- Quick, J. and Fryer, B. (2018) *The End of Epidemics: How to Stop Viruses and Save Humanity Now*, London and Melbourne: Scribe.
- Ramasar, V. (2014) *Fluid Governance: Scalar Politics in the South African Waterscape*, Lund: Lund University.
- Roitman, J. (2014) *Anti-crisis*, Durham: Duke University Press.
- Rydstrom, H. (2020) Disasters, ruins, and crises: masculinity and ramifications of storms in Vietnam, *Ethnos: Journal of Anthropology*, 85(2): 351–70.
- SAGE (Scientific Advisory Group for Emergencies) (2020) Coronavirus (COVID-19) response, www.gov.uk/government/groups/scientific-advisory-group-for-emergencies-sage-coronavirus-covid-19-response.
- Schumpeter, J. (1954) *A History of Economic Analysis*, New York: Allen and Unwin.
- Schwinn, T. (1998) False connections: systems and action theories in neofunctionalism and in Jürgen Habermas, *Sociological Theory*, 16(1): 75–95. doi: [10.1111/0735-2751.00043](https://doi.org/10.1111/0735-2751.00043)
- Shire, K. and Nemoto, K. (2020) The origins and transformations of conservative gender regimes in Germany and Japan, *Social Politics*, 27(3): 432–48. doi: [10.1093/sp/jxaa017](https://doi.org/10.1093/sp/jxaa017)
- Shire, K. and Walby, S. (2020) Introduction: advances in theorizing varieties of gender regimes, *Social Politics*, 27(3): 409–13. doi: [10.1093/sp/jxaa029](https://doi.org/10.1093/sp/jxaa029)
- Skocpol, T. (1979) *States and Social Revolutions*, Cambridge: Cambridge University Press.
- Spinney, L. (2017) *Pale Rider: The Spanish Flu of 1918 and How it Changed the World*, London: Vintage.
- Sridar, D. (2020) Unless the government changes tack, the UK's lockdown will have been for nothing, *The Guardian*, www.theguardian.com/profile/devi-sridhar.
- Sunday Times (2020) Coronavirus: private call centres will run new contact tracing system, 4 May, www.thetimes.co.uk/article/coronavirus-private-call-centres-will-run-new-contact-tracing-system-bjqnpsxqc.
- The Guardian (2020a) Hospitals sound alarm over privately run test centre in Surrey, 23 April, www.theguardian.com/world/2020/apr/23/hospitals-sound-alarm-over-privately-run-test-centre-in-surrey.
- The Guardian (2020b) Vote Leave firm wins seven government contracts in 18 months, 4 May, www.theguardian.com/world/2020/may/04/vote-leave-ai-firm-wins-seven-government-contracts-in-18-months.
- The Guardian (2020c) Private COVID-19 tracing disaster, 5 May, www.theguardian.com/society/2020/may/05/private-covid-19-tracing-disaster-councils.
- The Independent (2020) Schools must close to make second lockdown work Northern leaders tell Boris Johnson 1 November.
- Urry, J. (2011) *Climate Change and Society*, Cambridge: Polity.
- Urry, J. (2016) *What Is the Future?*, Cambridge: Polity.
- Walby, S. (2007) Complexity theory, systems theory and multiple intersecting social inequalities, *Philosophy of the Social Sciences*, 37(4): 449–70. doi: [10.1177/0048393107307663](https://doi.org/10.1177/0048393107307663)
- Walby, S. (2009) *Globalization and Inequalities: Complexity and Contested Modernities*, London: Sage.
- Walby, S. (2015) *Crisis*, Cambridge: Polity Press.
- Walby, S. (2018) Is Europe cascading into fascism? What concepts are needed to address this question?, *Politics and Governance*, 6(3): 67–77. doi: [10.17645/pag.v6i3.1438](https://doi.org/10.17645/pag.v6i3.1438)

- Walby, S. (2020a) Varieties of gender regimes, *Social Politics*, 27(3): 414–31. doi: [10.1093/sp/jxaa018](https://doi.org/10.1093/sp/jxaa018)
- Walby, S. (2020b) Developing the concept of society: institutional domains, regimes of inequalities and complex systems in a global era, *Current Sociology*, 69(3): 315–32. doi: [10.1177/0011392120932940](https://doi.org/10.1177/0011392120932940).
- Walby, S., Armstrong, J. and Strid, S. (2012) Intersectionality: multiple inequalities in social theory, *Sociology*, 46(2): 224–40. doi: [10.1177/0038038511416164](https://doi.org/10.1177/0038038511416164)
- WHO (World Health Organization) (2020a) How COVID-19 spreads, 19 March.
- WHO (2020b) Coronavirus disease (COVID-19) advice for the public, 31 March, www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public.
- Wolfe, N.D. (2011) *The Viral Storm: The Dawn of a New Pandemic Age*, London: Penguin.
- Yodmani S. (2011) 'Disaster risk management and vulnerability reduction: Protecting the poor'. Presented at the Asia and Pacific Forum on Poverty organised by the Asian Development Bank. Available at <http://drr.upeace.org/english/documents/References/Topic%205-Risk%20Management%20and%20Adaptation%20to%20Climate%20Change/Yodmani%202000%20Disaster%20Risk%20Management.pdf>.
- Žižek, S. (2020) *Pandemic! Covid-19 Shakes the World*, London: OR Books.