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Excerpt

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PART I

Introduction

1 *Anticipating risk and organising risk regulation: current dilemmas*

BRIDGET M. HUTTER

This book takes as its analytical focus the notion of anticipation, more precisely the anticipation of risks and how the concerns they generate influence the way we organise our policy systems. There seems to be a contemporary obsession with anticipating risks, acting to prevent them and having in place plans to manage risk events should they occur. Private and public sector organisations increasingly devote resources to risk prevention and contingency planning. And typically there is much criticism if events are not adequately predicted however unrealistic such predictions may be in reality. Social theorists see this trend as an inherent part of modern social and organisational life, some relating it to fundamental social changes and others relating it to new forms of governance and organisation. Certainly anticipating risks and organising for their control is an integral part of risk regulation regimes which have long been associated as much with their proactive as their reactive activities.

This book explores current dilemmas in anticipating risks and organising risk regulation for their mitigation. A key debate focuses on the value of anticipatory strategies and their impact on innovation and resilience. The chapters consider the importance of anticipation in framing risk regulation debates and policies in the public and private sectors. They consider whether or not concerns about anticipation are new, distinctively ‘modern’ considerations as risk society theories suggest. They also have different views about how extensive or inevitable anticipatory perspectives are. This chapter (Part I) will set out the main concepts and debates and set the scene for the papers and discussions that follow. It will lay out the significance of the concept of anticipation to risk regulation and consider the debates to which it gives rise.

Anticipating risk: risk as anticipation

Modern social theorists regard anticipation as central to the concept of risk, notably the anticipation of danger and catastrophe. Beck (2006 and 2009) makes an important distinction between risk as an anticipated event and catastrophe as an actual event: 'Risk means the *anticipation* of catastrophe ... At the moment at which risks become real ... they cease to be risks and become catastrophes ... Risks are always events that are threatening' (Beck 2006: 332). He claims that we live in a world where we are 'increasingly occupied with debating, preventing and managing risks'. Luhmann's (1993) distinction between risks and dangers also associates risk with 'potential' losses as opposed to the actual losses involved with dangers. Giddens (1999a) shares this view and sees this partly as a consequence of a growing preoccupation with the future. He argues that there is no longer a belief in fate but an 'aspiration to control' the future. This is partly attributed to the growth of science. Beck (2006) believes that a growing belief in science, rationality and calculability is significant. We live, he argues, in a world where we know much more about risks through science. But this greater appreciation of the risks serves to heighten feelings of insecurity and is rarely matched by a greater ability to control or manage risk. Beck and Giddens are pessimistic and cynical about these pre-emptive, anticipatory stances. Giddens (1999a) observes that there is a 'plurality of future scenarios' and no certainty about which is most accurate. Beck (2006: 329) is much more critical, referring to the 'optimistic futility with which the highly developed institutions of modern society ... attempt to anticipate what cannot be anticipated'.

An underlying theme in theory writing is that risk is essentially a modern concept and phenomenon. Bernstein (1996) and Giddens (1999a) claim that traditional cultures did not have notions of risk; they were rather fatalistic in their outlooks. Beck identifies the risk society as a peculiarly modern phenomenon and one which creates and encounters new potentially catastrophic global risks emanating from science. Luhmann (1993) also sees modern societies as riskier than previous societies but his explanation is rather different. Luhmann distinguishes between risks and dangers. He regards risks as potential losses which can be related to decisional uncertainty and dangers as potential losses which can be attributed to factors outside

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of our control. Risk is therefore seen as the consequence of decisions, and modern societies, he argues, involve greater dependence on decisions, especially the decisions of others. This is partly because of a high degree of structural coupling between the institutions of modern societies and technology. Giddens is relatively cautious about claiming that these risks are any more severe than those encountered in the past – ‘A risk society is not intrinsically more dangerous or hazardous than pre-existing forms of social order’ (Giddens 1999a: 3).

Here we witness a more fundamental divide about what it is in particular that is modern about risk: is it that modern societies encounter new and greater risks or is it a new way of ‘seeing’ the world, through the lens of risk? In many respects there are elements of truth in both points of view. Certainly modern societies do encounter different – or new – risks and many of these emanate from science. At the level of the individual these risks are probably no greater than in the past but some of the new risks we encounter may be marked by their scale, most particularly their potential global consequences. Likewise, risk does appear to have emerged as a major organising category in some areas of modern societies (Ericson *et al.* 2003; Power 2007) and where this has emerged, it does seem to be linked to notions of controlling risk into the future. These discussions will permeate the chapters in this volume as will the debate about whether or not contemporary societies are presented with distinctively new risks.

New threats, vulnerabilities and insecurities

Part II of the book considers some of the ‘threats, vulnerabilities and insecurities’ which characterise the contemporary world. Such discussions derive from one of the key assertions of social theories of risk namely that new risks characterise late twentieth- and twenty-first-century living. The main focus of theoretical attention has been on the ‘new risk environments’ created by science and technology (Giddens 1999a: 4) and particularly on ‘technologies of the future’ (Beck 2006: 337). These are the focus of much risk attention by governments and industry alike. Science and technology simultaneously explore new innovative avenues which hold potential to advance our lives in positive ways but which may also present us with new risks or uncertainty.

Scientific and technological risks

Over the past three decades a number of key risk events have shaken confidence in experts and governments and led to a fundamental questioning of new scientific and technological developments. Three Mile Island and Chernobyl, for example, led to public concern over the safety of nuclear power, especially in the 1980s (Wynne 1996). A series of food-related incidents in the UK in the 1980s and 1990s shook public confidence in the system of food regulation in Britain, most especially confidence in the government's handling of food safety. The Bovine Spongiform Encephalopathy (BSE) crisis highlighted disagreements among experts. Some official scientists claimed that it was safe to eat beef, while others contested this and linked this disease in cattle to variant Creutzfeldt–Jakob Disease (vCJD), a fatal brain disease in humans. Eventually it became clear that there was indeed a link between BSE and vCJD and this undermined official sources which had previously denied the link. Eldridge and Reilly (2003) explain that public confidence in the credibility of experts and the government caused by this episode influenced subsequent debates, for example, about genetically modified organisms (GMOs) (see also Wynne 2001).

Advances in biotechnology are perhaps among the most controversial of contemporary scientific developments with genetically modified products, stem cell and nanotechnology issues all potentially the stuff of daily media headlines. Interestingly, nanotechnology has not yet attracted great public or media attention. The commercial potential of nano particles is great and it is likely that most people do not even realise that they are in use in many of the products they use (Falkner 2008). Yet there are few signs that concern about their safety is emerging; the one exception is concern about the safety of nano tubes which it is feared may result in lung disease (Poland *et al.* 2008). But regulation has so far remained self-regulatory and voluntary although once again this is a growing subject of debate.

The Internet and television highlight scientific uncertainties and conundrums with the temptation of stressing the sensational. Knowledge of risk events and the possibility of their occurring are literally brought into our living rooms through a global mass media which is capable of transmitting visual images across the world in real time. Many of us saw the planes fly into the Twin Towers on 9/11

‘as it happened’. This brought home the ease with which knowledge of both a positive and negative kind travels. It also underlined how political fights and terrorism are transnational and force attention on a global stage, and become significant in demands for greater surveillance and resources.

Global risks

A key feature of some twenty-first-century risks is their potential scale and conceptualisation as global. This leads Beck (2009) in his more recent work to coin the term ‘world risk society’. This partly relates to the development of new technologies with global reach. For example, some would regard nuclear power to be in this category and the most alarmist versions of concern about genetically modified crops, nano technologies and stem cell research focus on fears of permanent and widespread changes which may occur to DNA through these interventions.

Other risks result from the increasing interdependence between local and global processes and institutions which defines globalisation (Dodd and Hutter 2000). There has been, for instance, an increase in transnational economic processes as financial risk events have demonstrated. In October 1987 ‘Black Friday’ in the United States saw a dramatic fall in the US stock market which led to similar falls in share prices elsewhere around the world. The collapse of BCCI (the Bank of Commerce and Credit International) in 1991 had multinational origins and effects. And the credit crunch in 2007 onwards in the United States had global repercussions as a dramatic reduction in the availability of credit, prompted by serious difficulties in the American sub-prime mortgage market, had international consequences for national economies and financial institutions, including some large and prominent multinational banks.

Another category of global risk is the realisation that some risks, hitherto regarded as local in their effects, are in fact global. Climate change and global warming would fall into this category. Some would also regard human viruses in this category. While these have always existed and there have been pandemics throughout history, arguably the ease with which we can travel around the modern world has facilitated unprecedented global aspects to these diseases. These risks do not fall within the traditional remit of ‘risk society’ theories

where the main emphasis was typically upon manufactured risks. But more recent writings by these theorists posit a change in our attitudes towards natural risks. Beck (2006: 332), for instance, argues that ‘even natural hazards appear less random than they used to’. The expectation is that their occurrence may be anticipated and how to react to them determined through emergency planning. Tierney *et al.* (2001) observe that a fusion of disaster and hazards research has brought a new focus on pre-event mitigation and preparedness. While this has mainly been with respect to natural hazards, it has not been exclusively so, as major events such as Three Mile Island and Bhopal have focused on the need to plan for high-technology disasters too. The emphasis in this literature is on how to think ahead and mitigate damage, for example, through planning laws and also by establishing and implementing construction standards so that buildings can withstand earthquakes.

Some authors do believe that reacting to natural risks, and manufactured risks, may be exacerbated by social and spatial aspects of twenty-first-century living, namely high concentrations of resources and power. Increasingly infrastructures involving transport and the utilities are the subject of high-level-risk concerns. They may comprise highly concentrated nodes which supply large, even transnational, areas. Accordingly the risks posed are potentially large scale and varied. For example, national and international infrastructures may become terrorist targets – stations, energy sources, telecommunications and so on. Critical infrastructures may also be vulnerable to more routine political or technical failures where problems in one nation may render others vulnerable: witness, for example, the effects of an overload in Germany’s power network in 2006 which triggered outages leaving millions of homes without electricity in Germany, France, Italy, Spain and Austria and parts of Belgium, the Netherlands and Croatia. Or they may be vulnerable to natural hazards as in the Louisiana example discussed below, or the UK floods of 2007 (Pitt 2008). This is a major concern of Perrow (2007), namely that a growing concentration of economic power, hazards and populations makes disasters more consequential. This includes the effects of natural disasters where he cites the example of Hurricane Katrina which caused such damage in New Orleans, Louisiana, an area of high population proximate to accumulations of hazardous material. It also makes the effects of ‘deliberate disasters’, such as 9/11, more

critical as one might expect that terrorists would target areas where maximum damage could be caused, where modern societies are most vulnerable (Perrow 2007: 70). As 9/11 demonstrated, mega-structures and large-scale national projects may be especially vulnerable both in terms of their actual effects and also their symbolic value.

New risks?

A variety of ‘new risks’ are discussed in this volume with authors taking differing perspectives on the usefulness of the risk society thesis and in particular whether or not we really are encountering new risks or new approaches to handling risks. A number of authors believe that there is a volatility attaching to risks in modern society. Lezaun (this volume), discussing new scientific developments, argues that these issues are highly volatile with new developments being heralded as a success one day and hazardous shortly afterwards. He refers to the case of ‘frontier research’ on gene therapy. This emerged in the 1980s when it was regarded as revolutionary and people were optimistic about its possible benefits but by the 1990s it was being criticised for failing to realise those benefits and by the early twenty-first century raising some concerns.

Several authors discuss the emergence of the ‘public’ as a threat. Jones and Irwin (this volume) explain that deliberations about science and technological innovations have construed the public as a ‘new’ risk and one which it is feared may be activated through their exposure to various media outlets. And Lloyd-Bostock (this volume) discusses how public perceptions of risk have themselves become a potential source of risk and also of growing political concern, particularly in relation to debates about the compensation culture.

Jennings and Lodge (this volume) discuss the risks attaching to mega-projects, most particularly the 2012 London Olympics, where a variety of political interests and political risks interplay with operational and economic risk management. An important aspect of mega-events, such as the Olympics, is the provision of critical infrastructures such as stadia, accommodation and crucial transport links. Jennings and Lodge discuss how the risks of failing are especially high profile as the event will take place on the world stage.

The global and transnational aspects of contemporary risks are addressed by a number of chapters. Hofmann (this volume) discusses

the risks attaching to the depletion of internet addresses, risks that are without national and organisational boundaries, risks which are decentralised, and outside of direct organisational and state control. Boin (this volume) argues that crises are becoming increasingly transboundary, partly because of the tight coupling of contemporary social technical systems. This, argues Boin, poses serious difficulties for crisis management as crises are increasingly difficult to detect and as national regimes are ill-equipped to manage such transboundary events. And Briault (this volume) argues that while there have always been risks and crises in financial markets, recent crises are marked by an over reliance on science throughout the global financial sector thus rendering the system vulnerable to greater shocks than have hitherto been experienced. Indeed Briault believes that the risk society thesis does add to our understandings of financial crises, most especially overconfidence in the ability of financial institutions to anticipate and to control risks.

These authors do see something distinctive about late twentieth-century and twenty-first-century understandings of risk. But Bartrip (this volume) questions the claims that the risk society is a post-1970s phenomenon. He argues that whether we are any better equipped to manage risks now than we were in previous generations, is unclear. This is largely because of the dearth of historical work on the topic. Bartrip traces the history of the 1950s outbreak of myxomatosis and argues that in many respects this has many of the characteristics associated with the risk society. He regards myxomatosis as a manufactured risk to the extent that this animal disease crisis was partly caused by humans moving rabbits across continents and exposing them to the virus, this sometimes being an intentional exposure to control rabbit populations. He identifies precautionary policies predating the risk society era – with respect to pathogens in 1930s Australia and also in the UK with respect to other animal diseases, for example, anthrax. Bartrip argues that anthrax and rabies were the cause of scares and strict regulation, akin to those associated with the risk society. And in 1953, when myxomatosis did enter the UK, a disjuncture emerged between the experts and lay opinion. The experts could see the advantages of the disease in pest control terms, but also recognised the political risks attaching to the very different stance of the public who were outraged by the suffering the disease involved and also were concerned about the possibility of transmission to humans.

Bartrip argues that this disjuncture, and the difficulties the experts had in allaying fears of transmission, are very typical of accounts of the risk society.

Anticipating risk: social, organisational and regulatory actions and reactions

Part III of this book focuses on social, organisational and regulatory sources of resilience and safety. The notions of safety and resilience are inextricably related to the notion of risk. The concept of resilience emerged in the late 1960s/early 1970s in relation to the resilience of ecosystems (Folke 2006) where the focus was upon the ability of systems to cope with change and still persist (Petak 2002). From the mid 1980s resilience referred increasingly to human environmental interactions, exemplified in discussions of sustainability (Lélé 1998) and in the late 1970s/early 1980s it appeared in behavioural studies where it referred to an individual's ability to withstand and rebound from crisis (Walsh 1996). The concept was first used with respect to organisations by Wildavsky in 1988 but it was not until the late 1990s that the application of resilience to organisations gained in popularity. Since then there has been discussion of resilience with respect to disasters. For example, resilience in the face of earthquakes (Petak 2002). There have also been specific case studies, for instance, relating to Hurricane Katrina and the capacity of New Orleans to recover (Campanella 2006), and 9/11 (Hoffer Gittel *et al.* 2003; Kendra and Wachtendorf 2003; O'Brien and Read 2005). There has also been broader discussion of resilience in relation to healthcare systems (Mallak 1998), business supply chains (Christopher and Peck 2004), information systems (Comfort *et al.* 2001) and resilience engineering (Hollnagel *et al.* 2006; Woods and Wreathall 2003).

Wildavsky's (1988) classic work *Searching for Safety* juxtaposes anticipation and resilience. Wildavsky urges caution in the use of anticipatory strategies and advocates enhancing resilience through trial and error. He argues that anticipation can lead to a great deal of unnecessarily wasted effort and wasted resources because of the high volume of hypothesised risks, many of which are exaggerated or are false predictions. Anticipatory strategies, argues Wildavsky, reduce the ability of organisations and societies to cope with the unexpected. Indeed, many preventive programmes have their own unexpected risks