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Organizing and risking

ONTEMPORARY discussions of risk routinely point to the paradox of science and technology. On the one hand great advances have been made in health and welfare; on the other hand such advances also give rise to new problems and vulnerabilities, e.g. the benefits of increased longevity in Western societies have given rise to difficulties in pension and social security systems. This is the essence of Beck's (1992) famous 'risk society' thesis; the risks we face today are largely 'manufactured', potentially fatal by-products of an industrial machine which demands a new politics to control it. In this collection of essays, we retain a focus on this paradox but we shift the analytical focus from science and technology to organizations and organizing.

Organizations, rather than individuals, are the critical agents of any so-called risk society because it is primarily 'in these contexts that hazards and their attendant risks are conceptualized, measured and managed' (Short 1992: 4). Organizations are both centres for processing and handling risks and potential producers and exporters of risk. Efforts to manage risk involve the creation of organizational networks for that purpose, and these risk regulation 'regimes' (Hood et al. 2001) themselves give rise to new side effects and risks - risks of risk management. Above all, there is widespread recognition that disasters and accidents are in a very important sense organized (cf. Beamish 2002; Perrow 1984; Turner and Pidgeon 1997; Vaughan 1996).

Management orthodoxy suggests that organizations represent cooperative endeavours which seek to process and manage different sources of uncertainty in the pursuit of a goal, e.g. profit. Accounting and information systems, strategic planning processes, human resource and marketing functions, regulatory compliance and procurement processes are all components of this management of uncertainty in its

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broadest sense. While specific 'risk management' practices may exist and take a variety of forms in many different settings (e.g. health and safety, finance, operations), the managing of risk in general is a constitutive feature of organization and is not some accidental feature of it. For example, as the contribution by Besley and Ghatak in Chapter 6 in this volume shows, the principal agent relationship and the risks to each party in this relation are widely recognized as a fundamental feature of organizational design. This is not to say that organizations necessarily know or understand the risks they take, or that they always invest in optimal or efficient formal risk management systems. Indeed, there are good reasons for doubting this. It is simply to suggest that 'organizing' and 'risking' are two sides of the same coin.

Empirically, this intimate relationship between risk, management and organization is most evident in so-called 'high-reliability' organizations where risk management is manifestly a core organizing principle (e.g. NASA, the nuclear industry, aviation and large petro-chemical sites). However, the claim is also a generic conceptual one; formally organized activity inextricably implies some form of uncertainty processing and some version of the management of risk. It follows that 'organizational encounters with risk' are as much about how organizations – such as corporations and states – experience the nature and limits of their own capacity to organize as they are about external shocks and disturbances in the environment. In different ways, all the essays in this volume deal with this issue.

It is often assumed that organizations exist in, but are ontologically separate from, their environments. The ideal typical concept of risk management is often represented as cybernetic in form, involving the sequential collection of information about these environmental uncertainties, the formulation of policy, the making of decisions and the processing of feedback from implementation processes. However, the view that managers deal with risk by first calculating and then choosing alternative risk-return combinations is highly questionable (March and Shapira 1987), and framing theory provides a reminder of the importance of context, sequence, attention capacity and many other variables which shape decision making (e.g. Kahneman and Tversky 1979). How managers actually respond to uncertainties also depends on the social definition of management roles and on collective beliefs about risk taking and related possibilities for control. In such settings the imposition of rational decision theory can be counterproductive, if not risky

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itself (March and Shapira 1987). Rational organizational blueprints not only misdescribe decision making but may, if institutionalized as norms, have perverse organizational effects. Accordingly, the simplistic duality of organization and environment must be challenged: organizational responses to risk are shaped by their institutional environments, and this organizing process is itself a source of risk for individuals, for other organizations and for wider environments. Notorious examples are the steam explosion and leakage of radiation across Europe from Chernobyl in the USSR in 1986, the gas leak from the Bhopal chemical plant in India in 1984 (see Jasanoff, Chapter 9 in this volume), and the failure in 1984–91 of more than 1,400 Savings and Loan banks in the USA. On this view of organizations, they are actively engaged in the 'manufacture of risk' (Beck 1992).

The organizational origins of many disasters have become well established (Perrow 1984; Turner and Pidgeon 1997; Vaughan 1996). Even apparently natural events have had distributional consequences which are organizational in origin, e.g. substandard practice in the construction industry seems to have amplified effects of the Turkish earthquake in 1999. So the environment within which organizations operate is not some Hobbesian state of nature but consists of a web of relationships with other organizations and with human communities more generally. It is this 'double moment' of organizations which mirrors that of science and technology, namely their pervasive duality as both producers and managers of risk. This makes formal organizations a critical point of reference in any project to understand and delineate the so-called risk society.

As Jasanoff (Chapter 9 in this volume) reminds us, the events of September 11 (2001) in many ways highlight the complex and interrelated difficulties in the way societies, and the organizations within them, recognize, assess, manage and create risks. To the obvious and awful scale, human cost and media drama of the event must be added myriad more specific and complex reactions and consequences. These include insurance systems (Ericson and Doyle 2004: Chapter 5), infrastructure concentration and business continuity, structural engineering and the future of tall buildings, emergency services and disaster planning, settlement systems in financial markets, and notions of 'homeland security' and preventative war. As we write, we sense a growing proximity between regulatory and security issues and a blurring of traditional boundaries between policing and risk management. But

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while September 11 reminds us that disasters, when they crystallize, respect no disciplinary boundaries and call into question existing investments in expertise as never before, it also illustrates the duality described above. September 11, the 2004 bombings in Madrid, and the 2005 London bombings have served to constitute a managerial and political climate of 'security precaution', forcing organizations to think about both their environments in more security-conscious ways, and aspects of their own organizing which may create specific vulnerabilities, e.g. the concentration of command and control in a single centre. Business continuity consulting has thrived in the wake of these terrible events, suggesting that the production of fear is simultaneously functional for governments and the consulting industry. Indeed, such events may justify the introduction of otherwise unpopular surveillance measures without full regard to their efficacy, the case of identity cards in the United Kingdom being a notable example at the time of writing (Better Regulation Task Force 2004: 15).

The 9/11 Commission (2004) traced the 'organization-made' nature of security risks to structural weaknesses in the security services and to an apparent communication impasse between the organizations of the FBI and the CIA. These reflect generic organizational deficiencies already clearly identified in the work of Turner and Pidgeon (1997) and Vaughan (1996). Some also claim that US vulnerability of the kind witnessed on September 11, and not sufficiently imagined by its security agencies, is an unintended consequence of the country's foreign policy over many years. Whatever the truth of this, the generic message is clear: disasters, however great or small, are, in a very important sense, *organized*. And as Jasanoff (1994) has shown, the organization of various accounts and explanatory narratives of disaster constitutes the 'civic epistemologies' of risk.

The focus on organizations is not intended to belittle impact at the human level. Major events can undoubtedly have huge effects – over 3,000 people died in a few hours as a result of the events of September 11; Bhopal resulted in over 3,000 immediate deaths, not to mention countless long-term effects and injuries; and Chernobyl contaminated large areas of northern Europe with radioactive material. Financial disasters also cause widespread suffering and damage. The Savings and Loan crisis had resolution costs estimated at some 3–5 per cent of US gross national product and the collapse of Enron and Worldcom in 2002 resulted in the catastrophic loss of welfare for many employees and pensioners.

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The scale of events can have seismic significance for entire systems of political and corporate governance in advanced economies. The Enron and Parmalat scandals have challenged the fabric of national and international risk regulation regimes in which auditors, both internal and external, non-executive directors and audit committees, state regulatory organizations and professional bodies, financial analysts and credit rating agencies have all lived in a delicately organized balance of compromises for many years. This complex assembly of agents and institutions is hardly a 'system' but has evolved slowly and in an ad-hoc manner, with occasional bursts of reform in the wake of scandals (e.g. Maxwell, BCCI, Barings in the UK). However, Enron triggered a more fundamental discourse about organizations in 'dis-organized' capitalism and has resulted in heavyweight legislation in the form of the Sarbanes-Oxley Act 2002 in the United States which is likely to have considerable international influence as a 'world-level blueprint' (Meyer et al. 1997). At the heart of this shaky edifice lies the role of accounting and accountants who epitomize the duality of organization in relation to risk - on the one hand they are critical for the smooth running of markets in making risks visible and transparent to those who would entrust their resources to entrepreneurs; on the other hand these intermediaries are also sources of risk to others and, via the drama of reputational meltdown visible in the demise of the firm Andersen, to themselves.

The impact of events and disasters depends on institutionalized forms of attention and social processes which amplify (or not) perceived dangers and consequences (Kasperson et al. 2003). It is argued that the long-term impact of Bhopal was at best ambivalent, with competing explanations being essentially unresolved (Jasanoff, Chapter 9 this volume). Indeed, some twenty years after the disaster, those living in proximity to the Union Carbide site are still being damaged by the effects and the site remains contaminated pending the outcome of legal proceedings. The very idea of impact can be contested by different affected groups and can vary greatly in duration. Major rail disasters in Britain have resulted in immediate media attention and political commitments that such events will never happen again, commitments which are often lost in the fullness of time (Hutter 2001). In addition to a number of rail crashes in the UK, the apparent failure of Swiss air traffic control to prevent a mid-air collision in July 2002, and the collapse of equity assets and the effects on

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pension funds, support claims that public confidence in the many and various institutions of risk management in developed economies is in decline. As organizational sources of risk are increasingly apparent, Beck's 'risk society' thesis, in which the authority of experts is called into question and in which each individual must take responsibility for his or her own actions in the face of risk, is becoming a more apparent empirical reality. Notwithstanding, and perhaps because of, the cultural plurality of risk perceptions, we are all our own risk managers now. In a cultural situation in which organizations become safer via their risk management processes, at the expense of citizens, it is hardly surprising that trust in institutions declines. Nor is it clear that reactively created certification and disclosure regimes, such as those required by the Sarbanes-Oxley legislation, have any capacity to create public trust (Power 2004a).

These reflections on the entanglement of organizations and risk are central to the collection of essays in this book. Each contribution addresses a dimension of the organization of risk and its management, a theme which we characterize by the motif of 'organizational encounters' with risk. In this introductory essay, we specify further why the metaphor of 'encounter' may be useful in moving forward the theoretical and empirical discussion of risk management. In the next section we focus again on the concepts of organization and organizing to re-emphasize the constitutive role of risk and its management for organizations. This is followed by an explication of the 'encounters' metaphor which identifies three coterminous perspectives or lenses. The first concerns the 'organization of attention', the second relates to forms of individual and institutional 'sense making' in the face of errors, accidents and anomalies, and the third relates to the 're-organizing' activity by which organization is constantly remade in the face of risk encounters. To repeat: these three moments are not to be taken as clear and distinct sequential stages; they characterize thematic aspects of complex empirical processes in which organizations and capacities to organize are rendered problematic.

Organizations and risk regulation

Large organizations occupy an increasingly prominent position in modern economic life and multinational organizations may even supplant the powers of the nation state (Braithwaite and Drahos 2000;

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Sklair 2002). It is argued that new strategies of social control and regulation are required as these large organizations give rise to distinctive difficulties of risk detection, proof, responsibility and power (Reiss 1984). In particular, it is becoming a neo-liberal orthodoxy that large organizations must be 'recruited' as partners in regulatory programmes; as creators of risk, organizations are also being enlisted as co-regulators of risk (Clarke 1999: 182). Models of 'enforced self-regulation' (Ayres and Braithwaite 1992) posit the use of the self-observing and self-controlling capacities of organizations for regulatory purposes. In terms of principal-agent theory (Besley and Ghatak, this volume), regulators as principals increasingly seek to give incentives to organizations as agents to align themselves with regulatory objectives.

The capacity of organizations to be co-opted into broader risk regulation regimes will depend on their varying professional constituencies, hierarchical structures, operational norms and internal control cultures (Hutter, Chapter 3 this volume; Vaughan 1998: 53). Indeed, efforts to conceptualize large organizations as 'actors' in any unitary sense are constantly challenged by their internal complexity and diversity, features which constrain and shape their emerging role in the regulation of risk. The internal heterogeneity of organizations, the often temporary nature of the assemblies which constitute them, and the fuzzy operational boundaries between their 'inside' and 'outside' contrast with the legalistic and fictional identities which get stabilized for contracting purposes. These assemblies contain formal and informal information systems which provide the empirical conditions for the visibility and processing of uncertainties within risk management practices. Precisely how these internal informational systems and capacities shape organizational responses to risk is still poorly understood, often disguised in disembedded practitioner concepts, such as 'risk appetite'.

The traditional technical foundation of risk management is risk analysis, a discipline whose strength consists in its machine-like, engineering quality. Standard conceptions of risk analysis focus on identifying, measuring and evaluating possible outcomes from both natural and technological hazards. The concern is to estimate the probability and likely effects of specific events happening. The assumptions are essentially realist, assuming a world of risk which is discoverable, measurable, quantifiable and controllable (Gabe 1995), independently of the means by which such risks are framed and communicated.

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However, in the tradition of science and technology studies, represented clearly by the contributions of MacKenzie and Jasanoff to this volume, the forms of abstraction inherent in technical risk analysis represent distinctive social constructions of risk knowledge, constructions which must be understood as part of the organization of risk cognition both at the level of specific professional cultures of knowing and at the cultural level of civic epistemology. Even the concept of probability, an apparently fundamental input to any technical risk calculus, involves the framing of uncertainty for a specific purpose and with a specific legitimizing function. Actual organizational decision making may operate at best in an informal 'probabilistic climate' where characterizations of likelihoods are often crude. Indeed, 'possible outcomes with very low probabilities seem to be ignored, regardless of their potential significance' (March and Shapira 1987: 1411), suggesting that the spectre of the high-impact, low-probability event, so important in the operational risk debate (Power 2005), is just a manner of framing ignorance or non-decidability in an acceptable way. However, low-probability high-impact events also characterize a 'space of fear' which can induce hyper-precautionary attention to risk and security. From this point of view rogue traders, fraudulent chief executive officers (CEOs) and terrorists are 'demonic' functional equivalents.

Once the analysis of risk and related forms of organizational decision making are understood as constructed in the setting of managerial behaviour and interests, variation in understandings of risk by organizational participants is elevated from the status of irrational noise to a matter of key importance. To date the risk perception literature has been mainly preoccupied with variations in perception between different lay groups and between lay publics and expert scientists. This literature has been criticized by 'constructivists' for taking risk as a culturally independent given around which perceptions may vary (Douglas 1987). The apparent 'problem' of variation in risk perception is not a function of ignorance with simple training remedies, but may reflect very different cultures of risk understanding even within a single organization. For example, directors of companies see risk in a way that is often not shared by staff who enact their programmes (cf. railway safety, Hutter 2001). Occupational subgroups, such as engineers and accountants, will have very different mental models of both the organization and its significant risks. In addition, the actual

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organizational 'appetite' for risk taking as revealed by concrete actions may be only very loosely coupled to official risk appetite policy inscribed in formal risk management manuals. In short, organizations as internal regulators of risk embody different and often incommensurable subcultures of risk understanding (Hutter, Chapter 3 in this volume), and the formal organization of risk management, such as an enterprise-wide risk management system, may not capture all the elements of these subcultures. The organization of risk management, including the role of specific agents such as risk officers (Power, Chapter 5 in this volume), can only ever be partially characterized by its ideal blueprints and this means that the role of large organizations as partners in regulatory processes is only as good as their ability to regulate themselves by securing internal commitment to a common 'mission' (Besley and Ghatak, Chapter 6 in this volume).

Having emphasized the importance of the organizational setting of risk management, it should not be forgotten how 'risk' itself functions as an 'organizing' category for management in general, a concept in whose name organizing and re-organizing activity is done. This reminds us that risk does not exist independently of management processes in organizations but that representations of risk, its management and the organizations which do the managing are *co-produced*. From this point of view, risk is not a 'thing', an independent object or set of imagined possibilities, to be managed, although it must be talked of in this way by practitioners. The management of something called 'risk' is also a constitutive sense-making project for management itself, defining the unity and identity of the array of practices undertaken by management. Risk language may also serve to 'amplify' risk representations within organizations themselves, something which may be desirable from the point of view of agendas for embedding risk management or undesirable because of the prospect of bringing about the 'timid' organization (Hunt 2003).

The explicit organizational framing of situations in terms of risk, the growing application of 'risk-talk', is therefore central to organizational encounters with risk. Luhmann (1993) suggests that there is no risk without decision making, but we might push the point further by suggesting that the growth of intra-organizational risk talk creates an expanded domain within which decisions are demanded (see also Holzer and Millo 2004). And if there is also no decision making without blame (Douglas 1987), then risk language functions as part of a

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web of normative framing practices in organizations in which risk management can be conceived as a moral technology for the attribution of responsibility (see also Baker and Simon 2002; Ericson and Doyle 2003).

In an introductory essay like this, it is tempting to offer a definition of risk. Indeed, many readers will expect this. We know of course of efforts to restrict the term 'risk' to calculative situations where the set of possible outcomes and their relative frequencies are known (Knight 1921), of attempts to distinguish risk from dangers, and of the use of risk within financial economics to denote variability of outcomes which may be judged either good or bad. Given this variation in meaning, casual use of the term 'risk' is potentially uninformative and incoherent. However, this collection suggests that we should study carefully the role of risk as part of an organizing narrative for organizations, a narrative which may serve some interests, e.g. those of risk managers, and not others. So we prefer, initially at least, to follow the term as it is used more loosely and more broadly in daily managerial practice. Indeed, for some managers it is not primarily a probability concept (March and Shapira 1987) and is used to refer to situations where the chance or probability that a threat or danger will result in adverse consequences cannot be formally calculated (Hutter and Lloyd-Bostock 1990). Rightly or wrongly, the concept of 'risk management' is, as a matter of empirical fact, being increasingly used to frame the processes by which organizations deal with many different kinds of uncertainty. And this fact alone deserves investigation.

Encountering risk: the organization of attention

Notwithstanding the title of this collection, we do not presume that the notion of 'encounter' is a developed and legitimate category for analysis. The concept is figurative, metaphorical and suggestive of a mode of empirical inquiry which is far from being fully developed but which sets a tentative methodological mood. The concept of encounter suggests a set of intellectual sensibilities about risk and the possible limits of management. Encounters may be characterized by a lack of clearly agreed or coherent data sets of historical event frequency in which judgements of probability are problematic and where the possibilities of rational calculation are limited, if they exist at all. Encounters with risk create demands for interpretations, not least for acceptable