The sociology of risk and uncertainty: Current state and perspectives

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The sociology of risk and uncertainty – current state and perspectives

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Abstract

Within sociology risk and uncertainty has become a major interest, most notably with the publication of Beck's *Risk Society* (1992). There are, however, a number of different approaches available, which define the object of research slightly differently. This has raised concerns as to whether risk sociology has a shared object of research. While it might be contested whether the diversity of risk research is a strength or weakness, I suggest that more conceptual work could help to consolidate its basis.
I will argue that whilst there have been a number of controversies in risk research, these debates have neglected a more fundamental difference. While most approaches can agree on the idea that risk is a possible threat in the future, they conceptualise risk in connection to at least three different core ideas: risk in *(rational) decision-making*, risk in *calculative-probabilistic calculation* and risk as part of a *modern worldview*. These ideas are part of risk research but they direct how we examine the social world. I suggest that it is important to clarify this conceptual basis of the sociology of risk and uncertainty as a step towards further theoretical advancement.

Keywords: Risk, Uncertainty, Rationality, Interdisciplinary

Diversity and the need for consolidation

Since the 1980s risk sociology has developed rapidly in Europe, North America and Australia. In particular the 'risk society' thesis has been influential (Beck 1992). However, there has been a variety of other approaches to risk such as the cultural (Douglas 1992), governmentality (Dean 1999), systems theory (Luhmann 1993) and edgework (Lyng 2005) approaches. While these have dominated theoretical reflections on risk and social change, in practice research has addressed a wide range of issues, from the management of disasters and its perception, via decision making and social regulation to everyday theories towards an in principle uncertain future and

voluntary risk taking. Though this is a diverse area of research, a growing number of researchers have been attracted to present their work in a risk framework.

Besides environmental sociology and disaster research, risk has infiltrated a number of research areas such as crime, social work, health, regulation and organisation. Additionally, international research networks on risk have been founded successfully within the European Sociological Association (Research Network 22, RN22) and within the International Sociological Association (Thematic Group 04, TG04). A thematic group, *Risk Societies,* was established this year within the Australian Sociological Association (TASA). Though risk attracts a lot of research activity, relatively few attempts have yet been made to systematize the different lines of research and theorizing (e.g. Krimsky and Golding 1992; Lupton 1999; Renn 2008; Zinn 2008a). While it might be contested whether the diversity of risk research is a strength or weakness, the sociology of risk and uncertainty has been repeatedly criticized on the grounds of whether it has a shared object of research at all (e.g. Garland 2003; Ungar 2008: 993). However, despite this confusion about the scope and object of risk research, I would rather argue that more conceptual work could help to consolidate the conceptual basis of the sociology of risk and uncertainty.

In the following I will highlight some of the major debates and differences between several approaches. I will then argue that these debates draw little attention to the fact that risk research refers to at least three different understandings of risk which shape the direction of research. I will show how these core ideas have been questioned and new research perspectives have been opened. I will conclude that more conceptual work might help to secure the theoretical basis of the sociology of risk and uncertainty, to enable theoretical advancement.

Major controversies

A number of different approaches are in the centre of the sociology of risk and uncertainty. The risk society approach assumes that new technological and environmental risks such as nuclear power, climate change or the recent global financial crisis have had a strong impact on the transformation of modern societies (Beck 1992). However, this thesis is challenged by other approaches. The cultural approach interprets increasing concern about ecological risks as a result of the growing dominance of individualist values (Douglas 1992). The governmentality perspective assumes that a new style of governing societies rather than the quality of new risks causes a fundamental change within society (Dean 1999). Systems theory sees growing risk communication as a result of ongoing societal differentiation, which fuels negotiations about who is responsible for undesired societal events (Luhmann 1993; Japp and Kusche 2008).

It is still contested which of these approaches is more suitable to understand risk phenomena in specific social domains and which one can better explain recent social transformations. It is also unclear whether these approaches complement each other and describe just different dimensions of the same social process, or highlight different and competing processes.

Major controversies within sociology have revealed some major differences and similarities between these approaches.

The debate about the *epistemological status* of risk has shown the fundamentally different ways in which sociological theories approach risk. The early cultural approach (Douglas 1990) assumes that risks are real but how they are politicised is a social process which depends on the selection and politicalization of risk. This is seen as determined by the socio-structural constitution of society and the socio-cultural

constitution of the social groups it contains. Its strength is to show how the institutions which we have chosen as organising our social life shape the selection and responses to risk. However, this approach has had difficulties in explaining social change by the quality of new risks. Thus, resistance against nuclear power has been explained by the shift in social values towards individualism and not as a result of the 'catastrophic' qualities of this new technology (Douglas and Wildavsky 1982)

The governmentality and systems theory approaches follow a radical constructivist perspective. Governmentality interprets statistic-probabilistic techniques to calculate risks as part of socially constructed technologies to govern societies. It focuses on their different applications, for example in the insurance industry, psychiatry, or crime control, and how they are embedded in legitimizing social contexts (Dean 1999). In this perspective growing concerns about risk are not a result of the quality of risk or a specific culture but of how liberal societies are governed. This approach contradicts the assumption of the risk society thesis that new risks cannot be managed by common instruments such as insurance, but argues that calculative technologies invade even more social domains.

Systems theory conceptualises societies as existing in communication. Therefore risks are a way in which societies communicate about themselves (Luhmann 1992; Japp and Kusche 2008). This is seen as a result of modernisation processes which change the way societies describe their future: no longer in terms of fate but of decision making. In this perspective social risk conflicts are the result of attempts of different societal subsystems to divert responsibility for (possible) undesired events to other social domains.

Finally, Beck (1992, 1999) is known for his emphasise upon the impact of new risks on the constitution of society. He has revised this risk objectivism slightly referring to

Latour's (1993) and Haraway's (1991) work and the idea that the distinction between nature and culture or the real and the socially constructed is an artificial one introduced by modernity itself. Risks are in his view at the same time both real and socially constructed. While this approach emphasises the impact of the new quality of risks, it is criticized for neglecting the impact of socio-cultural and socio-structural inequalities in being exposed to and being able to deal with risks and uncertainties. This has led to further criticism that most risk approaches turn a blind eye to systematic socio-cultural and socio-structural differences in the allocation and perception of risk. Some empirical studies therefore try to combine Bourdieu's work on the socio-cultural reproduction of social inequality with risk (1979). There is also some deficit to integrate the thesis of multiple modernities (Eisenstadt 2000) into concrete research. Even though some comparative and cross national research has taken place, there is still a need for more research to understand better how socio-cultural and socio-structural factors on national, global and cross-national levels effect how risk and uncertainty is managed. While this is common sense a major critique is addressed to risk research as such. Some researchers are concerned that the risk agenda itself narrows research and societal practice in an unfavourable way. In particular, in countries with a neo-liberal political culture such as the UK, a strong regulative culture has developed and has invaded increasing numbers of societal domains (Power 2004), leading to a focus on risk prevention and a consequent neglect of the more important primary goals in domains such as social work, health care, probation service, etc.

Different comprehensions of risk

The above debates may have obscured the fact that many of the approaches differ not only epistemologically or in their scope but in the core idea of their object of research. Besides the generally shared comprehension that risk has to do with the expectation of undesired events in an uncertain future, they refer to at least three different but related notions of risk: risk as part of *rational decision-making*, as part of *statistic-probabilistic calculation* and as a *modern worldview*. These concepts have been challenged from two directions, from their inner logic and from the outside or better the contextual logic they are a part of. These challenges have led to a revision of reductionist approaches and have opened new perspectives for research.

The idea of *(rational) decision-making* has been challenged from within by a stress on the limits of rationality and the growing awareness of the importance of strategies *in between* rationality and metaphysics, such as trust, intuition and emotions (Zinn 2008b). As a result there is a growing interest in how these strategies are linked to the idea of rationality. For example, trust can be seen as fully rational (Coleman 1990) or pre-rational (Zinn 2008b) or as a leap of faith bridging a lack of knowledge (Möllering 2006). Other disputes are about the characteristics of intuition. One approach interprets it as a result of the limited mental capacity which has led to the evolutionary development within humankind of a toolbox of heuristics, which if acknowledged can be used to deal efficiently with uncertainty or over-complex situations (Gigerenzer et al. 2001; Gigerenzer 2007). Others interpret intuition as a complex ability of pattern recognition that results from experience (Klein 1998) which is based on tacit knowledge. This skill enables us or professional experts to deal with high risk situations more successfully than by formalised procedures or fully rational

weighing of pros and cons. However, how we deal with failures which happen from formalised decision making modes or from the result of such 'intuitive' strategies is open to debate. The pressure towards formalised procedures and risk management (Power 2004) might be the result of a blame or compensation culture fuelled by public outrages (or extensive media pressure) when things go wrong (Alaszewski 2002). For example, politicians tend to divert responsibility for failure to other institutions and individuals or to science.

The concept of (rational) decision-making is also questioned externally. Central here has been the lay-expert debate about the status of lay-people's knowledge. The insight that trust in the experts is crucial for lay-people's acceptance of given information and professional judgements has led to increasing research to explain the sources of trust and distrust and also led to another shift in the risk communication approach from teaching the public to participate the public in decisions (Fischhoff 1998). Essential factors in sustaining trust in experts are excellent expertise, participation and honesty (Poortinga and Pidgeon 2004, 2005).

Another challenge for individual rationality in decision making results from institutional individualism. Beck (1992: 131) claims that institutions expect their citizens to act as self-responsible, rational decision makers exactly under conditions where individual control of the outcomes is even less possible then before. The growing freedom (and necessity) to decide has been paid for by less control of the outcomes. As a result of the growing individual dependency on labour markets and welfare states, social crisis would directly turn into individual crisis, suffering and illness (1992: 100). Under such circumstances rational decisions seem to be rather castles in the air. There is evidence for both, remaining reproduction of social inequalities at the bottom of society and individualised experience of risk and

increasing dominance of semantics of autonomous self determination of one's decision even where it is highly structured by factors which mainly escape individual control. There is still the tendency not to address these issues sufficiently in research, though there are exceptions which, for example, combine biographical approaches with an awareness of issues of class and other socio-structural inequalities (e.g. Tulloch and Lupton 2003). Some more recent interest in biographical research might be the result of dissatisfaction with rational models to explain decision making in everyday life. This approach allows combining competing claims of both individualisation and reproduction of social inequality (Zinn 2005).

Statistic-probabilistic calculation of risk is seen as a central technology which has contributed to the development of the modern world, making a formerly contingent and unmanageable future calculable (Bernstein 1997; Bonß 1997; Hacking 1975). Statistics and probability theory are an important part of science and are variously applied today both in the private sector, such as the insurance industry and by the government through calculations of such things as fertility and unemployment (Dean 1999).

This technology is challenged by its own success. With the development of even more sophisticated calculations and modelling even more uncertain futures are managed. As a result the technology itself is accompanied by a growing risk of failure. This has become most striking in the case of cancer screening with mammography. The uncertainty of the technology itself produced wrong prognoses as well as missed prognoses (Gigerenzer 2002). In this case a critical approach of citizens towards expert knowledge, which would characterise a late modern worldview, is certainly advisable (Giddens 1994).

The risk society thesis and research in the governmentality perspective disagree on the connection of statistic-probabilistic technologies and risk. The governmentality approach emphasises, often on the basis on historical studies, how flexible these technologies are in dealing with all kinds of uncertainties and transforming them into manageable entities. This has been always a combination of mathematical calculation and other techniques like rules of thumb or reasonable foresight (O'Malley 2008). It can be shown that these techniques increasingly invade all kinds of social areas such as social work, crime prevention or healthcare. But these are not just neutral technologies. They are transforming the social world in an artificial world of measurable factors with averages and probabilities, transforming them into normalities and expectations and thus into norms (Hacking 1991). People are addressed by policies not because of what they have done but in the likelihood that they might do something (e.g. a young driver has to pay higher insurance premiums just because s/he is young; an offender is expected to re-offend because of a number of factors which indicate the likelihood that s/he does). In this perspective society is challenged by the application of the technology because of its inner logic. A good example is the increasing use of risk management in all kinds of social domains which not only directs the focus on the measurable and the risk instead of positive aims but also produces systematically uncontrolled areas (Power 2004)

In contradiction to this perspective, Beck focuses on the challenge to these technologies by new risks and the built-in uncertainties of these technologies which open them to normative debate. Most prominent is his claim that in contrast to early industrial risks "nuclear, chemical, ecological and genetic engineering risks (a) can be limited in terms of neither time nor place, (b) are not accountable according to the established rules of causality, blame and liability, and (c) cannot be compensated for

or insured against" (Beck 1995: 2). In contrast to the non-insurability thesis, governmentality theorists would argue that these new risks do not challenge the insurance technology as such which would just develop new products. Partly in support of the risk society thesis some scholars in the governmentality perspective identify a shift from a compensation culture to a precautionary culture (Ewald 2002). Others question the assumption that this is in general a new development. Fire insurance was quite from the beginning established in the manner of a precautionary approach (O'Malley and Hutchinson 2007). It is still an open question why in some cases a precautionary approach was taken quite from the beginning, while in other contexts, such as in crime prevention, precaution developed relatively lately.

Both concepts, rational decision making and statistic probabilistic calculation, are linked to what can be described with Max Weber as the *modern worldview*. This is typified by rationalisation, which "means … the knowledge or belief that if one but wished one could learn [a rational explanation] at any time [and] … one can, in principle, master all things by calculation" (Weber 1948: 139). What is important in Weber's statement is the combination of knowledge and belief or an attitude of confidence towards the future. Rationalisation and rational judgement is not just the knowledge but the belief in its own principle. However, rationality cannot do without hope, confidence or what Keynes called 'animal spirits' which are needed to enable decisions under uncertain conditions. "Human decisions affecting the future, whether personal or political or economic, cannot depend on strict mathematical expectation, since the basis for making such calculation does not exist; and that it is our innate urge to activity [animal spirits (JZ)] which makes the wheels go round" (1936: 162-3). The claim that rationality and emotions are systematically connected is also supported by neurological research (Damasio 1996).

However, this modern worldview is challenged by contemporary social changes. In a risk society perspective Giddens (1994) suggests that in late modernity increasingly more citizens critically scrutinize knowledge claims and expertise. Instead of unconditional trust a kind of critical or active trust takes place (Giddens 1994: 14). In contradiction to this idea of a transformation, without questioning the modern enterprise in principle, some authors see modern confidence challenged in a more negative fashion. They claim the existence of a present day *culture of fear* (Glasner 1999, Furedi 1997) which against all good knowledge, will assume the worst and thereby block reasonable and necessary scientific developments. How worrying is caused by specific socio-cultural and institutional contexts is contested. Whether it is a response to bad societal risk management, or caused by public relations work of interest organisations such as Greenpeace, or a normal expression of some marginalised social groups, or a normal part of modern societies in general, is open to debate.

Another development which challenges the modern worldview of ongoing secularisation and rationalisation is the revival of faith and religion. There might be more evidence that religion differentiates into an autonomous societal subsystem which transforms rather than disappears (Possamai 2008). There is relatively little research and theorizing about the connection of risk and faith. Often religion is addressed in an oversimplified way, missing out the different ways in which religions deal with risk and uncertainty and are differently applied in everyday life.

Perspectives

Many publications on risk refer only to one or two of the available theoretical approaches instead of using the whole theoretical spectrum provided by the sociology

of risk and uncertainty to understand risk phenomena. As a result, much too often common criticisms are repeated and neither theorizing is advanced nor the theoretical basis secured. I suggest that securing the theoretical basis for the sociology of risk and uncertainty might be valuable to advance conceptual work within the discipline and to make it more acknowledged among other disciplines such as psychology and economics as contributing to the societal management of risk and uncertainty.

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