

CRITICAL STUDIES IN RISK AND UNCERTAINTY

Researching Risk and Uncertainty

Methodologies, Methods and Research Strategies

EDITED BY

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Critical Studies in Risk and Uncertainty

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Palgrave's Critical Studies in Risk and Uncertainty series publishes monographs, edited volumes and Palgrave Pivots that capture and analyse how societies, organisations, groups and individuals experience and confront uncertain futures. An array of approaches for mitigating vulnerability to undesired futures has emerged within social contexts around the world and across history, with risk being seen as an especially salient technique to have emerged within, while also characterising, processes of modernisation. These approaches have attracted the critical attention of scholars across a wide range of social science and humanities disciplines including sociology, anthropology, geography, history, psychology, economics, linguistics, philosophy and political science. This series will provide a multidisciplinary home to consolidate this dynamic and growing academic field, bringing together and representing the state of the art on various topics within the broader domain of critical studies of risk and uncertainty. It aims to provide cutting edge theoretical and empirical, as well as established and emerging methodological contributions. The series welcomes projects on risk, trust, hope, intuition, emotions and faith. Moreover, the series is sensitive to the broader political, structural and socio-cultural conditions in which particular approaches to complexity and uncertainty become legitimated ahead of others. Explorations of the institutionalisation of approaches to uncertainty within regulatory and other governmental regimes is also of interest.

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Editors

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1

Introduction

Jens O. Zinn and Anna Olofsson

This book presents various methods, methodologies, and research strategies to examine how individuals, organizations, and societies approach uncertain futures and their potential dangers. Understanding and managing risk and uncertainty is a central task of current societies which are characterized by rapid social, technological, and environmental change. These changes challenge common strategies of understanding and managing uncertain futures and their potential dangers and require new methods for their investigation. The book brings together contributions from a number of experienced and young researchers applying different research approaches to the examination of how risk and uncertainty are understood and responded to. While the book has a base in sociology, it

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is interdisciplinary in nature, considering the need of interdisciplinary exchange to advance understanding and management of social, technological, and environmental challenges. This includes research strategies and designs which integrate tools and approaches from psychology, history, linguistics, anthropology, and gender studies, among others. Furthermore, rather than engaging in old debates of qualitative versus quantitative methods or positivist versus constructionist epistemologies, the contributions in the book engage with the practical questions of how to use available approaches and methods to advance knowledge about the social understanding and management of risk and uncertainty.

This introductory chapter is composed of three parts: after the introduction, the second part provides an overview of the domain of research on risk and uncertainty, with a particular focus on the development of research strategies, methods, and methodologies in the social sciences and the humanities. The overview spans from Mary Douglas' anthropological field studies and the development of the psychometric paradigm in social psychology in the 1960s to today.

The third part of the chapter focuses on specific challenges risk research has faced and how it has responded by modifying and advancing research methods, methodologies, and strategies. The section presents cutting-edge developments and positions the contributions to this volume in broader debates in ethnography, narrative analysis, content and discourse analysis, and survey research/statistical analysis. This section concludes by introducing the structure of the book and each chapter.

Risk Research: From Technical Calculation to Critical Thinking

This section contextualizes the chapters of the book and indicates how they can advance common methodologies and research strategies. The chapter outlines developments in risk studies and how different methodologies are associated with specific fields of research.

Risk as a concept appeared and was regularly used when the need to foresee and understand the future was no longer satisfied by religion or faith. Thus risk is intimately associated with the enlightenment and the

development of modern society (Beck 1992). Cosmological understandings and the secrets of nature were replaced by rational calculation of an increasingly uncertain future (Luhmann 2008 [1993]). The etymology of the word is unclear, but even prior to the middle ages, traders already performed risk calculations that later informed regulation of maritime trade and insurance. Scientific or at least statistical calculation of future uncertainty still characterizes much of risk analysis and risk research, and over time risk analysis has become a technology for managing various issues, objects, events, and conditions in a seemingly rational and objective way, including social inequalities in welfare societies (Beck 1992; Ewald 1993). Calculations of possible futures, particularly in terms of the possibility and magnitude of (adverse) events or consequences, are still a common feature today in definitions of risk. Similarly, the intimate association between risk and rational action still permeates policy and risk research. Demographics and other statistics are key means for the analysis, and accumulated observations and practices direct attention to the population's life, births, deaths, health, life expectancy, and the scientific categorization of human beings (race, gender, sexual practices, eating habits, etc.) (Foucault 1978). Furthermore, humans are often viewed as rational actors who will avoid risk if correct information is available. However, already in the 1960s, it was clear that people do not always act fully rationally, which means that people do not behave like experts or policymakers assume or may wish. It was then that economists and psychologists began to study this difference, and how people perceive risk.

How It All Began: Experiments, Surveys, and Ethnography

In the 1960s psychologists started to investigate what makes people act seemingly irrational, that is, not according to the (risk) information they receive (Tversky and Kahneman 1974, 1987). Through experiments, a number of so-called heuristic biases proved to explain some of the 'mistakes' people make when making decisions, and since then cognitive psychologists have revealed several associations between cognition, perception, and experience, both direct and indirect. Thus, knowing the

likelihood of an event taking place is one thing, and accepting this probability is a completely different one. Psychologists therefore started to investigate people's perceptions of risk and began developing what is known as the psychometric paradigm (Slovic 2000). Using surveys and statistical methods, risk perception studies examine subjective views of different risks, what influences perception, and how perceptions differ between individuals, groups and, in part, cultures. Perception studies have advanced knowledge about subjective understandings of risk and how they are associated with social interaction and with individuals, surroundings, past experiences and many other factors. Furthermore, statistical calculations such as frequencies and probabilities can be difficult to comprehend and therefore people respond primarily to their perception of the risk and not to the calculated, 'objective', risk. Instead, the individual's own assessment and perception of possible negative consequences seems to play a greater role (Renn 1998). Research also shows that people generally place greater emphasis on the consequences of the risk than the likelihood that it will occur.

However, it was not only economic and psychometric risk research that developed during the 1960s and 1970s, but also anthropological studies known today as cultural-symbolic studies of risk. Rather than seeing risk as an objective danger that can be dealt with rationally on the basis of objective technological knowledge, early anthropological research emphasized that the risks we identify, the way we perceive them, and our responses to them are structured by our institutions and social values (Douglas 1992). Opposing rational-choice approaches, Douglas criticized the narrow decontextualized model of utility maximization provided by economics by arguing that it is our values that structure what we see as risky and how we respond to it. Douglas (1992) develops her reasoning about risk on the basis of her previous studies on danger, sin, and taboo. Real dangers are always transformed into cultural-symbolic risks since the danger is coded as threat to valued institutions. Hence, the sociocultural construction of risk is theoretically independent of its objective reality. Furthermore, it is the politicization of danger, or risk, that is linking risk to some disapproved behaviour, coding the risk in terms of a threat to valued institutions (Douglas 1992: 29). Within a particular culture/institution/community, there is a set of world views, or norms and

values, that permeate our understanding of the world shaping, for instance, how we view physical events like fires, earthquakes, and diseases (Douglas and Wildavsky 1982). Thus, in a community with individualized world views, people will tend to perceive risks differently than those living in an egalitarian community. This functionalist explanation of taboo emphasizes the maintenance of social structure. Risk or misfortune demands an explanation, which starts a process of attributing responsibility. A major contribution of cultural theory of risk and Mary Douglas is showing how risk always is situated, how risk is lived with in everyday life (Boholm 2015).

Cultural theory has from the offset applied ethnographic research strategies and methods, including participatory and non-participatory observations, visual methods, and other hermeneutic methodologies exploring meaning beyond the informant's narratives. Particularly in the early days, anthropological studies were carried out in countries foreign to the researcher, but over time, cultural theory has become a theory for understanding the cultural and spatial embeddedness of risk in general. Interestingly, cultural theory is also applied in psychometric research. At first, Douglas and Wildavsky (1982) were critical of psychometric researcher's focus on individual explanations of attitudes, and argued that the cultural world views which permeate certain institutional contexts shape the individual's perception of risk, and cannot be measured on the individual level (Douglas 1970). However, in the beginning of the 1990s, Karl Dake (1991, see also Rippl 2002) introduced the first quantitative measurements of Douglas' so-called grid/group typology as a measurement of cultural world views (or cultural biases) on the individual level, an approach since broadly applied in quantitative studies of cultural theory and public perceptions of risk (Kahan et al. 2007; Olofsson and Öhman 2015). Even though the quantitative operationalizations are established and applied in international surveys such as the World Values Survey, the critique has been harsh. For example, Lennart Sjöberg (2000) argues that the relation between world views and perception of risk is robust, but weak, and argues that this kind of operationalization of cultural theory fails because it tries to capture the social context, which is too abstract, and because the social context is not the only determinant of risk perception. Douglas (1992) seems ambiguous about the application

of the grid/group typology in risk perception studies: on the one hand, she seems to reject the whole idea of individual data as ‘methodological individualism’ (1992: 11), but on the other she seems to encourage such studies as long as cultural bias are accounted for, ‘It would be very feasible to develop questionnaires that sorted experimental subjects according to their cultural bias before embarking on their response to probabilities of loss’ (1992: 32).

The Sociological Turn: More Theory Than Practice

In the 1980s and early 1990s, a number of scholars published key sociological contributions about risk, including Ulrich Beck’s *Risk Society*; Niklas Luhmann’s *Risk A Sociological Theory*; Anthony Giddens’ *The Consequences of Modernity*; Graham Burchell, Colin Gordon, and Peter Miller’s *The Foucault Effect*; and Stephen Lyng’s *Edgework: A Social Psychological Analysis of Voluntary Risk Taking*. The authors contributed new theoretical understandings of the role of risk in society, including social development and governance, and have inspired the development of social scientific risk research. Sociological risk theory challenges risk calculation techniques and statistical methods and their capacity to produce ‘objective evidence’, which equate average behaviour with desirable, normatively supported behaviour and hides or mystifies social structures and inequalities. Instead, they called for a shift away from decontextualized, objectivist examinations of risk and variable-analysis towards the examination of the interrelation and interdependence of categories and variables in real life.

If we start with Ulrich Beck, who sought to conceptualize historical change in terms of risk and argued that new mega risks, such as gene technology, climate change, and later financial crises and terrorism, indicated a shift in the ontological nature of the risks we face (Beck 1992). Beck equalizes risk with danger, and argues that new risks have a direct impact on the social. At the same time, Beck interprets risk as brought into being by social entities, such as science, law, politics, and mass media which define, select and manage, or ‘stage’, risk (Zinn 2008). Beck argues that risks are always real *and* constructed since real dangers as well as

concerns, fears, or imaginations are indissolubly parts of risk. The risk society Beck constructs comes into being through the same forces that gave us welfare, good living standards, health care, access to education, and so on. Thus, it is a more modern or late modern society; the development of science, market economy, and politics has led to environmental degradation, climate change, and other global risks in a kind of reflexive self-confrontation, where risks are the unforeseen consequences of previous human actions (Giddens 1990). Contrary to cultural theory, Beck argues that individualization erodes norms and values, as well as institutions, and individuals have to ‘invent’ themselves (cf. Giddens 1990). Many have raised objections against the theory of risk society and Beck’s interpretation of the modernization process. One line of criticism comes from postmodernists (cp. Elliott 2002), while another focus on the over-emphasis of the power of risk to replace gender and class systems with individualization (Mythen and Walklate 2006). More recently, Dean Curran (2016) has re-analysed the risk society thesis by using Beck’s conceptualization of risk positions, among other concepts, arguing to the need of a class analysis since there are two risk societies, one for the privileged and one for the disadvantaged, who are the ones consuming the bads resulting from the wealth of the rich.

Beck (2002) was quite critical when it came to empirical studies and methodologies in the social sciences in general, arguing that social science has become a prisoner of the nation-state, practising ‘methodological nationalism’ (cp. methodological individualism). He contended that a new critical theory with a cosmopolitan intent, or methodological cosmopolitanism, should replace the old methodology through a change of concepts, theories, and methodologies, as well as a change in the organization of research, focusing on contradictions, dilemmas, and unseen and unintended side effects of world risk society (Beck 2003; cp. Therborn 2013). According to Beck (2002), the implication for empirical research is to ‘dig where you stand’, and investigate the new cosmopolitan society, for example, risk-cosmopolitanism, post-international politics, and how everyday life becomes cosmopolitan in big cities and other places.

Similarly, to Beck’s challenge to the old class orthodoxy, the governmentality perspective on risk, building on the work of Foucault, questioned dominant, top-down power concepts (e.g. Dean 1999; O’Malley

2004; Rose 1999). Power was conceptualized as increasingly exercised indirectly through discourses and calculative technologies. Actuarial risk and its embeddedness in power discourses became a key element in understanding how the generation of knowledge and dominant discourses integrates with the exercise of power. Risk is seen as a particular way of comprehending problems and generating responses to them (Hannah-Moffat and O'Malley 2007): According to Ewald (1991: 199), nothing is a risk in itself, but anything can be considered to be a risk; it all depends on how one analyses a particular danger or event, and objects are not turned into risks until the moment at which they are interpreted as risk. Furthermore, by being interpreted as risks, objects are subject to specific governmental consequences. Thus, power in terms of risk governance and policy of populations and organizations are the main focus, while what people actually do and think in practice are of less interest. There are exceptions; feminist researchers undertaking governmentality analysis have studied the effects of policy rather than just the kind of subjects they intend to make of their targets (e.g. Hannah-Moffat 1999).

Governmentality-inspired scholars have analysed the link between the development of risk calculation techniques and risk governance, particularly concerning health, welfare, and insurance. For example, by using population statistics health-related recommendations, such as what and how much to eat and drink or not, could be developed on seemingly objective grounds. As Hannah-Moffat and O'Malley (2007) point out, statistically based probabilities of risk calculations are not created in a vacuum without world views and norms, or immune to the interests of those who see the capacity of risk to extend the reach of policy. On the contrary, risk calculation and other scientific analyses are political processes staged and perceived as 'objective' but in fact impregnated with taken-for-granted values and assumptions (Boehm et al. 2013). More recently, governmental scholars have analysed how big data and various digital monitoring risk calculation systems, for example, boarder control systems in a similar way hide the unequal structures on which the assumptions of the calculations are based when singling out 'risk objects'. This has led to a critical stand against statistical methods among governmental scholars, who instead engage in discourse and critical policy analysis through genealogical modes of analysis.

In the same line of thinking, leaning towards postmodernist theory, a number of scholars developed critical perspectives on risk (Lash 2000; Wynne 1996). Although cultural theory, risk society, and governmentality all have contributed to the study of risk, many social scientists found that there is a lack of attention to how individuals actually respond to discourses and disciplinary strategies in their everyday lives and from their different locations; this lack of attention has resulted in a portrayal of individuals as little more than insentient ‘docile bodies’ that are unaffected by structures of class, race, gender, and their intersections (Olofsson et al. 2014; Tansey and O’Riordan 1999; Mythen and Walklate 2006). Here power relations, associated with social discourses that performatively define risk as well as the embodied experience of risk, are key perspectives, and the researcher is seen as part of this process and therefore has to take political responsibility for their research (Zinn 2008). Here we also find Science and Technology Studies and Actor Network Theory which scrutinize science role in the law, politics, and policy of modern societies, and open up the dialectic relationship between human society and nature (Jasanoff 2005).

Niklas Luhmann (1993) developed a functional systems approach to risk in which distinction and second-order observation are two core concepts. Second-order observation is the way to observe how a system, or actors, observe, construct, and manage risks, and to observe an indication of this, distinction needs to be determined (Zinn 2008). Luhmann (1993) distinguishes between risk and security, as well as risk and danger, arguing that the opposite term of risk is danger, and not certainty, security, or safety. Security is merely a social fiction, an empty concept that lays the ground for probabilistic risk calculations since the perceived need for safety simultaneously supports the development of risk analysis and risk management. The distinction between risk and danger is sociologically more productive. It is based, according to Luhmann, on whether a possible harm is posed by a decision within the functional system, for example, science, law, or economy, or by another system, that is, in the environment. Thus, possible harms ascribed by a system to itself are risks, while harms caused by the environment are danger.

Second-order observation is the methodology with which researchers can investigate different functional systems ways of defining, deciding,

and managing risk (Zinn 2008). This usually means documentation, written or in other media. For example, scientists publish their results and the publications can be analysed. Similarly, journalists' first-order risk-action can be observed through their articles or virtual documentation. In this way a system can observe itself, but only through second-order observation. One recent example of an analysis inspired by Luhmann, and complexity theory more broadly, is Sandra Walby's (2015) critical approach to understand the financial crisis in the late 2000s.

Finally, a branch of research which was also initiated in the 1980s departed from the mainstream approaches. Edgework (Lyng 1990) conceptualizes voluntary risk taking as a form of exploration of boundaries, for example, sanity and insanity, consciousness and unconsciousness, and life and death (Lyng 2005). In contrast to a common focus on risk prevention and minimization, this approach defines risk taking as something positive and desirable, which provides people with positive feelings of self and resourcefulness. Theoretically, edgework shows that the dangers we encounter in the Global North not only arise and are forced upon us because of unforeseen consequences of modern society, but also because some people, aware of the social structures that shape their lives, choose to take risks (Lyng 2005). However, several scholars have argued that risk taking is a constitutive part of everyday life and therefore should be understood as 'centre work' rather than edgework (Parker and Stanworth 2005; Tulloch and Lupton 2003). Indeed, as Zinn (2015, 2018b) has argued, risks are taken more or less voluntarily and for many different reasons, not only as an end itself as in edgework. People also take risks as a means to an end, such as to reach and secure a place within society. Furthermore, people might take risks in response to situations of suffering often without the prospect of improving their situation (Hayenhjelm 2006). As soon as different forms of risk taking are considered, socio-structural dimensions come into sight.

Edgework was for a long time blind to gender, although empirical studies almost exclusively focused on male practitioners (Hannah-Moffat and O'Malley 2007). This illustrates the malestream assumption that women tend to be risk averse while men are risk takers, often based on biological assumptions. However, as, for example, Batchelor (2007)

argues, the reason why some women approach risk in a stereotypically 'female' way is because of the influence of dominant cultural imaginaries.

Methodologically sociological approaches have broadened the perspective from the ontology of risks to the complexity of the social world. When risk can no longer be approached and understood merely by calculating and predicting risks (and possible gains) and the broader social processes on which societal macro-, micro-, and meso-level research is based become more complex and self-reflexive, it is necessary to shift from perspectives that emphasize interactions between risks, social responses, and individual perception to those that interrogate how risks and the social mutually constitute risk and uncertainty, and how the research that forms part of this process is shaped by social values, power, interest, and personal experience.

However, sociological approaches themselves have struggled to do justice to the multi-layered social reality through which risk and uncertainty are experienced, produced, and managed. It has proved difficult to apply the social macro theories to the complexities of everyday life (Tulloch and Lupton 2003). There seems to be a gap between *Risk Society's* bold assumptions of social changes on the macro level and the experienced realities on the micro level. Genealogies of *governmentality* scholars provide excellent historical analysis of institutional changes over time, but there is little about individual experiences and responses which account for resistance and strategic engagements with institutional demands. Although *cultural theory* studies the moral and symbolic values of risk and danger in everyday life, analytically it focuses on cultural biases on the organizational or societal levels. The emphasis on individual experiences of risk taking in *Edgework* also follows this trend but develops the argument from the alluring experiences of risk taking on the micro level and links them to macro change of advanced modernization, lacking again any recognition of the influence of common social processes and structures.

Thus, sociological theories tended to neglect the social middle or meso-level where institutional contexts and individuals combine in new and creative ways.

Challenges and Research Strategies in Social Scientific Risk Research

Risk studies and social science research more broadly faced a number of challenges during recent decades. So-called material, biographical/narrative, visual, and practice turns amongst others have highlighted issues which question the validity of research and restrict its ability to capture new social phenomena in *everyday life*. Power hierarchies and *social inequalities* within society as well as in the research process and the status of the subject have been key issues for quite a while, but an increasingly *global world* and availability of data requires and opens opportunities for comparative and cross-national research to do justice to both national framing of social realities and new cross-national forms of existence. This development is also related to the need to problematize the research process itself as well as the role of the researcher. *Social digitization* through the internet and social media has shaken social realities as they have been known for decades and together with the availability of big data, including online conversation and digitization of a growing body of text data, requires, and opens new strategies for research. The different contributions to this book respond to such broader debates in a range of ways.

A particular concern is about how to understand and approach *everyday life* and *subjectivities*. Under the heading of the interpretivist paradigm, there are a range of approaches which have examined everyday activities (symbolic interactionism, ethnomethodology, phenomenology, etc.). The different layers of meaning in everyday life have been examined and methodologies developed. The importance of the structure and dynamic processes is a particular issue for the discussion of how interviewing can be used to uncover these layers (Brown et al. 2018; Brown 2016). This is directly related to the debate about *subjectivities* and to what extent they are determined by their socio-structural context and are predominantly developed during a process of socialization which is mostly understood as integration into a particular position in the social world. Amongst broader conceptual debates, the developing life course and biographical approaches have suggested viewing people's sense-making in relation to their positioning in an institutional life course or life cycle (life course research) or as a result

of their specific biography (biographical research). Some scholars have started to use a biographical perspective (Zinn 2005; Reiter 2018; Henwood 2018) and a life course/life cycle perspective for risk studies (Chavez-Rodriguez 2018). That risk events can be quite disruptive of subjectivities is well known. Responses depend to a large degree on whether an experienced disaster or onset of illness has only recently occurred, and whether people are still struggling or have already started to cope. Since subjectivities are a dynamic process, repeat interviewing or diaries are a helpful strategy for observing subjectivities as they change over time (Alaszewski 2006, 2018; Bury 1982). This kind of participatory approach can also make use of visual methods in which participants' experiences are documented through drawings or photos to make the sometimes unspeakable visible (Mitchell 2018; Sajan Virgi and Mitchell 2011). The influence of the researcher on the research 'object' has been a long-lasting concern in social science research and different approaches have developed in response, such as standardization and minimization of researcher impact in quantitative standardized approaches and active engagement with the research 'object' and development of good rapport to prevent the undesired impact of social desirability and other factors. Also in ethnographic or action research, the participant observation, as in ethnography, as well as the attempt to actively change social relationships, as in action research, requires a highly self-reflexive approach on the part of the researcher about their role in the research process and the impact of their research not only on the research object but on themselves. These issues are also central for risk studies. The influence of facilitators such as translators and locals should be directly addressed and considered regarding their impact on the research results (van Voorst and Hilhorst 2018).

Debates about the diversification of *social inequalities* have been widespread. Discussions about social inclusion/exclusion and the precariat have challenged classical approaches that view social class as the central category necessary to understand disadvantage in present day societies. Debates about the extent to which inequalities have diversified or intensified remain controversial. Fierce disputes were sparked by Beck's original claim that global risks can affect everyone and that there is no or little possibility of escaping global climate change or environmental

degeneration. At the same time individualized inequalities can soar even when a political subject is missing. Inequalities based on gender, race, sexuality, and so on also tend to go unseen, or at least unrecognized, as key processes in the understanding of risk and uncertainty in everyday life (Hanna-Moffat and O'Malley 2007; Olofsson et al. 2014). Inspired by feminist debate about intersectionality (Crenshaw 1989), scholars who are unsatisfied with one-dimensional power analysis have suggested explorative quantitative research strategies to examine the multidimensionality and complexity of disadvantage in relation to risk (Giritli Nygren 2018; Öhman and Olofsson 2018). Risks have increasingly become global processes, meaning that global responses are needed to manage them. However, diverse populations in various countries respond differently to risk (Renn and Rohrman 2000). A better understanding of variances in risk perception and responses has supported the development of international survey data which have opened new opportunities to examine risk perception on a global scale, and to therefore consider how perceptions are anchored in spatial and cultural contexts (Balžekienė 2018). These methodological advancements have paved the way for the introduction of social theories that can provide a better understanding of variation and similarities across countries and regions regarding associations between, for instance, risk perception and trust (Olofsson et al. 2006), and risk perception and inequalities (Olofsson and Öhman 2015).

Social digitization has started to sustainably change the social world and has affected both the management of risk in everyday life (combining online and off-line communication) and the research resources available. The digital world has already changed social reality in manifold ways, and many examples of this are directly related to risk. For instance, the crowd-sourcing initiative of lay scientists in Fukushima who connected Giger-counters with their cars and the internet to produce reliable real-life fallout maps, or the self-help groups exchanging experiences of experimenting with unknown psychoactive substances (Berning and Hardon 2018). The digital social reality has also opened new opportunities to observe and research social processes via social media or in increasingly digitally available print (news) media. Social digitization produces new opportunities for examining the mutual constitution of the social and the

linguistic. It allows for examination of how people actually understand risk, and how the communication of risk differs between countries and changes over time. Discourse semantics of risk (and related terms) has recently been used to improve understanding of conceptual differences between words such as risk, danger, and threat (Grazia 2018; Boholm 2011), and the discourses of climate change in different countries (Müller and Stegmeier 2018; Grundmann and Krishnamurthy 2010). These new methods for discourse semantic analysis open new opportunities to test the claims made by risk theories about social change while also allowing for the development of such theories on the basis of sound empirical data (Zinn and McDonald 2016; Zinn 2018a).

In summary, research on risk and uncertainty has started to respond to the challenges to earlier research and the challenges of social change through more openness to the new, critical reflexivity of own research practice and problem-oriented approaches which engage in changing social practices. There is an emphasis on bottom-up conceptual tools rather than grand theories, and the complexities of social reality through which they are brought into existence. There is a stronger emphasis on connecting social forces with individual sense-making, and on practices challenging the division between methodological individualism and collectivism and methodological realism and constructionism. Instead, there is some concern about how social structures and individuals mutually reproduce. Perhaps, the socially still dominant distinction between expert and lay people or rational and non-rational approaches to risk is better understood as a currency in the social production and negotiation of risk when societies try to find reasonable ways to manage risk and uncertainty in a social world structured by power, values, emotions, trust, intuition, and so on. In contrast to the focus on evidence and misinformation/bias, there is more interest in how to deal with uncertain and risky futures in a decent and socially acceptable, rather than rational, way.

There have been several attempts to position different approaches into a diagram with the dimensions individual/subjective versus social/collective and constructionist versus realist (Horlick-Jones 2005; Renn et al. 2000; Taylor-Gooby and Zinn 2006). The debates in risk studies have in our view supported approaches which more pragmatically reconstruct the reality of everyday life and which seek to overcome the

dichotomies implied in such distinctions. A meso approach to the risk and/or uncertainty practices of everyday life would be in the centre of such a diagram where the reality of risk meets the social construction and where the individual and the collective is reproduced through the everyday practices.

The Logic of the Book

Planned as a resource book every contribution introduces a particular research strategy, methodology, and method using examples drawn from one of several concrete cases. Thereby it provides conceptual guidance as well as practical knowledge for the design and conduct of research on risk and uncertainty. We distinguish four major research methods—observation (visual research, ethnography), interviewing (narrative, life course perspective), structural analysis (survey research and secondary analysis), and content analysis (critical discourse analysis and linguistic corpus analysis)—which have been influential in the analysis of risk.

Part I Visual and Ethnographic Methods

In the first chapter of this section, *Claudia Mitchell* investigates the dilemmas and innovations of visual ethnography in terms of risk. She discusses how we as social science researchers might draw on the rich body of work in photography and cultural studies focusing on risk, pain, and atrocity (see, e.g. Susan Sontag (2004) *Regarding the Pain of Others* and Geoffrey Batchen et al.'s (2012) *Picturing Atrocity*) to inform our analysis and understanding of participant-generated images of risk in participatory visual research. Drawing on examples of images of risk in two PhotoVoice projects, the chapter grapples with a number of key issues of method and interpretation in relation to visual ethnography in critical risk studies. It explores the ways in which participatory visual methodologies such as PhotoVoice and participatory video can serve to deepen an understanding of risk (particularly in relation to issues such as sexual violence) as represented by research participants, but at the same time can provoke