Alison Hicks

Risk-Informed Information Practice

Ways of Knowing in an Uncertain World

GLOBAL PERSPECTIVES ON LIBRARY AND INFORMATION SCIENCE

RISK-INFORMED INFORMATION PRACTICE

How do people become informed about risk and why is this important? This book draws upon three case studies to interrogate risk's informational thread, including how people map and orient themselves to risk information as well as how these activities shape their increasingly knowledgeable performance within a risk situation.

This book offers a novel theoretical, methodological and practical approach for considering how risk responses are informed. As the first full-length treatment of this topic, the book provides insight into how people become knowledgeable about risk, including the various sources of information on which they draw and the social and political conditions that shape access to these information environments. In further centring developmental change, the book also sheds light onto the discontinuities that risk creates as well as the need to adjust to alterations in roles and responsibilities. Resulting in the production of a robust definition and conceptual framework for risk-informed information practice, the book's broad approach, which involves a consideration of risk understanding alongside the more typical risk perception and management, further integrates reflection on the methodological implications of this work.

The book's focus on research and practice means that it will be of interest to risk and information professionals, including those with responsibility for risk messaging, information literacy instruction and patient interaction. The conceptual focus further means that this book will be invaluable for information literacy and risk scholars looking to extend their understanding of how people develop knowing when things of value are at stake.

Dr Alison Hicks is an Associate Professor in Library and Information Studies at University College, London (UCL). Her research examines how information literacy practices help people to cope with uncertainty, including risk and transition, within academic, health, everyday and work contexts. She is additionally interested in qualitative, visual and participatory research methods. She was the Editor-in-Chief of the *Journal of Information Literacy* from 2020–2025.

Global Perspectives on Library and Information Science

Global Perspectives on Library and Information Science highlights the wide range of innovative projects and approaches on offer within the LIS field today. Authored and edited by scholars and practitioners, volumes explore the vital work being done by library and information scientists all around the world.

The series contains global and regionally specific volumes and will provide students, researchers, and practitioners in the LIS field with diverse, unique insights into contemporary issues.

To submit a proposal or discuss an idea for a book in the series, please contact the Routledge Editor for Library, Archival and Information Science, Heidi Lowther (heidi.lowther@tandf.co.uk).

The following list includes only the most-recent titles to publish within the series. A list of the full catalogue of titles is available at: https://www.routledge.com/Routledge-Critical-Studies-on-Open-Access/book-series/RCSOA

Social Informatics
Noriko Hara and Pnina Fichman

Risk-Informed Information Practice
Ways of knowing in an uncertain world
Alison Hicks

RISK-INFORMED INFORMATION PRACTICE

Ways of Knowing in an Uncertain World

Alison Hicks

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2025
by Routledge
4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-032-61383-3 (hbk)
ISBN: 978-1-032-61381-9 (pbk)
ISBN: 978-1-032-71962-7 (ebk)

DOI: 10.4324/9781032719627

Typeset in Times New Roman
by SPi Technologies India Pvt Ltd (Straive)

To Sophie, Ed, Tamsin, Charlie, Albert, Austin, Monty, Ralph, Jasper and Ottilie, who will all (hopefully!) be excited to see their names in print.

CONTENTS

ACKNOWLEDGEMENTS

My thanks, as ever, go to Professor Annemaree Lloyd, who not only read and gave me feedback on the manuscript but also solved my last minute title and naming wobbles. Thank you to Dr Rebecca Noone for feedback on an earlier draft and to my colleagues at UCL for affording me the space to complete this work. Most of all, *gracias* and *tapadh leat* to Adrian for all your love and support (as well as for finally reading this…).

1

INTRODUCING RISK-INFORMED INFORMATION PRACTICE

Introduction

For undergraduate language-learners, studying or working overseas as part of their degree is often seen as an exciting benefit of their studies, a unique opportunity to become immersed in the target language before final exams and the start of their graduate career. Yet, this time overseas is also punctuated by risk: physical risks, as students learn to navigate new settings; economic risks, as they juggle tight budgets with restrictions on working hours, and above all, academic risks, given the limited time in which they can improve their language. From a traditional technoscientific risk perspective, with its focus on "natural hazards, technological threats, working conditions, ambient health impacts, crime, terrorism, and pollution" (Renn, 2008, p. 50), the risks of an overseas sojourn may seem relatively inconsequential given the small-scale or personal nature of these concerns. For language-learners, however, the uncertainty of this period, coupled with what Aven and Renn (2009) refer to as the potential "severity of the consequences (or outcomes)" of an activity that is of value to them, means that these risks form a defining feature of these students' time abroad. Forming the culmination of many years of study, a period overseas not only has the potential to alter the outcome of a language-learner's undergraduate degree and job opportunities available to them, but it may also form one of the few opportunities to live as a local for an extended time, given increasing restrictions on youth mobility. The potential impact of these risks is further underscored by students' relative isolation from support structures given that, unlike with natural disasters, the risks that they face are not typically accompanied by national guidance about how to manage a situation.

DOI: 10.4324/9781032719627-1

In opening new courses of action, information forms the means through which language-learners successfully cope with the demands of this time. Providing a way to tap into the practical knowledge bases that support everyday living, such as how to access food and medical care, the building of connection to a new information environment also supports engagement with more tacit forms of knowledge, such as knowing who to talk to or approach about a problem. In effect, information forms a rich thread that runs throughout how people assess, understand and manage challenges within a new situation. At the same time, it is not just the presence of information that allows language-learners to negotiate these new situations. Instead, risk responses are premised upon how these students use information to learn or become knowledgeable about risk. Referred to as information literacy, which forms a "way of knowing the many environments that constitute an individual's being in the world" (Lloyd, 2007, p. 182), the emphasis on learning introduces a missing piece in the risk jigsaw, which has typically associated risk responses with the simple transmission of information from expert assessors to unsophisticated lay people. Drawing attention to how people map, orient themselves to and reconcile risk knowledge, information literacy also foregrounds the developmental changes that are produced through increasingly knowledgeable participation within risk information environments. In further spotlighting social context, information literacy additionally centres the structural conditions that shape how learning happens rather than the 'interferences' that might detract from this transfer process.

This book advances risk-informed information practice as the means to establish how risk responses are apprised. Pulling the threads of information literacy and risk together, risk-informed information practice establishes information literacy as facilitating changes in risk knowledge through enabling access to and engagement with information that is of value to a person. Referencing the positioning of information literacy as a social practice (Lloyd, 2017) that is organised through an interwoven array of open-ended and spatiotemporally-dispersed activities that hang together (Schatzki, 2001, p. 11), risk-informed information practice introduces a focus on how people orient themselves to risk knowledge, including the ways in which forms of guidance and advice are legitimised within a specific setting. In further highlighting the changes in agency that result from risk information activity, risk-informed information practice also foregrounds the building of mastery or how people develop increasingly knowledgeable ways of engaging within a risk information environment. Emerging from the perceived utility of placing two separate concepts- information literacy and risk- in dialogue rather than isolation from each other, risk-informed information practice provides a useful focal point for a topic that has remained peripheral in both risk and information research to date. It also responds to calls for a more interdisciplinary approach to the examination of human risk responses (Rosa, 1998, p. 16).

As this chapter goes on to explore, both information literacy and risk have been interpreted through a variety of theoretical lenses, including technoscientific, cognitive, behaviourist and constructivist approaches, amongst others. In emphasising how people come to know, risk-informed information practice is explicitly positioned as taking a sociocultural perspective. Establishing risk as shaped by social and cultural processes (e.g., Douglas, 1966), a sociocultural perspective similarly recognises that information literacy forms a situated practice that reflects shared understandings about how information is used and valued within a setting. Moving beyond the typical framing of risk as something that is objective and measurable (e.g., Royal Society, 1992), the sociocultural perspective also challenges the traditional conceptualisation of information literacy as the acquisition of decontextualised information skills. Within this approach, a sociocultural perspective reimagines risk responses as centred upon how information supports the production, handling and contesting of risk, including the various forms and types of information that support these actions. Together, these ideas allow for a more discursively oriented examination of the knowledge constructions that shape the negotiation of danger, including the complex interplay between information artefacts, activities and events.

Key concepts

The chapter will now turn to exploring information literacy and risk, which form the two concepts that create the basis for theorising risk-informed information practice. An overview of each concept will establish the baseline for risk-informed information practice more clearly as well as key sensitising themes. The chapter will then draw upon these theoretical underpinnings to present the emerging definition of risk-informed information practice as well as an overview of the empirical research that supports this ongoing conceptual work.

Information literacy

Information literacy forms the foundational concept that underpins risk-informed information practice. Information literacy is a complex term that is most simply understood as how we use information to learn. Encompassing the interactions between learning, information and knowledge, information literacy supports the development of practical, embodied, and conceptual knowledge through facilitating engagement with the sources and forms of information that give a context "its unique character and shape" (Lloyd, 2006, p. 572). From this perspective, health, professional, everyday and academic contexts form collaboratively constructed knowledge bases that are accessed through information modalities that reference how people who participate in this space value and legitimise knowledge (Lloyd, 2017). In further emphasising the establishment of a relationship with information, these ideas also

reference human development through the creation of more experienced forms of being. Another way in which we could refer to information literacy, then, is as a "way of knowing the many environments that constitute an individual's being in the world," (Lloyd, 2007, p. 182). Acknowledging the socially situated shape of information literacy through the recognition that knowledge looks different within the various contexts that a person inhabits, the focus on knowing instead of knowledge also recognises that becoming knowledgeable forms an active and ongoing process.

The central concept that underlies this conceptualisation of information literacy is information. A complex term that is not always problematised outside information studies research (Hicks, 2022), the meaning of information changes according to the context and the research approach through which it is theorised (Buckland, 1991). Within risk-informed information practice, the emphasis on the everyday ways in which people understand and negotiate risk meaning means that Bateson's (1972, p. 459) definition of information as "any difference which makes a difference" is used to underpin this work. One of the more expansive definitions of information, Bateson's ideas position information as constituted by the differences that people perceive as meaningful and as making a difference to their understanding of risk. Introducing a focus on the usefulness of information, this definition frames information as creating a change in risk knowledge, whether this change is considered positive, negative or neutral (cf. Lloyd, 2017, p. 94). The emphasis on meaning additionally acknowledges that information must be situated to be valued, an idea that further allows risk information to be recognised as both tangible or intangible. While this may seem to produce a very broad understanding of information, Bateson's definition is structured enough to provide a framework for recognising what could be considered as information while resonating with Buckland's (1991, p. 357) acknowledgement that almost anything can be understood as informative.

The second key concept that underlies information literacy is learning, which forms another complex and broadly defined phenomenon. Loosely conceptualised as a change in knowing, learning spotlights human development including shifts in understanding, contributions or performance. However, just as with the concept of information, our understanding of what learning is, including how it takes place, and where, when and with whom it happens, is shaped by the theoretical perspective through which it is conceptualised. Within risk-informed information practice, learning is understood as a generative social practice that is informed by personal and practical experience and secured through interaction with people, tools and events. Emphasising activity and sociality, the focus on interaction centres learning upon the negotiation of meaning within a specific context rather than a quantitative increase in the capacity to absorb knowledge (Säljö, 1979). In turn, the foregrounding of situated experience indicates that learning takes place in and over the lifecourse, including for the purposes

of developing expertise and dealing with change as much as for the gaining of formal qualifications. Importantly, and often overlooked, the focus on human growth further suggests that learning encompasses a change in being as well as a change in knowing, an idea that foregrounds the construction of identity within questions of development (Packer & Goicoechea, 2000). Together, these ideas suggest that risk responses are inextricably entangled with transition as people develop possible ways of grasping and relating to the world (Packer & Goicoechea, 2000, p. 234).

In centring context, the sociocultural approach to information literacy is somewhat distanced from traditional functional iterations of the term. The long association with professional librarian practice means that information literacy has typically been positioned as a goal for educational activity rather than as an object of study (Pilerot & Lindberg, 2011). Leading to its popular conceptualisation as finding, evaluating and using information (ALA, 1989), this definition is further complicated by the strong influence of behaviourist learning theories, which position information literacy as a set of generic and functional information skills that will 'protect' the learner across contexts. However, while a focus on standardised competencies have helped to popularise interest in the topic, the single, fixed way of knowing limits engagement with contextual aspects of information activity while further marginalising individual agency and alternative forms of knowledge (Hicks & Lloyd, 2023). Since then, growing dissatisfaction with the behaviourist approach has contributed to the conceptualisation of information literacy in relation to constructivist learning theory. Positioning information literacy as a learning process (Kuhlthau, 2004) or as the creation of mental models and habits of mind, the constructivist approach emphasises the role that affect such as frustration or elation plays in shaping information activity. At the same time, the assumption that it is the individual mind that is at the centre of knowledge creation means that this approach also neglects to account for the dynamics of social contexts or the very meanings and values that situate knowing. The limited possibilities that these approaches offer provide further justification for the framing of risk-informed information practice through a sociocultural lens.

Finally, information literacy should also be distinguished from information behaviour, a term that occasionally appears in risk literature (e.g., Choo, 2017; McNicholas & Marcella, 2022), yet which is somewhat different from information literacy. Defined as "the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use," (Wilson, 2000, p. 49), information behaviour examines the complexity of factors that affect how people interact with, or purposefully and passively seek, manage and utilise information (Bates, 2010). In further centring the relationship between individuals and information, information behaviour has also helped to introduce a more overt user-centred paradigm shift within the field of information science (Pettigrew et al., 2001).

The emphasis on human activity means that information behaviour and information literacy are closely related, with some researchers positioning information behaviour as giving theoretical grounding to information literacy and information literacy as providing the institutional context for information behaviour (Limberg & Sundin, 2006). However, this view also neglects to account for learning, which is positioned as peripheral to human activity within an information behaviour framing. The importance of human development to social life as well as the unmistakable impact that knowledge construction has upon the shaping of identity, provides a further justification for centring information literacy.

Risk

Risk is the second of the two concepts that shape risk-informed information practice. There is remarkably little consensus on the definition of risk, with the silence of various key risk theorists on how they understand this term (e.g., Douglas & Wildavsky, 1982; Giddens, 1991) contrasting with the vigour of debate in risk analysis spheres (Rosa, 1998, p. 27). Variously defined as "an expected value, a probability distribution, as uncertainty and as an event" (Aven & Renn, 2009, p. 1), risk has been distinguished as either a physical attribute or as a social construct (Bradbury, 1989) as well as taking one of seven integrated approaches in Renn's (1992) taxonomic classification. These classifications have led to attempts to establish common conceptual threads between risk definitions, with Renn (1992, 2008) arguing that all risk definitions are linked by a shared distinction between reality and possibility as well as a belief in the contingency of social actions. Establishing the future-oriented shape of risk, these commonalities also centre human activity through the implication that the potential consequences of risk can be avoided. However, ontological differences related to the objective existence of risk ensure that any consensus between definitions must be seen as limited, with Aven and Renn (2009, p. 3) acknowledging that debate about the independence of risk raises disagreement over "questions of knowledge, about our perceptions and understandings of risk, and about our understanding of how groups and societies choose to be concerned with some risks while ignoring others." For these reasons, it is particularly important to understand the basis upon which risk-informed information practice is constructed.

Risk-informed information practice employs Aven & Renn's (2009) definition of risk, which conceptualises risk as "uncertainty about and severity of the consequences (or outcomes) of an activity with respect to something that humans value." Positioning risk as an event that "impact[s] human reality in some way" (Rosa, 1998, p. 28), Aven and Renn's definition acknowledges that risk is shaped in relation to possible rather than predetermined outcomes (Rosa, 1998, p. 29). At the same time, the emphasis on uncertainty, which

challenges the ontological realism found in other risk definitions (e.g. Rosa, 1998), clearly situates risk as a social construct that is "(intrinsically) open to negotiation and contestation" (Boholm, 2003, p. 161). These ideas are extended through the emphasis that is placed on the stakes of action, where the recognition that risk has the capacity to harm someone or something further introduces questions of morality and normativity (Rigakos & Law, 2009, p. 80). From this perspective, risk is positioned as constituted through social interaction or "processes of discourse which are always open to debate and subject to change" (Wilkinson, 2001, p. 2). The recognition that people "do not exist in a social and cultural vacuum" (Boholm, 2003, p. 161) further acknowledges that risk is a product of "historically, socially and culturally contingent ways of seeing" (Lupton, 2013, p. 50) that bind knowledge of risk to the context in which it is created. In effect, risk is understood as emerging from and constructed through participation within social groups.

Uncertainty, value and context form the three foundational concepts that underscore this definition of risk. Uncertainty, which is seen to unite risk with its original seafaring etymology (Rosa, 1998, p. 30), refers to events and consequences where outcomes and their severity are unknown. Originally introduced to challenge a focus on probability and expected values (see below), uncertainty has since been used to represent the future oriented possibility of risk, whether related to human activities or the natural world (Rosa, 1998, p. 28) as well as a person's ability to recognise and mediate these challenges. At the same time, the possibility of both desirable and undesirable outcomes (Aven & Renn, 2009, p. 3) illustrates how uncertainty cannot be separated from value, which forms the second core concept that lies behind the definition of risk. Recognising that the "act of designating an object as at risk is an act of implicating value" (Boholm & Corvellec, 2011, p. 180), an emphasis on value also acknowledges "the multivalent quality of risk outcomes" including how a positive or a negative qualifier depends on the meaning that a person attributes to the issues at stake (Battistelli & Galantino, 2019, p. 68). While a focus on value has been critiqued for neglecting agency and intention (Battistelli & Galantino, 2019, p. 68), it does draw attention to other important ideas, including the connection between risk, subjectivity and wellbeing (Lupton, 2013, p. 21). The final foundational concept within this definition is context, which recognises the situated shape of risk activity.

In acknowledging the possibility of positive and negative outcomes, risk-informed information practice clearly distinguishes risk from other interchangeably used terms including danger, hazard and threat. For Luhmann (1993), the difference between risk and danger lies in intentionality, with danger perceived as uncontrollable by humans and risk as connected to human choice and decision-making. Renn (2008, p. 50) adopts a similar tack in positioning hazards as the "potential" rather than the "likelihood" of a technology, an event or an activity causing harm. However, Boholm's (2012) linguistic

analysis challenges the bracketing of risk with decision-making, while introducing a more overt focus on agency; in this definition, risk is positioned as more agentic than danger. These ideas have since led Battistelli and Galantino (2019) to distinguish risk, danger and hazard through the twin axes of agency and intentionality, where danger is characterised as low agency and low intentionality, threats are marked by the presence of agency but negative intentionality, and risk is described by high agency and positive intentionality. Re-integrating a focus on choice and decision-making with actors' interests, this typology clearly distinguishes between semantically related terms while also allowing for a more positive conceptualisation of risk alongside its traditional negative focus.

In focusing on uncertainty, value and context, risk-informed information practice is distinguished from the technoscientific approach to risk, a more well-known definition that refers to risk in terms of the chance or likelihood that a particular hazard will impact on a population or an institution (Lupton, 2013, p. 27). Establishing risk as a product of the relative frequency and consequences of danger (Bradbury, 1989), the technoscientific approach is most famously exemplified through the Royal Society's (1992) definition, which states that risk refers to "the probability that a particular adverse event occurs during a stated period of time or results from a particular challenge." However, while the technoscientific approach aims to identify and mitigate large-scale losses or disasters, particularly in finance, industry and government, it also imposes a normative view of risk that ignores the unique complexities of human activities (Renn, 1992, p. 59). Risk is further characterised as an objective, often physical entity that exists independently from rather than constructed through human activity. The limitations of these ideas, which additionally position risk responses in terms of a lack of knowledge and a one-way transfer of information, provide a further justification for the adoption of a sociocultural approach.

Risk-informed information practice

The emphasis that information literacy places on the development of knowledge, coupled with the uncertainty of risk, gives rise to risk-informed information practice. Creating a more overt connection between information literacy and risk, risk-informed information practice also provides a framework or structure through which to explain the relationships between these phenomena. Along these lines, risk-informed information practice is defined as:

> The knowing of risk through connection to and interpretation of the forms of risk knowledge that, in being practically or situationally of value to a person, contribute to the development of situated risk expertise.

Moving beyond a focus on how people respond to information, this definition foregrounds the creation of relationships within a risk information environment, including with the various artefacts, experiences, and forms of guidance that inform a person's actions and how these information sources can be accessed as well as negotiated and interrogated. Positioning risk as shaped through interaction with information sources that reference and facilitate engagement with knowledge, this definition also draws from the definition of risk (Aven & Renn, 2009) to acknowledge that this information must have some bearing on "aspects of our situation that concern us" (Wilson, 1973, p. 461) to be of consequence. Framing information in terms of utility, which may also be assessed through community legitimacy (Chatman, 1996, p. 201), the emphasis on value also permits the possibility that risk knowledge may be formal and informal, including experience that is constructed through everyday activity as well as professional advice. The situating of risk responses as shaped by the historical, political, social, and material dimensions of a setting further allows for a more overt focus on questions of power and agency, including how advice is taken up or rejected and the various ways in which meaning is negotiated. Importantly, the framing of risk in terms of the construction of situated expertise also centres questions of human development as people learn to construct nuanced interpretations of shared social spaces.

In providing a conceptual interpretation of how risk is apprised, risk-informed information practice has its genesis in a research agenda (Hicks, 2023) that aimed to stimulate a more nuanced consideration of the role that information plays in shaping responses to hazard and danger. Developing the first conceptualisation of this topic, this research agenda originally referred to risk-informed information practice as informational risk. Defined as "any way in which information is implicated within the conceptualisation, construction, and experience of risk" (Hicks, 2023), informational risk was further underpinned by the grounded theory of mitigating risk (Hicks, 2018), which provided a first indication of the importance of studying information literacy and risk in conjunction with each other. Since then, further empirical research has led to the refining of this original terminology and definition. In particular, the use of the informational adjective was seen to contradict the emphasis of this conceptual work; risk is informed rather than something that provides information. It was further unclear what information risk might provide. At the same time, a simple reference to informed risk was seen to incorrectly align this work with "informed learning" (e.g., Bruce, 2008), a concept that is epistemologically and methodologically quite distinct. The practice theoretical heritage of information literacy, in which information literacy is positioned as a dispersed practice that weaves throughout or binds together practices within a site (Lloyd, 2021, p. 26) and is explored more in Chapter 2, led to the establishment of risk-informed information practice as a more appropriate term to refer to this exploration of risk's informational thread.

This book introduces the refined concept of risk-informed information practice through presenting three of the empirical studies that formed the basis of this ongoing conceptual work. Questioning how information literacy shapes risk responses in health, workplace and everyday contexts, these case studies establish and draw attention to core conceptual themes for the study of risk-informed information practice, including its methodology as well as future research. More specifically, each of the case studies takes a specific dimension of risk as its focal point: risk perception, risk understanding and risk management. A focus on these three key dimensions of risk, which were identified through a literature review of risk and information research (Hicks, 2023), provides a more nuanced way to unpack the complex relationship between risk and information literacy. Previously, an emphasis on the transmission of expert knowledge has meant that risk information research has tended to focus on risk perception, or how lay people recognise and become alerted to potential forms of danger. However, as literature has begun to acknowledge the many ways in which people give meaning to and deal with risk, additional dimensions of risk in which information plays a role have started to become more prominent. To risk perception, then, is added risk understanding and risk management in acknowledgement of the multifaceted ways in which information supports risk responses.

Beyond unpacking the multidimensionality of risk, these case studies have also been selected to represent a wide variety of risk contexts including settings in which risk is explicit or large-scale as well as situations in which risk is limited to a specific population. The case studies further include situations for which national or governmental advice was provided as well as settings in which risk was evolving, challenged or perhaps invisible to anyone but the participant. Introducing further analytical depth to the ongoing conceptualisation of risk-informed information practice, the selection of these case studies was also designed to extend a more robust understanding of how and where the relationship between risk and information plays out. Along these lines, the case studies that form the basis of this conceptualisation of risk-informed information practice include:

- Case Study 1: An examination of how risk was brought into view during the COVID-19 pandemic in the UK. This case study, which explores how information shapes risk perception and is based on original analysis by Lloyd and Hicks (2021), provides insight into the interplay between population-scale risk that is shaped through institutional advice as well as more everyday forms of knowing.
- Case Study 2: How school library workers become knowledgeable about the risks of book banning and censorship. This case study, which examines how information shapes risk understanding, focuses on how people reconcile and develop sensitivity to risk in a fragmented yet highly contested sphere.

- Case Study 3: How language learners studying overseas mediate the risks of moving abroad. This case study, which examines how information supports risk management and is based on original analysis by Hicks (2018), explores the negotiation of small-scale and personal dangers, including how action is predicated upon creating, sharing and contesting new forms of information.

Encompassing health, workplace and everyday settings, these case studies illustrate the scope of risk-informed information practice as well as its broader shape and structure.

In centring risk responses, these case studies offer useful insight into the role that information plays in helping people to deal with challenges within a variety of everyday contexts and scenarios. This focus is particularly important given the positioning of risk as linked to the consequences of activities that are of value to people (Aven & Renn, 2009). However, the prominence that society accords to risk means that the impact of risk-informed information practice is not just limited to these individual situations. Instead, the key role that risk plays within broader political, social and health concerns provides a further indication of both the value and importance of developing a more nuanced consideration of how risk is informed. The growing reliance of many Western governments on nudge economics, in which behaviour change is predicated upon coercive forms of messaging (Thaler & Sunstein, 2008), provides one example of the need to consider the relationship between risk and information in more detail. The use of risk-related knowledge to justify a range of health and social interventions, including related to pregnancy (Lupton, 2013) and breast-feeding (Infant Feeding Alliance, n.d.) provide an additional rationale for foregrounding a more detailed understanding of how risk is informed. Growing participation in (self-)surveillance technologies, in which people monitor and track information to reduce their exposure to risk (Kazansky, 2021), further illustrate how a more robust consideration of risk-informed information practice would be of benefit to social research and practice.

Structure of this book

The book is divided into eight chapters, each of which addresses a specific dimension of risk-informed information practice. Chapter 2 situates information literacy and risk theoretically, providing an overview of the conceptual influences behind each term. The chapter starts by presenting the theoretical influences that shape how information literacy is understood, including the theory of information literacy, literacies as social practice and practice theory. The chapter then focuses on risk, drawing upon the work of anthropologist, Mary Douglas, and other key theorists to establish the book's sociocultural focus. The chapter concludes by sketching how information and risk have been treated within empirical literature to date, including how information has been presented within risk research, and vice versa.

The following three chapters, which form the core of the book, present the case studies that are used to explore the shape of risk-informed information practice; risk perception, risk understanding and risk management. Chapter 3 takes risk perception as its theme, using research into the COVID-19 lockdowns within the UK to explore how information brings risk into view. Drawing on interviews with a broad cross-section of society, this research challenges the efficacy of official advice by exploring how the construction of risk judgements is constrained and enabled. In contrast, Chapter 4 pulls from research with school library workers to examine how information supports the development of risk understanding. Focusing on recent attempts to impose book banning and censorship within school libraries, this chapter interrogates how professionals negotiate and reconcile shifting risk knowledges during a time when their expertise may be challenged. Finally, Chapter 5 examines the role that information literacy plays in supporting risk management. Based on arts-based research with people who are learning a language overseas, this chapter develops knowledge about how people act on risk, including through interrogating how information supports (and constrains) these goals.

Findings from these case studies are subsequently drawn together in Chapter 6 to present the emerging conceptualisation of risk-informed information practice. Focusing on core conceptual themes that establish key and critical features of risk-informed information practice, this chapter draws upon the theoretical constructs of liminality and uncertainty to position risk as emerging from and shaped within transition and as framed in broader terms of learning and the construction of subjectivity. In further accounting for the sociocultural features that influence the role that information literacy plays in perceiving, understanding, and managing hazard, this chapter establishes the basis for future theoretical work in the area as well as creating a reflexive jumping off point for pedagogical considerations. This conceptual framework is rounded off by Chapter 7, which establishes methodological considerations for the study of risk-informed information practice, including related to how we access and make risk-informed information practice visible. This chapter also considers the ethical concerns of risk-informed information practice, including the potential impact of risk research on the researcher.

The book will then finish with a conclusion that draws together the empirical, methodological, and theoretical strands of this book. Summarising and synthesising the key characteristics of risk-informed information practice, this conclusion section also suggests future directions for research as well as drawing out its implications for practice.

Purpose of this book

In establishing risk-informed information practice, this book highlights and encourages further interrogation of risk's informational thread. While

information and risk research have considered some of the ideas that are brought together here under the framing of risk-informed information practice, there has been little consistent focus, with research additionally often typically remaining limited to an exploration of information from within a technoscientific understanding of risk. One of the primary purposes of this book, therefore, is to create an initial definition and conceptual framework through which risk-informed information practice is foregrounded. Centring on the production of core themes that will provide insight into key and critical features of risk-informed information practice, the conceptual framework will provide researchers in both the risk and information fields, as well as related areas, with a starting point for interrogating the shape of risk information activities. Risk research acknowledges that too much effort has been placed upon "debating the merits of competing paradigms and metatheoretical orientations" (Rosa, 1998, p. 16) to the exclusion of more complex work understanding human responses to risk. Risk-informed information practice provides one such attempt to move beyond a dominant focus on risk paradigms while further establishing the importance of exploring risk as an "inherently interdisciplinary area" (Rosa, 1998, p. 16).

At the same time, the disjointed nature of research to date means that a secondary purpose of the book is to use the prominence that risk-informed information practice accords to information literacy to open research up to more complex questions related to how risk responses are informed. Beyond the recognition that experts and lay people respond differently to risk, for example, how do the conditions of a social site constrain and enable the construction of risk knowledge, including by shaping what forms of information are legitimised within a specific setting? More specifically, what adaptive information strategies do people develop in the face of challenging circumstances and how do these actions impact the development of increasingly knowledgeable performance? The dynamic shape of risk-informed information practice also highlights the need to examine how risk knowledge is coordinated and aligned over time as well as the tools and resources that are needed to support these goals. A focus on information literacy means that risk-informed information practice moves beyond the traditional emphasis on knowledge transmission, which positions risk responses as linked to the conveying of official messaging, to centre more nuanced considerations of how people come to know. The emphasis on information rather than merely journalism and mass media (e.g., Anderson, 2006) also foregrounds broader insight into how risk is informed, including what is recognised as useful and how this transformation occurs (Bateson, 1972, p. 453).

A final purpose of this book is to contribute to broader theorising in information literacy. Information literacy has frequently been understood in functional or problem-solving terms rather than as an empirical object to be studied and theorised. However, the introduction of the field's first theory of

information literacy (Lloyd, 2017) as well as the first full-length volume on its theorisation (Hicks et al., 2023) means that conceptual work is starting to receive more scholarly attention and interest. The current volume contributes to this shift in focus through theorising information literacy as a core social process, as well as extending theoretical work related to uncertainty, liminality and transition. More broadly, this book contributes to more theoretically engaged scholarship through examining the value of risk theory to information literacy research, including by drawing attention to the assumptions that risk theory makes about key information literacy terms and the understandings to which theoretical risk work opens and closes information literacy and related methodological choices (cf. Hicks et al., 2023).

References

American Library Association (ALA). (1989). *Presidential committee on information literacy. Final report*. American Library Association.

Anderson, A. (2006). Media and risk. In G. Mythen & S. Walklate (Eds.), *Beyond the risk society: Critical reflections on risk and human security* (pp. 114–131). Open University Press.

Aven, T., & Renn, O. (2009). On risk defined as an event where the outcome is uncertain. *Journal of Risk Research*, *12*(1), 1–11.

Bates, M. (2010). Information behavior. In M. J. Bates & M. N. Maack (Eds.), *Encyclopedia of Library and Information Sciences* (pp. 2381–2391). CRC Press.

Bateson, G. (1972). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. University of Chicago Press.

Battistelli, F., & Galantino, M. G. (2019). Dangers, risks and threats: An alternative conceptualization to the catch-all concept of risk. *Current Sociology*, *67*(1), 64–78.

Boholm, Å. (2003). The cultural nature of risk: Can there be an anthropology of uncertainty? *Ethnos*, *68*(2), 159–178.

Boholm, Å., & Corvellec, H. (2011). A relational theory of risk. *Journal of Risk Research*, *14*(2), 175–190.

Boholm, M. (2012). The semantic distinction between "risk" and "danger": A linguistic analysis. *Risk Analysis: An International Journal*, *32*(2), 281–293.

Bradbury, J. (1989). The policy implications of differing concepts of risk. *Science, Technology & Human Values*, *14* (4), 380–399.

Bruce, C. (2008). *Informed learning*. Association of College and Research Libraries.

Buckland, M. (1991). Information as thing. *Journal of the American Society for Information Science*, *42*(5), 351–360.

Chatman, E. A. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, *47*(3), 193–206.

Choo, C. (2017). Seeking and avoiding information in a risky world. *Information Research*, *22*(3).

Douglas, M. (1966/2002). *Purity and danger: An analysis of concepts of pollution and taboo*. Routledge.

Douglas, M., & Wildavsky, A. (1982). *Risk and culture: An essay on the selection of technological and environmental dangers*. University of California Press.

Giddens, A. (1991), *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.

Hicks, A. (2018). *The theory of mitigating risk: Information literacy and language-learning in transition* (Doctoral dissertation, Högskolan i Borås, Sweden).

Hicks, A. (2022). The missing link: towards an integrated health and information literacy research agenda. Social Science and Medicine, *292*, 114592.

Hicks, A. (2023). Risky (information) business: An informational risk research agenda. *Journal of Documentation*, *79*(5), 1147–1163.

Hicks, A., & Lloyd, A. (2023). Reaching into the basket of doom: Learning outcomes, discourse and information literacy. *Journal of Librarianship and Information Science*, *55*(2), 282–298.

Hicks, A., Lloyd, A., & Pilerot, O. (2023). *Information literacy through theory*. Facet.

Infant Feeding Alliance (n.d.). Infant Feeding Alliance. https://www.infantfeedingalliance.org.uk/

Kazansky, B. (2021). 'It depends on your threat model': The anticipatory dimensions of resistance to data-driven surveillance. *Big Data & Society*, *8*(1).

Kuhlthau, C. (2004). *Seeking meaning: A process approach to library and information services*. Libraries Unlimited.

Limberg, L., & Sundin, O. (2006). Teaching information seeking: Relating information literacy education to theories of information behaviour. *Information Research*, *12*(1).

Lloyd, A. (2006). Information literacy landscapes: An emerging picture. *Journal of Documentation*, *62*(5), 570–583.

Lloyd, A. (2007). Learning to put out the red stuff: Becoming information literate through discursive practice. *The Library Quarterly*, *77*(2), 181–198.

Lloyd, A. (2017). Information literacy and literacies of information: A mid-range theory and model. *Journal of Information Literacy*, *11*(1), 91–105.

Lloyd, A. (2021). *The qualitative landscape of information literacy research: Perspectives, methods and techniques*. Facet Publishing.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: The unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation*, *77*(3), 1052–1072.

Luhmann, N. (1993). *Risk: A sociological theory*. De Gruyter.

Lupton, D. (2013). *Risk*. Routledge.

McNicholas, C., & Marcella, R. (2022). Information behaviour in high risk decision making: Study of international postgraduates. *Journal of Information Science*, *50*(6), 1525–1540.

Packer, M. & Goicoechea, J. (2000). Sociocultural and constructivist theories of learning: Ontology, not just epistemology. *Educational Psychologist*, *35*(4), 227–241.

Pettigrew, K., Fidel, R., & Bruce, H. (2001). Conceptual frameworks in information behaviors. *Annual Review of Information Science and Technology*, *35*, 43–78.

Pilerot, O., & Lindberg, J. (2011). The concept of information literacy in policy-making texts: An imperialistic project?. *Library Trends*, *60*(2), 338–360.

Renn, O. (1992). *Concepts of risk: A classification*. Universitätsbibliothek der Universität Stuttgart.

Renn, O. (2008). Concepts of risk: An interdisciplinary review part 1: Disciplinary risk concepts. *GAIA-Ecological Perspectives for Science and Society*, *17*(1), 50–66.

Rigakos, G. S., & Law, A. (2009). Risk, realism and the politics of resistance. *Critical Sociology*, *35*(1), 79–103.

Rosa, E. A. (1998). Metatheoretical foundations for post-normal risk. *Journal of Risk Research*, *1*(1), 15–44.

Royal Society. (1992), *Risk: Analysis, perception and management, report of a royal society study group*. The Royal Society.

Säljö, R. (1979). Learning about learning. *Higher Education*, *8*(4), 443–451.

Schatzki T. (2001). Introduction: Practice theory. In T. Schatzki, K. Knorr Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1–14). Routledge.

Thaler, R., & Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth and happiness*. Penguin.

Wilkinson, I. (2001). Social theories of risk perception: At once indispensable and insufficient. *Current Sociology*, *49*(1), 1–22.

Wilson, P. (1973). Situational relevance. *Information Storage and Retrieval*, *9*(8), 457–471.

Wilson, T. D. (2000). Human information behavior. *Informing Science*, *3*(2), 49–55.

2

THE CONCEPTUAL BACKGROUND OF RISK-INFORMED INFORMATION PRACTICE

Influences and conceptual approaches

The increasing importance that has been accorded to both information literacy and risk since the 1970s means that each field of study lays claim to a rich (and evolving) theoretical heritage. A consideration of the theoretical influences that shape the construction of each concept will situate and lay the groundwork for the elaboration of risk-informed information practice. The chapter takes information literacy and risk in turn. Presenting the theoretical influences that shape each concept, the chapter further unpacks the theoretical heritage of both information literacy and risk by contrasting a sociocultural approach with common alternative perspectives. The chapter finishes by presenting an overview of how the concepts of information and risk have been approached in empirical work to date.

As Chapter 1 establishes, risk-informed information practice is understood through a sociocultural lens. Positioning both information literacy and risk as phenomena that are "socially embedded, shaped by culturally based notions about the state of the world, what the world consists of and how it works" (Boholm, 2003, p. 161), a sociocultural perspective acknowledges that knowledge structures are built and sustained in relation to the political, cultural and historic contexts of knowledge production. The recognition that knowledge is negotiated rather than found or revealed means that a sociocultural perspective also recognises how these relationships are tied up with questions of power and privilege. A sociocultural perspective, which is also referred to as a social constructionist position, forms a "confluence of several streams of thought" rather than a "singular or unified" account or dialogue (Gergen, 2019, p. 73–74). Shaped across various disciplines, including linguistics, literacy

DOI: 10.4324/9781032719627-2

theory, critical theory, the history of science and the sociology of knowledge (Gergen, 2019, pp. 73–74), the sociocultural perspective is typically grounded by three basic tenets, the sociocultural origins of knowledge, the centrality of language and the politics of knowledge (Gergen & Gergen, 2008). Positioning meaning as the product of dialogue or sustained through social process, these precepts also draw attention to the idea that knowledge is specific to historically and culturally situated social processes (Gergen & Gergen, 2008, p. 817). The focus on interaction further acknowledges the centrality of language, as the means through which "we express and realize a certain way of being in the world" (Schwandt, 2003, p. 307), to social action. Together, this theoretical approach lays the groundwork for a rich conceptualisation of risk-informed information practice.

Information literacy: Theoretical influences

The chapter starts by presenting the theoretical influences of information literacy, which forms the foundational concept that underpins risk-informed information practice. Information literacy has been conceptualised through various theoretical perspectives of which the sociocultural approach forms the newest approach. Predominantly arising from the work of Australian and Nordic theorists over the last two decades, the sociocultural approach to information literacy has also been influenced by theoretical work from sociology, education and organisational studies, amongst other fields. This section will present the mid-range theory of information literacy on which risk-informed information practice draws as well as literacy as social practice and practice theory, which form the two other sociocultural theories that inform how information literacy is shaped, to situate the conceptual basis for risk-informed information practice.

The first theory that shapes risk-informed information practice is Lloyd's (2017) more recently established mid-range Theory of Information Literacy (TOIL). Derived from empirical study of information literacy within a variety of workplace and everyday settings, the theory of information literacy positions information literacy as a practice that shapes performance within everyday life through connecting people to the knowledge base of a specific setting (Lloyd, 2017, p. 91). Establishing these sites of knowledge as accessed through epistemic, social and physical information modalities, the theory of information literacy acknowledges that local ways of knowing reference objective sources of information as well as more tacit, physical and social experiences. In further recognising that engagement within these information environments supports the construction of information landscapes, which are defined as intersubjective spaces that are created through the development of knowing that is "of relevance" to a person (Lloyd, 2017, p. 94), the theory of information literacy also cements the contextual and collective shape of information activities. Applied to risk-informed information practice, the theory of information

literacy introduces a corporeal focus that has previously been missing from risk research as well as reconceptualising social sources in terms of the collective support they provide. The emphasis on intersubjectivity further draws attention to developmental change, including the shift in identity that is produced through an increasingly knowledgeable engagement with information.

Literacy as social practice is a multifaceted theoretical perspective that centres people and their literacy practices, or what people do with literacy (Barton & Hamilton, 1998, p. 6). Emerging through anthropological research into how language "instantiates culture" (Perry, 2012, p. 52), and most comprehensively explored in the field of education, literacy as social practice establishes that reading and writing are social acts that are "rooted in a particular world-view" rather than universal skills that will autonomously lead to improved equality and performance (Street, 2003, p. 77). Applied to risk-informed information practice, the work that literacy as social practice does to problematise "what counts" (Street, 2003, p. 77) as legitimate practice at any given time and place helps us to consider the power structures that underlie risk responses, including what is considered to form literate or illiterate activity. The reconceptualisation of literacy practices around the diverse forms and meanings that reading and writing assumes within an environment further acknowledges that risk-informed information practice is shaped in relation to informal learning processes as well as formal or institutional goals. Highlighting the importance of recognising vernacular literacy practices, which arise from everyday settings and concerns (Barton & Hamilton, 1998, p. 10), these ideas suggest that risk-informed information practice is connected to the layered resources of a setting, including sounds and smells as well as textual resources.

The third theory that has shaped information literacy is practice theory. Much like the sociocultural perspective, there is no single or unifying practice theory (Nicolini, 2012, p. 1) but most practice theories are recognisable through the positioning of "social practices as the central phenomenon in social life" (Schatzki, 1996, p. xi). Establishing practices rather than people as the "starting point for theorizing human affairs" (Nicolini, 2012, p. 162), a practice-based sensitivity provides the means to explain complex organisational phenomena, including how social experiences unfold, interconnect and are made durable (Nicolini, 2012, p. 2). In turn, the distinction that practice theory makes between complex integrative practices that constitute a domain, and dispersed practices that concentrate on one action yet course through a variety of sectors (Schatzki, 2002, p. 88), centres information literacy within the composition and coordination of social phenomena (Lloyd, 2012, p. 777). More specifically, the conceiving of practices as "embodied, materially mediated arrays of human activity" (Schatzki, 2001, p. 11) draws attention to the importance of know-how and ways of wanting, feeling and understanding (Reckwitz, 2002, p. 253) to risk-informed information practice as well as the "compositional significance" of objects, tools and artefacts (Schatzki, 2010, p. 132).

The recognition that practices are held in place through arrangements or setups of material objects and structures that prefigure practice (Schatzki, 2012, p. 16) further positions risk-informed information practice as shaped in relation to conditions that qualify the possible paths that a person could take (Schatzki, 2002, p. 44).

Risk within information research

To date, risk has played an underdeveloped role within information research. While the key themes from this literature parallel some of those that are found in risk research, the more explicit focus on information means that there are other areas of significant difference. Considered together, these literatures support a more expansive picture of risk-informed information practice.

Cognitive approaches

One of the major parallels between risk and information research is the typical exploration of risk through a cognitive or sociotechnical lens. However, a focus on information means that research has focused more explicitly on anticipating how risk messaging influences people rather than expert and layperson hierarchies, as in risk literature. The premise that preventive risk behaviour is predicated upon the rational seeking out and critical analysis of risk information (Griffin et al., 1999, p. S232; McNicholas & Marcella, 2024, p. 3) further means that studies centre the various factors that might influence how people process information as researchers endeavour to "predict" responses to risk messaging (Griffin et al., 1999, p. S231). Most famously explored within Griffin et al.'s (1999) *Risk Information Seeking and Processing* (RISP) model as well as Kahlor's (2010) *Planned Risk Information Seeking Model* (PRISM), these models draw upon rational behaviour theory to present individuals as calculating or self-interested "information processing units" who take in risk information and deal with it in more or less biased ways (Lupton, 1999, p. 31). The emphasis on the minimisation of interference for the correct transmission of information means that literature also overtly positions information as distinct "semantic units" that operate within the classic sender-receiver model of communication (Day, 2000, p. 806).

Two variables that are seen to have a particularly important effect on responses to risk information are information (in)sufficiency and information gathering capacity. Information (in)sufficiency, which refers to the gap between the knowledge that people possess and the knowledge they need to deal with the topic (Huurne & Gutteling, 2008, p. 848), is seen to compromise risk responses by impeding knowledge about how to behave (Griffin et al., 1999, p. S236). While later research suggests that gaps may be linked to dissatisfaction with information rather than amounts of knowledge (Huurne & Gutteling,

2008, p. 858), the emphasis on individual deficiency neglects to account for the broader social conditions and interactions that shape access to information. A second commonly mentioned risk variable is information gathering capacity which refers to the "ability to perform the information seeking and processing steps necessary for the outcome one desires" (Griffin et al., 1999, p. S237). Originally invoking an individual's opportunity or motivation to learn about risk, particularly when it involves "cognitive effort" or the collection of "non-routine" information (Griffin et al., 1999, p. S237), information gathering capacity has since also been understood in terms of the information skills or competencies that provide a 'bulwark' against risk exposure (Buchanan & Husain, 2021; Nara, 2007; Palupi et al., 2022). However, the focus on discrete abilities as well as the tangibility of information further spotlights normative contexts and accountability.

The role that emotion plays in influencing responses to risk is another prominent theme within information literature. Emotion and affect have a complex history within information research, where dominant systems-centred models have often precluded a focus on individual feelings (Westbrook, 2015). However, while the more recent affective turn has since started to acknowledge the impact that positive and negative emotional states have upon information activity, research into risk information research still tends to understand emotion as separate to and from cognitive reasoning and the analytic process (cf. Lupton, 2013b, p. 635). Within this framing, which is most clearly exemplified by Catellier and Yang's (2012, p. 900) update to the *RISP* model, emotion is seen as diverting individuals from the rational assessment of risk, including seeking information about preventive measures. These issues are even more pronounced in "high-risk" situations, where decisions based on emotional behaviour rather than more rigorous forms of information are seen to increase risk for postgraduate students (McNicholas & Marcella, 2024, p. 11) or disrupt the information engagement process within intimate partner violence (Westbrook, 2015). Emotions are further seen to derail responses to risk by encouraging information avoidance, which is positioned as blocking a "well-informed public understanding and engagement with the risks posed by major hazards" (Choo, 2017, n.p.). Refocusing attention on interference to rational decision-making, these studies also provide little space to acknowledge the complexity and ongoing evolution of emotional responses within risk situations, including the impact of positive emotion.

Sociocultural approaches

While the sociocultural approach is now firmly embedded within the broader field of information research, there has been no explicit corresponding turn within risk information research, unlike in risk research. Linked, undoubtedly, to the limited emphasis that information research has placed on risk,

sociocultural themes can nonetheless be clearly traced within a handful of key studies. Pioneering work in the area comes from Elfreda Chatman (1996), who noted how the social cost of activity curbed how the "outsiders" with whom she worked, including janitors and care home residents, shared or asked for information. These observations, which demonstrated how people weighed up whether revealing information would create too great a risk for them, including related to ongoing employment or future institutionalisation (Chatman, 1996, p. 199), subsequently led her to establish risk-taking as a principal component of an impoverished lifeworld. Providing stark insight into the impact that social context, including secrecy, has on risk information activity, Chatman's research has since been extended through Gibson et al.'s (2021) work examining place-based "danger zones." Establishing how engaging in information spaces, such as libraries, create a wide array of social or physical costs for teens and tweens of colour, including the potential to lose access to information resources, Gibson et al. (2021) demonstrate how a focus on spatiality opens up risk-informed information practice to a more nuanced understanding of the impact that social systems have upon risk responses.

Since Chatman, the most extensive focus on risk within information research has been found within the work of Hicks and Lloyd, who explicitly employed the theoretical construct of risk as a framing device for their research into language-learning overseas (Hicks, 2018, 2019) and the COVID pandemic (Lloyd & Hicks, 2021, 2022). Providing the first formal alignment with risk literature, this research also established a pathway for sociocultural risk information research by challenging assumptions that had emerged from the cognitive tradition. The typical focus on information seeking as the means to fill the information sufficiency gap, for example, is queried through Hicks' (2018, 2019) research that demonstrates how language-learners mitigate risk through a variety of information activities, including through recording, documenting, and avoiding information. A focus on varied information activity is also noted in Gibson et al.'s (2021) work, where teens and tweens of colour are seen to identify risk through "testing" a potential information source for trustworthiness, for example by using "forbidden words," or through observing adult reactions (and distributing this responsibility amongst peers). The traditional cognitive focus on exploring responses to risk messaging, which presupposes the positioning of risk as an objective hazard, is further challenged through Lloyd and Hicks' (2021, 2022) exploration of the COVID-19 pandemic, which centres how people shape and negotiate risk rather than merely how they respond to scientific or governmental communication campaigns. Expanding understanding about the complexity of risk information environments, these developments will be explored more thoroughly in the case studies that follow.

A final contribution of sociocultural research relates to how risk-informed information practice is shaped by the broader social context. Introducing a new focus on how risks are knowable, research draws attention to the social

tensions and dynamics that structure information interactions as well as the discourses that frame the information environment. The concept of trust provides one such example. While trust has been recognised by risk research as important to risk responses, Chatman's (1996, p. 196) research extends these ideas by illustrating how the establishment of "trustworthy sources" creates a situation that would be supportive of information sharing within risky situations, whether this is trusted insiders or people who had proved themselves to be "worthy of belief" (Chatman, 1996, p. 197). Introducing a new emphasis on self-protection, this research also demonstrates how risky situations are also predicated on opportunities to build networks of trust with others (Chatman, 1996, p. 197). Perhaps the concept that lies at the heart of sociocultural risk information research, however, is the question of power, including how risk information seeking is shaped by social support systems in which risk-taking is rewarded (Chatman, 1996, p. 204). Gibson et al.'s (2021, p. 12) work with tweens and teens of colour further demonstrates how power imbalances influence what risk information activities are valued, with unaccepted self-protective information activities often seen as "maladaptive" rather than as a critical part of developmental processes. These findings provide several jumping off points for risk-informed information practice research.

Risk and information professionals

To date, the focus of this chapter has been on examining how information shapes individual risk responses. However, information research has also started to engage with risk and information professionals, which parallels risk research into professional risk activities (explored below). In contrast to risk research, however, the emphasis on expert knowledge means that most of these studies have taken a cognitive approach to risk wherein emphasis is placed on identifying risk and controlling for risky behaviour. Thus, the goal of Haynes and Robinson's (2023) Delphi study with information professionals is to establish risks related to privacy while Jacobson et al. (2022) and Cheshire et al. (2010) aim to account for the individual behaviours that might influence the perception of online risk. An exception to this cognitive research is found in the study of Häußler et al. (2023), who examine the risks of using a search engine. While this research focuses on establishing what risks exist rather than how these risks are constructed, the decision to survey everyday search engine users provides useful insight into the social mediation of online hazards. A more nuanced approach comes from Frank (2020), who explicitly adopts a sociocultural approach to explore how digital preservation experts construct risk within their everyday work. Bearing resemblance to risk research into professional practices, Frank's research establishes eight 'factors' that shape a professional understanding of risk, including trust and uncertainty as well as less well-explored ideas such as vulnerability and political culture. While it is not

clear how digital preservation experts contributed to the construction of this model, the paper's emphasis on the socially constructed shape of digital preservation work provides an example of how professional risk expertise can be unpacked.

Related concepts within information research

While risk remains relatively underexplored within information research, scholars have examined related concepts such as safety and stigma. Although this literature rarely explicitly focuses on the concept of risk, it touches on similar concerns and preoccupations. Research into the safety work carried out by nurses, for example, highlights how "knowing the patient" facilitates the ongoing monitoring of risk, a clear reference to the value of tacit and experiential knowledge within high-stakes situations (MacIntosh-Murray & Choo, 2005, p. 1334). In turn, offshore installation managers' reliance on checklists and mnemonics, which provide "clear, simple and unambiguous information about the actions to be taken" if their minds go blank in an emergency (Marcella & Lockerbie, 2016, p. 557), draw attention to the material dimensions of risk knowledge. Interestingly, Marcella and Lockerbie (2016, p. 561) also hint at the social shape of risk knowledge through pointing out that official information sharing is often less helpful than might be presumed within a safety situation, particularly in informal situations when minute-taking inhibits the sharing of the "war-stories" that might inform future risk responses (Marcella & Lockerbie, 2016, p. 561). Other studies talk more positively of safety and technique workshops, which are seen to provide the means for the sadomasochist community to function in a "risk aware" manner (Harviainen, 2015, p. 423).

Research examining stigma provides further insight into information activities within personally or socially risky situations. One frequent theme is the focus on self-protective behaviours; the risk of being outed as infected or as affected by HIV/AIDs means that people often engage in "covert information seeking," including destroying treatment information or refraining from using the internet for fear of their search histories being found (Namuleme, 2015, p. 64). Similarly, maximum security prisoners discuss how they refrain from interacting with prison staff, either because of a lack of trust or for fear of being seen as a "grass" (Canning & Buchanan, 2019, p. 425). Prisoners may also self-censor information on phone calls for fear of who is listening in (Canning & Buchanan, 2019, p. 426). Providing further evidence of the impact that social norms have on risk information activities, this research also recognises the complexity that lies behind information avoidance in risk situations.

Somewhat intriguingly, research into the threats raised by the risk society (Beck, 1992) remains limited within information literature. Research exploring the risks of climate change is conspicuous by its absence, although Haider and

Rödl (2023) touch on how the Google search engine shapes engagement with environmental issues. Other natural disasters and crisis situations, including floods, hurricanes, tornadoes and fires, as well as transportation disasters feature more prominently, including through the related field of crisis informatics, which refers to the "interconnectedness of people, organizations, information and technology during crises," (Hagar, 2010, p. 10). Drawing attention to the importance of social support during disasters, this literature also highlights how monitoring information (e.g., Bunce et al., 2012) and observing environmental or organisational cues (e.g., Muhren & Walle, 2010) provide a way to understand the severity of a situation. Most recently, information research has turned to explore responses to the COVID-19 pandemic (examined further in Chapter 3), where trust is often seen as instrumental to risk responses. However, while this research provides insight into the role that information plays within crisis situations, few studies have explicitly considered disasters in relation to risk, including related to the development of knowing or expertise.

Risk: Theoretical influences

The chapter continues by examining the theoretical influences on risk, which forms the second concept that shapes the elaboration of risk-informed information practice. Just as with risk definitions (see previous chapter), risk has been conceptualised through a variety of theories and theoretical approaches. In adopting a sociocultural perspective, (also known as the social science (Renn, 1998), constructivist or discursive approach to risk (Jasanoff, 1998)), risk-informed information practice is influenced by the work of anthropologist, Mary Douglas, as well as that of other sociocultural risk theorists. This section will draw out key themes from this scholarship to begin to illustrate the emerging shape of risk-informed information practice.

The theoretical influence to which risk-informed information practice is most indebted is the work of Douglas, which Lupton (2013a) has categorised as forming a cultural/symbolic approach to risk. Shaped in relation to anthropological work carried out in Africa (Perri 6 & Richards, 2017), Douglas' conceptualisation of risk forms part of her "trajectory" (Lupton, 2013a, p. 52) of theorising on social organisation, which includes how concepts such as pollution, which endangers the purity of the body, and taboo, which challenges the stability of a culture, are used to uphold community values. From this perspective, risk is positioned as anything that forms a threat to order and integrity, whether this refers to the individual body or the symbolic body of a society. For Douglas, then, risk is uniquely understood as a social endeavour that is coordinated through rather than "privileged from contemporary cultural pressures" (Douglas, 1985, p. 3). Distancing risk from individual decision making (Douglas, 1985, p. 80), the emphasis on cultural concerns determines that risk is shaped by shared expectations, which she refers to as "culturally learned assumptions and

weightings' (Douglas, 1992, p. 58). In further highlighting that these communal values are founded on socially established "norms of acceptability" (Douglas, 1985, p. 69) that reference a group's agreed levels of loss and harm, Douglas (1985, p. 81) additionally draws attention to the political, ethical and moral complexities that adherence to a cultural "mnemonic system" brings. In centring social organisation, Douglas' work notably differs from the later sociocultural association of risk with catastrophe (Wilkinson, 2001).

In conceptualising risk as a mutual concern, Douglas draws upon two key concepts that run across her scholarly work: boundaries and blame. Boundaries form one of the most enduring features of Douglas' theorising on risk. Delimiting between the inside and outside of the individual body, or what is dirty and impure, Douglas (1966, p. 141) also positions social groups as defined by margins that collectively establish what threatens or endangers a specific community, whether internal or external (Douglas, 1966, p. 123). From this perspective, risk is constituted as anything that endangers boundaries, whether this is a threat to social order or a violation of cultural values and responsibilities (cf. Douglas, 1966, p. 172). The emphasis on the integrity of the community also draws attention to how risk is entwined with questions of solidarity, or self and subjectivity (cf. Douglas, 1966, p. 173). In turn, a focus on boundaries introduces questions of blame as local communities seek to maintain cultural values; as Douglas (1992, p. 8) points out, "danger is defined to protect the public good and the incidence of blame is a by-product of arrangements for persuading fellow members to contribute to it." Positioning people who do not conform as a "potential threat to order because of their abnormality or otherness" (Alaszewski, 2005, p. 216), blame also recognises the politicisation of risk, which is predicated upon what influential actors value or position as needing to be preserved (Douglas, 1992, p. 44). At the same time, and unlike the governmentality perspective on risk (explored below), the emphasis on how the community is brought together means that Douglas' view of blame reinforces the sociocultural shape of risk rather than centring the exclusion of offenders.

In grounding risk within broader questions of social organisation, Douglas' theorisation provides a rich basis for risk-informed information practice. However, certain inconsistencies means that the cultural/symbolic approach to risk does not form its only sociocultural influence. Douglas' focus on cultural process, for example, is undermined through her adoption of a critical realist or a "weak" constructionist perspective, wherein risk is positioned as objective, albeit mediated through sociocultural processes (Lupton, 2013a, p. 55). Her framing, which contrasts with the relativist insistence that "anything *can* be a risk; it all depends on how one analyses the danger, considers the event' (Ewald, 1991, p. 199, italics in the original), has also been critiqued for distancing corporate interests and government hierarchies from cultural theorising (Perri 6 & Richards, 2017, p. 69). Douglas' later work with Wildavsky (1982), which has been largely

censured for its partisan attack on the environmental movement (Perri 6 & Richards, 2017, p. 68), also weakens her earlier emphasis on social organisation. While their introduction of a grid-group model to distinguish between risk logics and rationalities extends understanding of the social construction of risk, its individualistic focus as well as its equation of culture with ideology (Perri 6 & Richards, 2017, p. 71), further distances Douglas from a sociocultural stance. For these reasons, risk-informed information practice is positioned as shaped but not uniquely defined by Douglas' cultural/symbolic approach to risk.

In drawing upon the work of Mary Douglas, risk-informed information practice stands apart from two other more well-known sociocultural approaches to risk; Beck's and Giddens' risk society thesis and Foucauldian governmentality. The concept of the risk society, which emerged from Beck's (1992, 1995) and Giddens' (1991) work examining the consequences of globalisation and modernity, forms a particularly well-known approach to risk. Centring on the premise that industrialisation and subsequent wealth creation has increased the number and type of risks to which people in Western societies are exposed, the risk society thesis focuses on large scale risks to human life, arguing that industrialisation has made risk less evident to the senses (Beck, 1992, p. 21). In further arguing that science has failed to respond adequately to these concerns, Beck (1992, p. 21) also positions risk as mediated by reflexive or critical examination that questions the state of the world. Beck's (1992) and Giddens' (1991) writings are seen to fall under a sociocultural umbrella due to their labelling of risk as socially mediated, whether within everyday or scientific contexts. However, the emphasis on the large-scale institutional or structural features of risk means that this work also overlooks the ordinary concerns and experiences that are a feature of risk-informed information practice, including related to power and other inequalities. The individualisation of risk responses further distances the risk society thesis from risk-informed information practice.

The third sociocultural approach to risk that is typically identified is the governmentality approach. Emerging from the work of Foucault (1991), although he did not specifically dwell on the concept, the governmentality perspective differs from other sociocultural perspectives through an emphasis on how risk operates, particularly in relation to governmental concerns. Within this framing, risk is positioned "as a governmental tool of regulatory power" (Lupton, 2013a, p. 116) that both reflects and monitors deviance from the standardised behaviours or norms that make a society productive. Rendering bodies in terms of populations, the central role given to the exercise of power introduces a new focus on surveillance and correction, particularly for high risk individuals who require interventions by virtue of their divergence from the broader population (Lupton, 2013a, p. 117). In providing guidelines and advice, expert knowledge supports an active emphasis on self and subjectivity as individuals are encouraged to pursue self-actualisation or what Foucault (1988, p. 18) describes as "happiness, purity, wisdom, perfection or

immortality." At the same time, the governmental focus detracts from local risk responses in favour of a policy-oriented approach centred on the operationalisation of citizenship. And, while governmental perspectives on risk adopt a strong constructionist approach, wherein risk is seen to be constructed through discourse and institutional thought, a lack of engagement with how broader social narratives are resisted or negotiated further distances the governmentality perspective from the priorities and emphasis of risk-informed information practice.

Technoscientific and cognitive approaches to risk

When considering risk, it has become almost commonplace (e.g. Lupton, 1999, Zinn, 2009; Brown, 2015) to contrast the sociocultural approach with other risk paradigms, which include the techno-scientific and the cognitive (also known as the realist (Jasanoff, 1998) or psychometric perspective (Slovic, 1987)). The technoscientific approach is arguably the most well-known approach to risk, with antecedents in psychology, economics and statistics, amongst other mathematical fields. Positioning risk as an objective fact that exists "independently of humans" (Bradbury, 1989, p. 382), the technoscientific perspective aims to identify the probability and consequences of adverse events and to model its impact on populations. In further linking risk management with non-personal factors, such as efficiency, this approach also positions rational, expert thinking as the means to bring disorder under control (Bradbury, 1989, p. 383). Yet, while the measurement and calculation of risk may be appropriate for engineering decisions (Bradbury, 1989, p. 383), it falls short within a social context given that all risk judgement is the product of a way of seeing. In turn, the overwhelming focus on differences between experts and laypeople, which almost universally equates the public's failure to make scientific decisions with deficiency or a lack of knowledge, precipitates simplistic responses. As Douglas (1992, p. 31) notes, "it is most unlikely that better communication and more education would reconcile differences of opinions on risks" given that differences are political rather than intellectual. Risking compromising the complexity of risk responses, these issues also limit our understanding of information by promoting rational and transmission-based models of communication wherein informative content is neatly transported via neutral vessels.

In contrast, the cognitive perspective on risk, which forms the other major alternative to sociocultural perspectives, centres the various mental strategies or personality attributes that are seen to shape a person's response to risk. Established through psychological testing, these variables are seen to produce "large and persistent biases" (Slovic, 1987, p. 281) that lead people to under or overestimate risk depending on proximity, media attention or of likelihood of occurrence, amongst other issues (Slovic, 1987). Positioning risk as an expertly defined objective phenomenon, the cognitive approach also draws upon

rationalism to frame individuals as "hedonic calculators calmly seeking to pursue private interests" (Douglas, 1992, p. 13). Unlike the techno-scientific approach, a cognitive perspective acknowledges the need to pay attention to "how people think about and respond to risk" (Slovic, 1987, p. 280), and the introduction of "affect heuristics" further recognises the role that emotions play in shaping risk responses (Slovic et al., 2007). However, the focus on cognitive and sensory functioning ensures that risk responses are positioned as individualistic and as uni-dimensional, or as distanced from meaning and social values. More complexly, the elevation of the self-interested researcher also highlights how the cognitive perspective is premised upon so-called interferences to lay risk perception, another classic reference to stimulus-response or transmission information exchange. Just as with the technoscientific perspective, these ideas provide a restricted understanding of the role that information plays within risk.

Information within risk research

The concept of information has played a recognisable if peripheral role within much risk research to date, with the focus of these studies being linked to the research approach that is taken. An overview of themes within this research will further help to situate risk-informed information practice.

Cognitive approaches

Information concepts and ideas have been surprisingly under-explored within risk research to date. Before risk research moved round its interpretive or sociocultural turn, information was often understood very straightforwardly; experts transmitted appropriate risk information to the layperson who was poised, ready to "rationally review evidence to identify and choose the best course of action" (Alaszewski & Horlick-Jones, 2003). Drawing on a "hierarchy of rationalities" (Seear, 2009, p. 368), in which the expert is assumed to be the most rational and the layperson the least, the realist/rational-actor model (Alaszewski, 2005) adopts what Douglas (1992, p. 30) refers to as an "innocent model of risk" (Douglas, 1992, p. 30), wherein it is assumed that people would behave logically (and responsibly) "if only they knew the facts" (Horlick-Jones & Prades, 2009, p. 410). Informationally, however, these ideas create a limited framework for understanding how risk is informed. The positioning of people as acting rationally when they are "complying with expert advice" (Seear, 2009, p. 368) for example, introduces certain groups as better placed to calculate hazards and dangers than others. The centring of risk management on cognitive reasoning further sidelines other forms of knowledge, including emotion, which are seen to distort rational judgement by being too personal or unstable for the basis of decision-making (Zinn, 2008, p. 446).

These issues are particularly visible within literature that explores the role that mainstream news media, as a specific form of information, plays in shaping risk. While research acknowledges that journalism brings "experts to us" (Stallings, 1990, p. 91), concern is also frequently raised about how this form of media may spark inappropriate responses including "denial or irrational fear" (Klaidman, 1990, p. 122) or risk amplification and attenuation (Lupton, 1999, p. 35). The driving professional and organisational interests of TV, news and radio media (Sapolsky, 1990, p. 90), for example, is seen to interrupt or create a 'disturbance' in what would otherwise be a straightforward communication of risk between experts and laypeople (Bucchi, 2008, p. 59). These fears have only been intensified by the growth of social media, with literature fretting about how a lack of editorial control and a reliance on emotional anecdotes may manipulate "naive views" (Slovic, 2000, p. 185). Beyond news and social media, allusions to rational hierarchies of knowledge and, by implication, professional beneficence (Playle & Keeley, 1998), are most recently traced in governmental use of nudge theory, wherein risk information is used to "influence the motives, incentives and decision making of groups and individuals" (Boyes, 2017). Cognitive discourses must consequently be seen as further entwined with modernist and neoliberal ideologies that promote individual responsibilities, including seeking appropriate advice, while recognising the role that experts play in making subjects more "governable" (Petersen & Lupton, 1996, p. 15).

Sociocultural approaches

Starting in the 1990s, empirical and theoretical risk literature began to question this limited picture. Beck (1995, pp. 125–126) moved beyond the prevailing emphasis that his risk society (Beck, 1992) thesis placed on expert knowledge to argue that scientific authority was challenged by the inability to empirically test complex and indeterminate understandings of risk. Other scholars drew upon empirical research from the 1970s to argue that local knowledge had always played a key role within the construction of risk, albeit one that was "under-recognised" and "easily deleted" (Wynne, 1996, p. 58). Additional work simply highlighted that the adoption of rationalistic models of risk had produced little evidence of impact (Alaszewski & Horlick-Jones, 2003). While these critiques still focused, for the most part, on how to improve the communication of risk rather than challenging problems inherent to messaging, they nevertheless drew attention to the need to explore risk in relation to meaning and interpretation or how people make sense of risk. These developments also meant that as social constructivist ideas about the nature of knowledge begin to become more prevalent within risk research (e.g., Wynne, 1996), research began to coalesce around two major themes; the reasoning processes that lie behind how lay people understand risk and the nature of expert risk work. These two areas of interest, which were later referred to by Horlick Jones et al.

(2007) as bricolage, where people bring "whatever is at hand" to a consideration of risk, have since shaped how information has been explored within risk research.

Within research that has explored lay constructions of risk knowledge, one area that has received considerable attention is the concept of trust. Originally taken for granted within both Beck (1992) and Giddens' (1991) early work due to the assumption of expert competence, questions of trust became more prominent as attention turned to how lay people considered and gave shape to risk. First explored through the work of Luhmann (1993), who established that individuals apprehend risk through direct (first order) or indirect (second order) observation, trust became centred when there was a need to evaluate whether a secondary account could be accepted as "trustworthy as a direct observation" (Kiisel & Vihalemm, 2014, p. 278). These ideas were later picked up by Zinn (2008, 2016), who drew upon Luhmann's argument about the non-fully rational shape of trust to position the concept as a mainly "cognitive element [that is] grounded on rational and instrumental judgements" yet shaped in relation to "affective dimension[s] developed in social relationships" (Zinn, 2008, p. 434). At the same time, far less attention has been paid to how trust shapes the construction of risk. An exception is found in the work of Rodrigues (2016), who moves beyond the premise that trust reduces complexity to examine how different modalities and relations of trust influence risk decision-making processes. Highlighting how the Mozambican participants in her study held general levels of trust in both medical systems and health organisations, Rodrigues' findings also illustrated widespread trust in social network experiences, which raises questions about the entwined and pluralistic role that trust plays in the construction of safety and danger.

Emotion forms a second area of interest within research into how lay people use information to construct risk. Traditionally seen as misleading rational judgement (Marcu et al., 2018), emotion has further been understood as separate from analytical reasoning or as merely constituting an unconscious mental shortcut for cognitive judgement, in what is known as the affect heuristic (Slovic et al., 2007). These ideas are further partially perpetuated through Zinn's (2008, 2016) characterisation of emotion as another "in-between" risk management strategy that is neither fully rational nor irrational. Yet, Lupton (2013b) has vehemently pushed back against what she sees as this continued separation between mind and body, arguing that emotions form an "intelligence" (Thrift, 2004, p. 60) that allow us to apprehend the world, including the threatening or welcoming shape of spaces, people and situations. In further recognising that to call something a risk is to recognise its "importance to our subjectivity and wellbeing," Lupton (2013b, p. 638) also highlights how emotion forms the means through which we assess the anticipated or incipient shape of risk, including how actions may cohere with or contravene social values. From this perspective, emotion constitutes a form of information that

offers insight into the "shifting dynamics" that characterise the construction of risk, yet which is hard to perceive or capture (Lupton, 2013b, p. 640). Research that has demonstrated how patients concerned about Methicillin-Resistant Staphylococcus Aureus (MRSA) infections used an information help desk for emotional support, including for reassurance and confirmation in relation to frightening situations (Dickmann et al., 2016, p. 60), provides another example of the entwined emotional dimensions of risk-informed information practice.

The third area of interest connected to lay understandings of risk relates to the concept of experiential knowledge, which has formed a large catch-all category for understanding that is produced through both tacit and more direct forms of interaction. Initially referred to as a pre-rational form of intuition (Zinn, 2008, p. 444), experiential knowledge has since been characterised as a complex form of knowing that is predicated on embodied and situated awareness rather than unconscious rationality (Baillergeau & Duyvendak, 2016). Constituting what Baillergeau and Duyvendak (2016, p. 408) refer to as a form of "knowing otherwise," experiential knowledge is seen as particularly valuable within contexts of high uncertainty where expert knowledge may be "scattered" or "divided." This form of knowledge is also recognised as shaped in relation to more intimate or specialist experiences related to living with risk that may otherwise be inaccessible, such as hill-sheep farming (Wynne, 1996), ovarian cancer (Hallowell, 2006) or domestic violence (Baillergeau & Duyvendak, 2016, p. 411). However, although risk research may recognise the value of experiential knowledge, Seear's (2009) examination of endometriosis demonstrates that issues are not so clear cut in practice. Arguing that non-compliance with rational scientific advice constitutes a form of experiential female knowing that is informed by the economic, social, and mental health burden of official risk advice, Seear's study hints at the structural issues that underpin the integration of localised expertise into risk discourse.

A final under-developed yet intriguing theme within lay conceptualisations of risk is the concept of mastery, and how risk is shaped and managed through the development of skilled performance and knowing within a setting. The typical positioning of risk as something to be avoided means that proficiency and competence has rarely been associated with the navigation of danger. However, research into the construct of edgework, which refers to voluntary risk-taking (Lyng, 1990), suggests that mastery may play a far more complex role in the mediation of risk than assumed. Research with skydivers, for example, illustrates how they "spend more time preparing for a jump than they do making it" (Lyng, 1990, p. 874), including by drawing upon experiential information to rehearse their jump and check their equipment. Extending research that sees voluntary risk as merely mediated through luck or "mental toughness" (Lyng, 1990, p. 859), these findings acknowledge how risky activity is shaped through the development of situated expertise, which is realised through learning how information is operationalised within a particular space.

The recognition that edgework also facilitates opportunities to create and develop an alternative sense of authenticity or agency further illustrates how information contributes to and shapes the development of the subjectivity that is needed to control the boundaries of the body (Tulloch & Lupton, 2003, p. 122).

Beyond lay responses to risk, the second focus of risk information research relates to the work of risk professionals, and how understandings of danger are constructed in the workplace. As Wynne (1996, p. 45) points out, the traditional unquestioning reliance on expert systems has traditionally obscured a "basic lack of recognition of the cultural/hermeneutic character of scientific knowledge itself." Yet, from a sociocultural perspective, technical experts assess risk through considerations that go beyond the purely technical; the processes that shape lay understanding and scientific work cannot be seen as "wholly distinct activities" (Horlick-Jones et al., 2007, p. 84). The emphasis on expert rationality has since sparked growing interest in what has been labelled as risk work, which refers to the "experiences and practices of (para)professionals where risk has become a key [or] (re)defining feature or logic of everyday work" (Brown & Gale, 2018). Concentrating on the experiences of client-facing practitioners rather than organisational responses to risk, risk work has centred on how risk is translated into and minimised within practice, all of which have significant knowledge implications (Brown & Gale, 2018). As an aside, it is interesting to note that while few studies have "peered into the messy world of how such risk work actually "gets done"" (Brown & Gale, 2018, p. 3), research exploring professional risk information practices has been far bolder than the lay equivalent.

Research into social care worker practices, for example, is swift to point how seemingly "intuitive" responses to risk are based upon intimate knowledge and observation of what is "usual" for each resident as well as an identification of patterns over time rather than pre-conscious rationality (Harrad-Hyde et al., 2022, p. 7). The same research study also draws out how care workers coordinate risk interventions through documenting information, while more complex risk decision-making is negotiated through informative interactions with both colleagues and family members (Harrad-Hyde et al., 2022, p. 10). Sharing information with peers across social media and private WhatsApp groups is also seen as an effective way to manage the risks that are produced through driving for on-demand food couriers (Gregory, 2021). More intriguingly, research into professional risk work broaches the concept of power, which has been somewhat sidelined within lay research to date. Care workers, for example, felt "less comfortable with the perceived legitimacy" of their risk decision-making, feeling the need to combine embodied observations with the codified knowledge that was more acceptable to external colleagues (Harrad-Hyde et al., 2022, p. 8). Brown and Gale (2018, p. 11) further note how workplace hierarchies impact an ability to question the 'truthfulness' of risk knowledge. These studies recognise the complexity of risk information activities.

In sum, the acknowledgement that both lay people and risk work professionals integrate "a wider framing of topics, considerations and agendas" into the construction of risk than has previously been considered (Horlick-Jones & Prades, 2009, p. 414) has opened the door to risk information research. Within studies that have explored lay reasoning, emphasis has been placed on how considerations of trust, emotion and experiential knowledge contribute to the construction of risk, although the typical focus on contrasting lay knowledge with expert advice has impeded a wider consideration of how, why and when people engage with risk information. In contrast, while research into professional risk work is more limited, studies have drawn out promising lines of inquiry, including related to how power structures impact the information activities that enable people to perceive and manage risk. At the same time, considerable gaps remain; the role that social relationships play in shaping risk, including through information sharing (e.g., Seppola-Edvardsen et al., 2016), is underexplored, while little focus has been placed on how forms of non-knowledge, such as ignorance and information avoidance (Gross, 2016), enable and constrain the development of understanding. The predominant tendency for research to explore risk within Western contexts means that there is still also considerable work to be done challenging biases related to what is seen to form 'useful' risk knowledge, including related to faith, magic and ideology (Zinn, 2016, p. 349). These emerging research directions indicate the enormous potential for scholarship in this area.

References

Alaszewski, A., (2005). Risk communication: Identifying the importance of social context. *Health, Risk & Society*, *7*(2), 101–105.

Alaszewski, A., & Horlick-Jones, T. (2003). How can doctors communicate information about risk more effectively?. *BMJ*, *327*(7417), 728–731.

Baillergeau, E., & Duyvendak, J. W. (2016). Experiential knowledge as a resource for coping with uncertainty: Evidence and examples from the Netherlands. *Health, Risk & Society*, *18*(7–8), 407–426.

Barton, D., & Hamilton, M. (1998). *Local literacies: Reading and writing in one community*. Routledge.

Beck, U. (1992), *Risk society: Towards a new modernity*. SAGE.

Beck, U. (1995), *Ecological politics in the age of risk*. Polity Press.

Boholm, Å. (2003). The cultural nature of risk: Can there be an anthropology of uncertainty? *Ethnos*, *68*(2), 159–178.

Boyes, B. (2017). Is "nudge management" the new scientific management approach? *Real KM*. https://realkm.com/2017/06/16/is-nudge-management-the-new-scientific-management-approach/

Bradbury, J. (1989). The policy implications of differing concepts of risk. *Science, Technology & Human Values*, *14*(4), 380–399.

Brown, P. (2015). Social theories of risk. In A. Elliott (Ed.), *Routledge handbook of social and cultural theory* (pp. 157–174). Routledge.

Brown, P., & Gale, N. (2018). Theorising risk work: Analysing professionals' lifeworlds and practices. *Professions and Professionalism*, *8*(1), e1988–e1988.

Bucchi, M. (2008). Of deficits, deviations and dialogues: Theories of public communication of science. In M. Bucchi & B. Trench (Eds.), *Handbook of public communication of science and technology* (pp. 160–172). Routledge.

Buchanan, S., & Husain, Z. (2021). Digital participation, surveillance, and agency: Insights into the role of digital literacy to manage risk. In Serap Kurbanoğlu, Sonja Špiranec, Yurdagül Ünal, Joumana Boustany, & Denis Kos (Eds.), *European conference on information literacy* (pp. 719–729). Springer International Publishing.

Bunce, S., Partridge, H., & Davis, K. (2012). Exploring information experience using social media during the 2011 Queensland floods: A pilot study. *The Australian Library Journal*, *61*(1), 34–45.

Canning, C., & Buchanan, S. (2019). The information behaviours of maximum security prisoners: Insights into self-protective behaviours and unmet needs. *Journal of Documentation*, *75*(2), 417–434.

Catellier, J., & Yang, Z. (2012). Trust and affect: How do they impact risk information seeking in a health context?. *Journal of Risk Research*, *15*(8), 897–911.

Chatman, E. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, *47*(3), 193–206.

Cheshire, C., Antin, J., & Churchill, E. (2010). Behaviors, adverse events, and dispositions: An empirical study of online discretion and information control. *Journal of the American Society for Information Science and Technology*, *61*(7), 1487–1501.

Choo, C. (2017). Seeking and avoiding information in a risky world. *Information Research*, *22*(3).

Day, R. (2000). The 'conduit metaphor' and the nature and politics of information studies. *Journal of the American Society for Information Science*, *51*(9), 805–811

Dickmann, P., Wittgens, K., Keeping, S., Mischler, D., & Heudorf, U. (2016). Rethinking risk communication: Information needs of patients, health professionals and the public regarding MRSA–the communicative behaviour of a public health network in Germany responding to the demand for information. *Public Health*, *131*, 56–62.

Douglas, M. (1966/2002). *Purity and danger: An analysis of concepts of pollution and taboo*. Routledge.

Douglas, M. (1985). *Risk acceptability according to the social sciences*. Routledge & Kegan Paul.

Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.

Douglas, M., & Wildavsky, A. (1982). *Risk and culture: An essay on the selection of technological and environmental dangers*. University of California Press.

Ewald, F. (1991). Insurance and risks. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 197–210). Harvester/Wheatsheaf.

Foucault, M. (1988). Technologies of the self. In L. Martin, H. Gutman, & P. Hutton (Eds.), *Technologies of the self: A seminar with Michel Foucault* (pp. 16–49). Tavistock.

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 87–104). Harvester/Wheatsheaf.

Frank, R. (2020). The social construction of risk in digital preservation. *Journal of the Association for Information Science and Technology*, *71*(4), 474–484.

Gergen, K. (2019). A constructionist conversation with positioning theory. In B. Allesøe Christensen (Ed.), *The second cognitive revolution: A tribute to Rom Harré* (pp. 73–80). Springer.

Gergen, K., & Gergen, M. (2008). Social constructionism. In L. M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (pp. 816–820). SAGE Publications.

Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, *26*(8), 1513–1530.

Giddens, A. (1991), *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.

Gregory, K. (2021). 'My life is more valuable than this': Understanding risk among on-demand food couriers in Edinburgh. *Work, Employment and Society*, *35*(2), 316–331.

Griffin, R. J., Dunwoody, S., & Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. *Environmental Research*, *80*(2), S230–S245.

Gross, M. (2016). Risk and ignorance. In A. Burgess, A. Alemanno, & J. Zinn (Ed.), *Routledge handbook of risk studies* (pp. 310–317). Routledge.

Hagar, C. (2010). Introduction to the special section. *Bulletin of the American Society for Information Science and Technology*, *36*(5), 10–12.

Haider, J., & Rödl, M. (2023). Google search and the creation of ignorance: The case of the climate crisis. *Big Data & Society*, *10*(1).

Hallowell, N. (2006). Varieties of suffering: Living with the risk of ovarian cancer. *Health, Risk & Society*, *8*(1), 9–26.

Harrad-Hyde, F., Williams, C., & Armstrong, N. (2022). Hospital transfers from care homes: Conceptualising staff decision-making as a form of risk work. *Health, Risk & Society*, *24*(7–8), 317–335.

Harviainen, T. (2015). Information literacies of self-identified sadomasochists: An ethnographic case study. *Journal of Documentation*, *71*(3), 423–439.

Häußler, H., Schultheiß, S., & Lewandowski, D. (2023). Is googling risky? A study on risk perception and experiences of adverse consequences in web search. *Journal of the Association for Information Science and Technology*, *75*(5), 567–580.

Haynes, D., & Robinson, L. (2023). Delphi study of risk to individuals who disclose personal information online. *Journal of Information Science*, *49*(1), 93–106.

Hicks, A. (2018). *The theory of mitigating risk: Information literacy and language-learning in transition* (Doctoral dissertation, Högskolan i Borås, Sweden).

Hicks, A. (2019). Mitigating risk: Mediating transition through the enactment of information literacy practices. *Journal of Documentation*, *75*(5), 1190–1210.

Horlick-Jones, T., & Prades, A. (2009). On interpretative risk perception research: Some reflections on its origins; its nature; and its possible applications in risk communication practice. *Health, Risk & Society*, *11*(5), 409–430.

Horlick-Jones, T., Walls, J., & Kitzinger, J. (2007). Bricolage in action: Learning about, making sense of, and discussing, issues about genetically modified crops and food. *Health, Risk & Society*, *9*(1), 83–103.

Huurne, E. & Gutteling, J. (2008). Information needs and risk perception as predictors of risk information seeking. *Journal of Risk Research*, *11*(7), 847–862.

Jacobson, J., Lin, C. Z., & McEwen, R. (2022). Information behaviour paradox: Understanding perceptions of risk and online behaviour. *Library & Information Science Research*, *44*(4).

Jasanoff, S. (1998). The political science of risk perception. *Reliability Engineering & System Safety*, 59(1), 91–99.

Kahlor, L. (2010). PRISM: A planned risk information seeking model. *Health Communication*, *25*(4), 345–356.

Kiisel, M., & Vihalemm, T. (2014). Why the transformation of the risk message is a healthy sign: A model of the reception of warning messages. *Health, Risk & Society*, *16*(3), 277–294.

Klaidman, S. (1990). How well the media report health risk. *Daedalus*, *119*(4), 119–132.

Lloyd, A. (2012). Information literacy as a socially enacted practice: Sensitising themes for an emerging perspective of people-in-practice. *Journal of Documentation*, *68*(6), 772–783.

Lloyd, A. (2017). Information literacy and literacies of information: A mid-range theory and model. *Journal of Information Literacy*, *11*(1), 91–105.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: The unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation*, *77*(5), 1052–1072.

Lloyd, A., & Hicks, A. (2022). Saturation, acceleration and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19-environments. *Journal of Documentation*, *78*(5), 1008–1026.

Luhmann, N. (1993). *Risk: A sociological theory*. De Gruyter.

Lupton, D. (1999). Introduction. In D. Lupton (Ed.), *Risk and sociocultural theory* (pp. 1–11). Cambridge University Press.

Lupton, D. (2013a). *Risk*. Routledge.

Lupton, D. (2013b). Risk and emotion: Towards an alternative theoretical perspective. *Health, Risk & Society*, *15*(8), 634–647.

Lyng, S. (1990). Edgework: A social psychological analysis of voluntary risk taking. *American Journal of Sociology*, *95*(4), 851–886.

MacIntosh-Murray, A., & Choo, C. W. (2005). Information behavior in the context of improving patient safety. *Journal of the American Society for Information Science and Technology*, *56*(12), 1332–1345.

Marcella, R., & Lockerbie, H. (2016). The information environment and information behaviour of the Offshore Installation Manager (OIM) in the context of safety and emergency response: An exploratory study. *Journal of Information Science*, *42*(4), 551–567.

Marcu, A., Black, G., & Whitaker, K. (2018). Variations in trust in Dr Google when experiencing potential breast cancer symptoms: Exploring motivations to seek health information online. *Health, Risk & Society*, *20*(7–8), 325–341.

McNicholas, C., & Marcella, R. (2024). Information behaviour in high risk decision making: Study of international postgraduates. *Journal of Information Science*, *50*(6), 1525–1540.

Muhren, W. & Van de Walle, B. (2010). Sense-making and information management in emergency response. *Bulletin of the American Society for Information Science and Technology*, *36*(5), 30–33.

Namuleme, R. (2015). HIV/AIDS-related stigma and information behaviour: An ethnographic study in the UK. *Health Information & Libraries Journal*, *32*(1), 61–66.

Nara, Y. (2007). Information literacy and everyday life risks. In *Knowledge-Based Intelligent Information and Engineering Systems: 11th International Conference, KES*

2007, XVII Italian Workshop on Neural Networks, Vietri sul Mare, Italy, September 12–14, 2007 (pp. 942–949). Springer.

Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford University Press.

Palupi, G., Nerisafitra, P., & Bisma, R. (2022). How information literacy influences student's online risk mitigation. *Journal of Information Engineering and Educational Technology*, *6*(2), 42–49.

Perri 6 & Richards, P. (2017). *Mary Douglas: Explaining human thought and conflict*. Berghan.

Perry, K. (2012). What is literacy? A critical overview of sociocultural perspectives. *Journal of Language and Literacy Education*, *8*(1), 50–71.

Petersen, A., & Lupton, D. (1996). *The new public health: Discourses, knowledges, strategies*. Sage.

Playle, J. F., & Keeley, P. (1998). Non-compliance and professional power. *Journal of Advanced Nursing*, *27*(2), 304–311.

Reckwitz, A. (2002). Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory*, *5*(2), 243–263.

Renn, O. (1998). The role of risk perception for risk management. *Reliability Engineering& System Safety*, *59*(1), 49–62.

Rodrigues, C. F. (2016). Medicines and therapeutic pluralism in Maputo: Exploring modalities of trust and the (un)certainties of everyday users. *Health, Risk & Society*, *18*(7–8), 385–406.

Sapolsky, H. (1990). The politics of risk. *Daedalus*, *119*(4), 83–96.

Schatzki, T. (1996). *Social practices: A Wittgensteinian approach to human activity and the Social*. Cambridge University Press.

Schatzki T. (2001). Introduction: Practice theory. In T. Schatzki, K. Knorr Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1–14). Routledge.

Schatzki, T. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. Pennsylvania State University Press.

Schatzki, T. (2010). Materiality and social life. *Nature and Culture*, *5*(2), 123–149.

Schatzki, T. (2012). A primer on practices. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 13–26). Sense Publishers.

Seear, K. (2009). 'Nobody really knows what it is or how to treat it': Why women with endometriosis do not comply with healthcare advice. *Health, Risk & Society*, *11*(4), 367–385.

Seppola-Edvardsen, T., Andersen, R. S., & Risør, M. B. (2016). Sharing or not sharing? Balancing uncertainties after cancer in urban Norway. *Health, Risk & Society*, *18*(7–8), 367–384.

Slovic, P. (1987). Perception of risk. *Science*, *236*(4812), 280–285.

Slovic, P. (2000). *The perception of risk*. Earthscan Publications.

Slovic, P., Finucane, M. Peters, E., & MacGregor, D. (2007). The affect heuristic. *European Journal of Operational Research*, *177*(3), 1333–1352.

Stallings, R. (1990). Media discourse and the social construction of risk. *Social Problems*, *37*(1), 80–95.

Street, B. (2003). What's "new" in New Literacy Studies? Critical approaches to literacy in theory and practice. *Current Issues in Comparative Education*, *5*(2), 77–91.

Thrift, N. (2004). Intensities of feeling: Towards a spatial politics of affect. *Geografiska Annaler: Series B, Human Geography*, *86*(1), 57–78.

Tulloch, J., & Lupton, D. (2003). *Risk and everyday life*. SAGE.

Westbrook, L. (2015). Intimate partner violence online: Expectations and agency in question and answer websites. *Journal of the Association for Information Science and Technology*, *66*(3), 599–615.

Wilkinson, I. (2001). Social theories of risk perception: At once indispensable and Insufficient. *Current Sociology*, *49*(1), 1–22.

Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a New Ecology*, *40*, 44–83.

Zinn, J. (2008). Heading into the unknown: Everyday strategies for managing risk and uncertainty. *Health, Risk & Society*, *10*(5), 439–450.

Zinn, J. (2009). Introduction: The contribution of sociology to the discourse on risk and Uncertainty. In J. Zinn (Ed.), *Social theories of risk and uncertainty: An introduction* (pp. 1–17). John Wiley & Sons.

Zinn, J. (2016). 'In-between' and other reasonable ways to deal with risk and uncertainty: A review article. *Health, Risk & Society*, *18*(7–8), 348–366.

3

BRINGING RISK INTO VIEW

A COVID-19 case study

How is risk perception informed?

When was the first time that you realised that the SARS-CoV-2 virus, which was responsible for the COVID-19 respiratory syndrome that swept the world in 2019–2020, might be more serious than you expected? Was it linked to the increasing quantity of news reports on the television and the accompanying images of deserted Italian villages on social media? Or might it have been when your relatives started to share warnings on the family WhatsApp group or passengers on the London underground started to avoid touching handrails and strap hangers? Perhaps you had even come down with certain symptoms that seemed unlike any illness that you had ever experienced before? For the participants who were interviewed about the UK's lockdowns in May-July 2020 (Lloyd & Hicks, 2021), all these information sources played a vital role in helping them to recognise and become alerted to the initial health risks of what would later become the COVID-19 pandemic. Centring on first-hand accounts and arresting visual imagery, the impact of this information meant that for many, national lockdown did not seem like a surprise when governmental advice finally appeared in late March 2020. At the same time, the extraordinariness of the situation meant that the risks of COVID-19 were not immediately apparent; as one participant in our study put it: "plagues don't happen in 2020, do they?" (Lloyd & Hicks, 2021). Subsequent government involvement further modified the shape of risk as newly established vulnerable, furloughed, or home-schooling categorisations altered how people were positioned in relation to risk and the discourses available to them. It also became clear that health risks could not be separated from ensuing legal, financial and wellbeing concerns, all of which constituted similarly dangerous issues to participants in our study.

DOI: 10.4324/9781032719627-3

This chapter uses research into the COVID-19 pandemic as a case study to explore how information literacy shapes risk perception. Forming the first in the series of three case studies that unpack key elements of risk-informed information practice, this chapter starts by defining risk perception before focusing in greater detail on how information sources and activities shape how risk was brought into view during the COVID-19 pandemic. Importantly, the sociocultural framework that structures risk-informed information practice means that this chapter also goes beyond individual effort to explore how risk perception was shaped by the social conditions or arrangements of the COVID-19 context. The chapter finishes by reflecting on situations when risk is not so clearly ascertained, including when it relates to small-scale personal challenges and when it is denied or minimised by governing bodies.

Risk perception: Technoscientific, cognitive and sociocultural approaches

As Chapter 2 has pointed out, the variety of different approaches that have been used to conceptualise risk make it extremely hard to establish standardised definitions of risk's key features. Risk perception, which forms a vague term that nonetheless constitutes the focus of a voluminous amount of literature (Horlick-Jones & Prades, 2009, p. 410), is no exception to this rule. Introduced into policy research in the 1960s in the face of public opposition to nuclear technology (Sjöberg et al., 2004, p. 8), the concept grew in importance as researchers and policy makers attempted to understand what drove social acceptance of certain risks but not others. From this beginning, risk perception became understood in terms of the probability and the consequences of an event happening (Sjöberg et al., 2004, p. 8). Since then, concern that risk perception involves "attitudes, beliefs, feelings and cognitions" has led some scholars to separate risk perception from risk judgement, a term that they felt better encapsulated the influence of emotion on the acceptance and tolerance of risk (Coleman, 1993, p. 612). More recently, issues have been further complicated by the growth of sociocultural ideas, which challenge both the equivalence of risk perception with calculation and the separation of the cognitive from the affective. Nevertheless, the tendency for policy documents to differentiate between recognition of and response to risk (e.g., Bubeck et al., 2012; Department of the Environment, 1995) indicates the value of continuing to explore how people become alerted to risk, whether this forms a perception or a judgement. In accordance with the sociocultural framing of risk-informed information practice, this chapter employs risk perception to refer to how risk is brought into being, including in relation to the conditions that shape these constructions.

Perhaps unsurprisingly, the preponderance of positivist risk research means that the typical goal of most risk perception studies to date has been to improve communication between "technical experts, politicians and the general public"

(Wilkinson, 2001, p. 8). Referencing a psychometric or technoscientific approach to risk, wherein risk is produced and disseminated by experts, risk perception research has consequently focused on exploring the assorted factors that influence and inhibit the success of expert communication strategies. Information, which is seen as vital for the dissemination of risk messages (Dunwoody & Griffin, 2013, p. 220), is often positioned as key to the effectiveness of this work. Most famously exemplified through Griffin et al.'s (1999) *Risk and Information Seeking Processing* model, which positions information seeking as an underexplored "black box" within risk research, information is understood to shape risk perception through connecting people to expert risk-related knowledge and advice (Dunwoody & Griffin, 2013, p. 220). Mediated through both active and passive information seeking, risk perception is further seen to be inhibited through the associated costs and expectations of certain information channels, alongside an individual's capacity to access information (Dunwoody & Griffin, 2013, p. 230). Positioning information as essential to risk perception research, the centring of transmission-based models of risk knowledge as well as the failure to move beyond a focus on information seeking nonetheless limits a more complete understanding of these ideas.

In contrast to techno-scientific models of risk perception, the rise of the psychometric paradigm introduced a more overt focus on the role that emotion plays in shaping risk. Acknowledging that risk perception could refer to "attitudes, beliefs, feelings and cognitions" (Coleman, 1993, p. 612), the cognitive tradition recognised the informativeness of affective concerns, such as dread or worry, as well as the guiding influence of other knowledge related factors such as level of education and novelty or newness (Rundmo & Nordfjærn, 2017). The cementing of non-expert information as central to risk perception subsequently introduced a reflexive dimension to an awareness of danger while shifting the focus of research from persuasion to behaviour. Yet, the coining of a new term, risk judgement, also led to the separation of risk into subjective and objective dimensions or emotional and cognitive concerns. The establishment of these related but different processing systems was subsequently used to differentiate between lay and scientific approaches to risk, with "perceived risk" being seen as the purview of lay people and "real risk" emanating from experts (Coleman, 1993, p. 612). Reinforcing transmission-based models of risk perception, wherein objective expert calculation is assumed to be more accurate than the subjective approaches of lay people, the positioning of emotion as uniquely interfering with risk assessment also belies a similarly limited way of approaching information's role within risk perception.

The perceived dangers of emotions are more clearly developed in studies examining contagion or the figurative spreading of risk through populations. Commonly linked to popular media, the perils of risk amplification have also been credited to networks of contacts, with social ties being seen as an effective way to spread negative attitudes to risk. The impact of the media was a particular

concern of Beck (1995, p. 100), who criticised news reports for "sounding the social alarm" about hazards that would otherwise pass unnoticed. These ideas have since been picked up in research accusing the media of using emotional sensationalism to foster inaccurate perceptions of health risk (Young et al., 2013, p. 104) or warning that risk perception is more frequently linked to word-of-mouth sharing of others' experiences rather than personal engagement or expertise (Jacobson et al., 2022). Yet, as various scholars have pointed out, researchers who directly correlate messaging with audience behaviour overestimate "the structuring effects of communication media" (Wilkinson, 2001, p. 13) or the impact that the conveyance of information has upon the public (Coleman, 1993, p. 611). Instead, the mediatisation of risk may merely reflect the power that certain organisations have to control the news agenda rather than forming an indication of undue influence (Wilkinson, 2001, p. 13). In effect, the allusions to outdated hypodermic needle communication theory reinforce rationalistic understandings of information and risk perception as well as the impact of individual endeavour.

Theoretical influences

In contrast to the techno-scientific and cognitive perspective, the sociocultural foregrounding of the contexts in which risk is negotiated overtly challenges the association of risk perception with the transmission of objective facts. Starting from the premise that risk is not "fully knowable outside of belief systems and moral positions" (Lupton, 2013a, p. 43), a sociocultural approach to risk instead reframes risk perception in terms of how risk is constructed or the ways in which concepts of danger and hazard are brought into social existence rather than how risk is transmitted. This shift, which foregrounds questions of representation and meaning, centres risk perception on more complex questions about how people recognise and become alerted to danger. The emphasis on how knowledge is articulated, for example, draws attention to the various forms of information that people use to construct judgement, including "personal embodied experiences, observations and emotional responses [and] discussions with others" (Lupton, 2013a, p. 45). The categorisation of risk awareness as shaped by how near, far, or immediately at risk that people feel (Cole & Watkins, 2015) further introduces a spatio-temporal dimension to considerations of how risk perception is informed, an idea that is further reinforced by Gibson et al.'s (2021) outlining of the "danger zones" faced by teens and tweens of colour. More complexly, the recognition that "uncertainties create the context and the condition through which [people] operationalise their [risk] information practices" (Lloyd & Hicks, 2021, p. 1053) foregrounds the social structures that enable and constrain risk perception, including related to what forms of risk knowledge are valued and whose ways of seeing are prioritised.

In linking the identification of risk to cultural differences, the work of anthropologist, Mary Douglas, has been instrumental in broadening how risk

perception is understood from a sociocultural perspective. Her emphasis on culture as a "mnemonic system" (Douglas, 1985, p. 81) foregrounds the multiple influences that shape risk perception; as she later points out, "no-one takes a decision that involves costs without consulting neighbours, family, work friends" (Douglas, 1992, p. 12). Highlighting the impossibility of objectivity within risk situations, Douglas' (1992, p. 12) identification of these people as "the support group that will help if things go wrong" (Douglas, 1992, p. 12) also references the vital role that emotion and affect play in the establishment of danger alongside other sociocultural reference schemes. More expressly, Douglas' critique of the psychometric focus on individual "cognitive aids" (Douglas, 1985, p. 80) draws attention to the influence of social arrangements upon the construction of risk. In defining a risk situation as the outcome of "psychological and sociological processes, including the chooser's own activities and the activities of others in his environment," Douglas (1992, p. 12) clearly establishes that the identification of danger is shaped by cultural expectations and conventions rather than forming a decontextualised and individual process.

At the same time, Douglas' later work with Wildavsky (1982) muddied risk perception research through the establishment of the grid-group model to categorise how distinct social groups approach risk. Identifying four distinct forms of social organisation, including hierarchies, egalitarians, individualists and fatalists, the grid-group model aimed to draw out the impact of power and status on social perceptions of risk (Douglas & Wildavsky, 1982). From this perspective, risk perception is shaped by worldview, including whether a person aligns with or rejects community norms as well as other social distinctions. Yet, the rigidity of Douglas and Wildavsky's categories promotes "an excessively static conception of risk perception" (Wilkinson, 2001, p. 11) that diminishes or replaces understanding of complex social dynamics with ideological beliefs. Concern about the replicability of the methodology used to establish this model further challenges Douglas' work in this area (Wilkinson, 2001, p. 10). While an absence of empirical research is a critique levelled at many of the recognised risk theorists, including Beck as well as Douglas (Hawkes et al., 2009), concern about the individualist emphasis of the grid-group model provides an example of where risk-informed information practice diverges from Douglas' theorising (see Chapter 2).

Bringing risk into view during the COVID-19 pandemic: A case study

The chapter will now present the COVID-19 case study that forms the basis for this exploration of risk perception (Lloyd & Hicks, 2021; Lloyd & Hicks, 2022). Carried out from May-July 2020 and November-February 2021, which covered the UK's first and second lockdown periods, the original aim of this research was to examine how people adjusted to the pandemic and the subsequent

national lockdowns. Focusing attention on how information literacy practices came into view, this research also provided significant insight into unfolding constructions of risk through the emphasis that it placed on the transition into complex pandemic environments.

The research that formed the basis for this case study was carried out in two stages to accommodate the evolving pandemic situation. Employing a qualitative methodology, in alignment with the studies' emphasis on the negotiation of risk, the research design comprised semi-structured interviews that were carried out online using an end-to-end encrypted video conferencing tool, audio-recorded and transcribed. Interview questions were open-ended to build a more complex picture of risk perception but explored participant activities immediately preceding the UK government's lockdown edict in March 2020 as well as the impact of subsequent changes to working, caring, health and social conditions. In the second phase of the research, additional questions were asked about the transition into and out of the UK's subsequent national lockdowns. Interviews lasted between 35–50 minutes.

Participants were recruited through social media adverts and a snowball sampling method. Seventeen participants were included in Phase One, and an additional fifteen participants took part in Phase Two for a total of 32 participants (See Table 3.1). Participants represented a wide range of ages, UK geographic locations and family/employment situations, including people who were key workers, working from home, furloughed, unemployed, retired and those who were home-schooling or in a caring role. Interview data were subsequently analysed by the study's two researchers using the constant comparative method of constructivist grounded theory (Charmaz, 2014). This approach facilitated more detailed insight into similarities and differences between participant activities and supported the mapping of information strategies. Each of the initial and focused rounds of coding was discussed by both researchers over several sessions to build a comprehensive analysis. Limitations of the study included difficulties accessing participants aged under 25 as well as increasing lockdown fatigue, which impacted people's interest in the project. Full details of the research methodology can be found in the original papers (Lloyd & Hicks, 2021; Lloyd & Hicks, 2022).

The overarching findings of the original study (Lloyd & Hicks, 2021; Lloyd & Hicks, 2022) indicated that information literacy within pandemic information environments constituted a form of safeguarding in which people engaged in information activities to protect themselves, their local communities, and institutions such as the NHS from health, economic and social risk. Centring on the navigating and interrogation of information at both an intersubjective and a subjective level, safeguarding supported a shift towards a more stable phase of lockdown life by helping people to reconcile and situate emerging understanding about the impact of the pandemic in relation to collective knowledge. Within this framing, information literacy supported the construction of

TABLE 3.1 COVID-19 participant data

Identifier	*Location*	*Age range*	*Role*	*COVID-status*
P1	Oxfordshire	60+	Caterer	Furlough
P2	Bristol	30–60	Nurse	Keyworker
P3	Hampshire	60+	Retired	Retired
P4	Glasgow	30–60	Teacher	WFH/ Homeschool
P5	Oxfordshire	18–30	Special Needs Teacher	Keyworker
P6	Cambridge	60+	Stockbroker	WFH
P7	Somerset	18–30	Childcare	Keyworker
P8	Manchester	30–60	TV crew	Unemployed
P9	East Lothian	60+	Retired	Retired
P10	London	60+	Poet/Academic	WFH
P11	Bristol	30–60	Barrister	WFH
P12	Birmingham	30–60	Lecturer	WFH
P13	London	18–30	Student	Student
P14	Essex	60+	School administrator	WFH
P15	Somerset	60+	Doctor	WFH
P16	London	60+	Human Resources	WFH
P17	Yorkshire	30–60	Fitness Consultant	WFH/ Homeschool
P18	Somerset	60+	Retail	Furlough
P19	Liverpool	18–30	Homemaker	Homeschool
P20	London	30–60	Consultant	WFH
P21	Scotland	18–30	Railway worker	Keyworker
P22	Buckinghamshire	60+	Engineer	WFH
P23	Yorkshire	18–30	MA Student	SFH
P24	Edinburgh	18–30	BA Student	SFH
P25	North Somerset	30–60	Accountant	WFH
P26	Poole	30–60	Recruitment Consultant	WFH
P27	Cheshire	60+	Retired	Retired
P28	Liverpool	30–60	Vicar	Keyworker
P29	Bristol	30–60	Engineer	WFH
P30	Kent	60+	Retired	Retired
P31	Bournemouth	30–60	Software Engineer	WFH
P32	Devon	60+	Retired	Retired

risk through facilitating transition into the evolving conditions and social arrangements that were radically redefining social life. Shaped through distinctive unfolding, intensifying, and maintaining stages, this transition reflected the ongoing stabilisation of knowledge within an evolving landscape. At the same time, individual agency within these spheres was prefigured by the institutional discourses, societal interpretations and physical constructions that legitimised

certain forms of knowledge over others. Risk was consequently further brought into view through how people were positioned within the pandemic environment, including through the allocation of an institutional categorisation and identity (such as vulnerable or furloughed). Impacting the information that was available to an individual, these discursive spaces provided a further illustration of how the production of risk was facilitated by the conditions of social life.

Findings from this study, which originally focused on broader questions of risk, will now be used to provide a detailed understanding of the implications for risk perception.

Extending risk perception

Risk perception forms a complex, whole-body activity that incorporates many forms of knowing. Analysis of this COVID-19 case study extends understanding of risk perception through: moving beyond information-seeking, challenging non-rational information strategies, reframing affect and emotion, and drawing attention to the impact of conditions and arrangements upon how risk is shaped.

Moving beyond information seeking

One of the first ways in which this COVID-19 research extends understanding of risk perception is through broadening an appreciation of the range of information activities that people employ to bring risk into view. As Chapter 2 points out, the emphasis that cognitive approaches to risk place upon the transmission of expert understanding has typically uniquely associated risk perception with the activity of information seeking, with the assumption that risk perception increases as risk-related knowledge and advice is acquired. Nonetheless, this approach is limited because it fails to account for other ways in which people use information to produce and negotiate risk, including mundane or less visible forms of activity. From a practice theory perspective, a focus on information activity is important because information literacy practice is constructed and produced by social activities that reflect how information is organised, accessed, and circulated (Lloyd, 2010). Paying attention to activity is key to understanding how practice happens.

The role that social and embodied modalities of information play in shaping risk perception forms a particularly interesting finding that emerges from this study of the COVID-19 pandemic. Social sites, which refer to "the place where, and as part of which, social life inherently occurs" (Schatzki, 2002, p. xi), are composed of forms of knowledge that reference the shape or structure of a setting (Lloyd, 2006). Traditionally, both risk and information literacy research has privileged epistemic forms of knowledge, which comprise the very visible forms of institutional knowledge that are codified in text or

regulations. In contrast, social modalities of information, which represent situated or socially nuanced knowledge that is constituted through ongoing relationships, have often been associated with the spreading of poor-quality or unsubstantiated advice (Zinn, 2016, p. 353). Reference to corporeal modalities, which are exemplified by contingent and embodied forms of knowledge that are accessed through "tactile, sensory, or kinesthetic activity" (Lloyd, 2011, p. 290), have been similarly almost entirely absent from a consideration of risk. Within the unfolding complexity of the COVID-19 sphere, however, analysis demonstrates that the embodied and the social take on new significance.

Observing (Lloyd & Hicks, 2021, p. 1060) physical and visual cues, for example, formed a particularly vital information activity at a time when the COVID-19 information environment was unfolding. Referencing both embodied information and environmental features, *observing* brought risk into view by providing a tangible representation of new everyday norms, including how epistemic information, such as government regulations, was being put into practice. Thus, driving past local shops "to see how it was working" (P7) or watching distancing rules at the local supermarket from a first-floor apartment window (P8) confirmed the initial shape of risk by legitimising new social arrangements. For others, it was the lack of bodies and other cues that helped to establish risk, with several participants indicating how hearing birdsong (P9) or noticing an unusual drop in traffic (P13) immediately sounded an alarm. Beyond risk to self and family, participants noted that *observing* signs, such as those on the Prime Minister's daily briefing podium as well as on the street, helped to alert people to danger, including the risk of overstretching the capacity of the National Health Service (NHS). In effect, corporeal and physical information that is accessed through observation shapes risk perception by supporting reflexive activity and altering how people act within everyday life.

The social space, where information is interpreted by and with others, formed another important sphere for the construction of risk in the COVID-19 environment. Created by friends, family and broader social networks, social settings supported the construction of risk through providing insight into unique and first-hand experience of the pandemic, particularly related to recovery from COVID-19 (P17) or the return to work (P5) in the early days of the first lockdown. Referred to as the information activity of *mediating* (Lloyd & Hicks, 2021, p. 1062), the sharing of information with others further supported the construction of risk through drawing attention to what was relevant within people's lockdown landscapes, with one participant becoming concerned about the risks of isolation after receiving a photo of her grandson peeping through the fence (P3) and others becoming hyper-alert to economic risk through tuning into news about the industry in which their adult children were employed (P3, P15). Facilitated through new and older forms of technology, which allowed people to maintain connections with friends and family members, *mediating* demonstrates that risk perception is shaped through the

creation of interactional opportunities that facilitate access to nuanced and hard to express risk information. At the same time, the emphasis on social ties illustrates how access to the communal space of the COVID-19 environment is tied up with participation and membership within broader social structures, which may not always be available to all.

Challenging 'non-rational' information strategies

A second way in which this study of the COVID-19 pandemic extends understanding of risk perception is through addressing themes that have either been underexplored or side-lined within both risk and information studies literature. One example of an overlooked theme is the question of information avoidance, which information studies literature has traditionally positioned as a strategy that people employ in the face of unwanted information, whether this is excessive data (Savolainen, 2007) or knowledge that is incongruent with prior beliefs (Case et al., 2005). Confronting the rationality of inquiry, in which people are expected to avail themselves of all possible forms of information (Lupton, 2013a, p. 31), the implied personal inefficiency, which further references the cognitive focus on self-disciplined subjects, has led to the depiction of information avoidance as a problem behaviour. In contrast, information avoidance has been relatively absent from risk literature, which has tended to focus on information sufficiency (Griffin et al., 1999) rather than its evasion. Linked, perhaps, to the underlying emphasis on the transmission of carefully modulated expert knowledge, the suggestion that avoidance forms a non-rational approach to risk (Zinn, 2016, p. 353) nonetheless speaks to similar concerns about the value of this activity. Yet, the prevalence of information avoidance during the COVID-19 pandemic demonstrates th*e* importance of examining how risk perception may be shaped by the absence of information as well as its presence.

A particularly vivid illustration of the role that information avoidance plays in risk perception lies in the *compartmentalising* (Lloyd & Hicks, 2021, p. 1063) activities in which people engaged during the COVID-19 pandemic. Referring to the avoidance or shutting down of information sources, the information activity of *compartmentalising* arose in response to an intense initial information gathering and became more widespread as lockdown continued. Within a traditional information studies approach, risk perception might be understood as inhibited through this purposeful blocking of potentially useful knowledge and advice. However, in the rapidly changing COVID-19 information environment, participants indicated that *compartmentalising* provided a vital way to maintain access to information "that [they] needed to know… which essentially was how can [they] keep safe" (P16). Occurring at a time when people felt overloaded by the need to stay up to date with accelerated and multi-platform information dissemination, *compartmentalising* supported the construction of risk through creating the space for people to engage with essential information.

In further providing a way to reduce the noise of multiple voices, whether this was through deleting platforms (P2, P17, P26) or limiting the amount of news (P2, P3, P5, P11, P15, P3) and opinions (P18) to which people had access, *compartmentalising* also constituted a form of being present, in which people diffused the information load by only seeking information at the point of need. In effect, *compartmentalising* created a way to focus rather than detach from information.

As the pandemic continued, however, the increasing impact of lockdown on mental health, personal finances and social relationships meant that *compartmentalising* also provided a way for people to safeguard against other forms of risk that were produced through lockdown. Becoming more noticeable after the initial March 2020 lockdown, *compartmentalising* began to bring people into conflict with governmental risk discourse when personal and national concerns clashed. For participants who were feeling overwhelmed by the national focus on physical health, for example, ignoring or discounting official information provided a useful way to manage the risk that lockdown posed to their wellbeing: "I have actually stopped watching the news because I just find it a bit too anxiety creating… and also social media stuff… it was coming in all directions" (P5). A similar focus on mental health was noted through the avoidance of information about national travel rules (P18), or location-tracking apps (P27). At other times, *compartmentalising* provided a way for people to prioritise risks to their physical health, with numerous participants indicating that they ignored government advice to support the hospitality industry in August 2020 because they felt it was not "worth" the risk to their family (P23, P26, P31, P32). Forming the means through which people purposefully attempted to exert agency or influence over the institutional risk narratives that aimed to define them, *compartmentalising* also speaks to the fragmentation of risk within the COVID-19 environment.

The interconnected shape of risk environments, in which the establishment of one hazard may challenge the construction of another, has not typically been widely acknowledged in prior research. While scholarship recognises that experts and lay people draw upon different forms of knowledge in defining risk (e.g. Wynne, 1996), far less attention has been paid to how local ways of knowing may also produce conflicting conceptions of risk, particularly given distinct value commitments, priorities, and identities (although see Gjernes, 2008; Seear, 2009). This is problematic because it downplays both the reflexive and the temporal shape of risk as people envisage living with certain undesired events. At the same time, the acknowledgement that risk is shaped by "competing logics" (Lupton, 2013a, p. 44) means that *compartmentalising* also opens risk perception up to more controversial forms of risk, as illustrated by the study participant who referenced a common conspiracy theory about the origins of the COVID-19 pandemic when she admitted ignoring reassurances over the safety of her local 5G telephone mast (P5). Providing a vivid example

of the multiple interests and identities that play into the construction of risk, the situated and embedded shape of risk perception also serves as a reminder that the difference that information makes can be both discordant and cooperative.

Reframing affect and emotion

A third way in which this COVID-19 case study extends risk perception is through reconsidering the shape of affect and emotion. Attention to emotion forms one of the major differences between techno-scientific and cognitive approaches to risk; while emotion is almost completely side-lined from a techno-scientific perspective, the cognitive tradition's identification of affect heuristics, which link feelings to the creation of 'mental shortcuts' (Slovic et al., 2002; Lupton, 2013b, p. 637), acknowledges that emotion cannot be separated from risk judgements. At the same time, the positioning of affect as preceding reason maintains a hierarchical distinction between emotion and rationality, with lay people still seen as overly demonstrative. Negating the fluidity of emotion, the emphasis on affective control subsequently downplays the intensity of risk perception or the impact of human suffering (Wilkinson, 2006). Similar issues are also noted in traditional information literacy literature, where the identification of emotions associated with information seeking parallels the separation of the cognitive from the affective while further introducing a binary categorisation of emotion as either aspirational or detrimental (e.g. Kuhlthau, 1993). Research is further limited by the overarching emphasis that is placed on individual feelings rather than on how emotion is shaped and produced through social interactions. These issues are challenged within a sociocultural approach to risk perception.

The first sign of the emotional shape of risk perception was found in the "intensifying" (Lloyd & Hicks, 2021, p. 1062) phase of participants' transition to the new COVID-19 lockdown information environment. Forming a concentrated period that was marked by the establishment of new rules and procedures, the intensifying phase also saw the emergence of information activities that evoked affective dynamics as people started to engage with the social, economic and material implications of lockdown. Participant engagement in the information activity of *hoovering* up information (Lloyd & Hicks, 2021, p. 1062), for example, which refers to the indiscriminate absorption of any information, referenced increased anxiety and stress as people responded to the precarity of this period. In contrast, participation in the information activity of *documenting* (Lloyd & Hicks, 2021, p. 1062), which refers to recording visual or textual information about the pandemic, provided the means to process the unexpectedness of change, with one participant taking photos of her empty neighbourhood because, "when are [the streets] ever going to be like that again?" (P8). Positioning risk as shaped in relation to threats that are felt

in the body, the emphasis on information activities that reference "the body's apprehension of the world" (Thrift, 2004, p. 67) illustrates how emotion became a fluid source of knowing rather than a precursor to cognitive thought. The creative shape of *documenting*, which references how arts-based research methods facilitate engagement with affective experiences (see Chapter 7), provides a further indication of the need to consider how risk perception is shaped in dialogue with the information environment rather than merely through information seeking.

Beyond identifying the tacit and nuanced ways in which risk is brought into being, the intensifying phase also drew attention to the emotional impact that ongoing uncertainty had upon the construction of risk. References to "doom scrolling" (P31) and the "depressing" constant engagement with news (P18, 20, 29, 30), for example, demonstrated that people experienced information overload affectively while the perception that the BBC was more fearmongering than ITV (P1, P30) provides a further vivid illustration of the material dimensions of emotion. One of the concerns of the cognitive approach to risk is that emotion impedes a person's ability to make risk judgments. However, the recognition that people diffuse emotion through engaging in *compartmentalising* activities, whether this is by negotiating COVID conversation time limits with friends (P18) or inundating social media feeds with happy news (P20), illustrated that risk construction was also predicated upon the creation of a protective buffer zone from which people could negotiate the affective impact of change. Helping people to continue engaging at a time when external demands exceeded their capacity to make meaning, the need for physical and mental space provides a further example of how risk perception is shaped through purposeful engagement with challenging forms of information rather than forming a dangerous withdrawal from society. The variety of emotions that are referenced through information interactions, including fear, anger, safety, and security, further speak to the importance of making the affective shape of risk an object of concern.

The intensifying period provides ample evidence of how risk is shaped in relation to the affective dimensions of operating in long-term crisis mode. Yet, emotions are not just intensities that run between individuals and things (Lupton, 2013b, p. 660). Instead, as sociocultural theory reminds us, emotions circulate between bodies; they are shared, relational and situated within practice as well as shaped through interaction and engagement. Perhaps the most important contribution that a focus on information makes, then, is to highlight how risk is also shaped in relation to support networks created to mediate emotional impact rather than merely what poses an affective threat to one's own wellbeing and subjectivity. *Documenting* images and stories of the pandemic on social media, for example, which helped to situate people in relation to risk, also formed a way for people to invoke affirming human connections as these artefacts oriented and attuned friends and families to the concerns of

their new lives (P5, P6, P15). At the same time, risk is also shaped by consideration for emotional welfare, with participants noting that they refrained from *mediating* or sharing certain forms of information, such as images of hospitals and dying (P5), out of concern for mental wellbeing. Articulating how emotion is produced through and in conjunction with social relations, the emphasis on the safeguarding of others brings analytical depth to the social site of knowing as well as addressing concerns about community risk amplification (Lupton, 2013a, p. 35). The acknowledgement that emotion is expressed through personal interest in others also introduces care as an additional dimension of risk perception as people negotiate affective ties in their lives.

Drawing attention to the conditions of practice

A final way in which this study of COVID-19 extends understandings of risk perception is through drawing attention to how structural conditions or arrangements impact the construction of risk. Referencing the sociocultural framing of knowledge as produced through historically and culturally situated social processes, conditions or arrangements shape how practice is made possible by influencing how a community talks or thinks as well as through establishing "what, when, how, and by whom something can be done" (Mahon et al., 2017, p. 8). However, in recognising that the relationships between people and the "organisms, artifacts and things through which they coexist" (Schatzki, 2001, p. 51) can both limit and promote activity, conditions and arrangements also illustrate how activity is not just dependent upon autonomous action. Applied to risk-informed information practice, conditions and arrangements shape risk perception through enabling or constraining how an information landscape is constructed, including how information is made available to people and how it is disseminated and circulated. In privileging certain ways of knowing over others, arrangements and conditions also shape a person's capacity to exert agency over the narratives that shape them.

One particularly prominent way in which conditions and arrangements influence risk perception is noted through how the pandemic information environment positioned people in relation to risk. As the preceding sections have suggested, the pandemic information environment was made up of three interconnected dimensions; official messaging and government briefings, which constituted the prominent cultural-discursive dimension of the pandemic information environment, and physical and social information, which, respectively, formed the less prominent material-economic and communal dimensions (Lloyd & Hicks, 2021, p. 1066). Together, these dimensions brought risk into view by shaping how information literacy was constructed within the pandemic context. However, in also establishing the sanctioned narratives and regulations of the pandemic context, including political and public health discourses as well as material requirements such as social distancing, the

information environment also shaped risk through creating a discursive space that positioned people within a sociocultural framing (Lloyd & Hicks, 2021, p. 1066). Risk was consequently brought into being through discourses that situated people in relation to risk, which, in the UK, included vulnerable, furloughed and working-from-home pandemic identities, amongst others (Lloyd & Hicks, 2021, p. 1066). These discourses, which influenced how the virus might affect health, employment or relationships and were established through official messaging as well as governmental briefings, illustrate how the conditions through which risk became instrumentally operationalised were created. In extending Brown's (2020, pp. 4–5) identification of the work that risk probabilities do to establish "the relative safety of the mainstream 'normals', and the implicit othering of those who are older and more vulnerable" they also draw attention to how risk perception is intricately entwined with prevailing power relations.

At the same time, the assignment of lockdown identities does not merely establish people as subject to specific risk discourses. Instead, institutional positioning also impacted people's agency by influencing what information was made available to them as well as how they could use technology to maintain social connections. Agency was further referenced through information activities that people adopted to distance themselves from the constraints of the social context, including through reconciling their prior subject positions with lockdown categorisations imposed upon them. Illustrating how the discursive dimensions of the pandemic both created assumptions about appropriate pathways to knowledge and reinforced how opportunities to engage in information environments are not evenly distributed, the projection of future pandemic trajectories nevertheless highlights the vital role that human agency plays in challenging the conditions of the social site. Illustrating that risk is brought into view through the reconfiguration of structural contexts of action, the association of agency with regeneration and judgement provides a further illustration of how risk perception is both reflexive and creative (Emirbayer & Mische, 1998). And, while grounding the capacity for risk perception within human agency might presuppose a return to individual rationalism, the emphasis on engagement (and disengagement) from different contexts also reinforces how risk perception must also be seen as "intrinsically" social and relational (Emirbayer & Mische, 1998, p. 973).

Next steps for risk perception

This chapter has drawn upon a case study of the COVID-19 pandemic to explore how risk perception is informed. Forming part of a broader examination of risk-informed information practice, the chapter has challenged the traditional cognitive emphasis on the transmission of expert knowledge to present a more nuanced picture of how risk is brought into view, including in relation

to the activities, emotions and conditions that shape these constructions. The complexity of emerging crises means that various commentators have positioned an understanding of risk perception as "neither reliable nor complete" with most potential hazards coming "as a surprise" to researchers and society alike (Hawkes & Rowe, 2008, p. 617). However, in drawing attention to the various ways in which people use information to learn about risk as well as how these strategies are shaped in relation to localised power relations, this chapter provides important insight into how risk perception is operationalised within newly created and evolving risk information environments. More expressly, these ideas position risk perception as shaped through the regulation of a risk information environment that, in referencing the broad sites of information that legitimise and give form to danger, construct discourses that both enable and constrain how people can access, reflect upon and situate themselves in relation to new expectations and norms. From this perspective, information literacy supports risk perception through informing and situating people in relation to the changed conditions and arrangements that influence agency.

Beyond the lens of COVID-19, there are many areas of interest for future risk perception research. One of the most interesting areas lies in examining situations in which the construction of risk is either contested or refuted by institutional bodies. While the UK response to the COVID-19 pandemic was challenged over time, the initial lockdown period was guided by a relatively integrated approach in which both the government and the healthcare system foregrounded crisis management. However, risk perception takes on a very different guise when official bodies oppose or play down concerns, whether this is to avoid challenges to a business model, as with on-demand food couriers (Gregory, 2021) or in the face of contested health conditions such as Long COVID (e.g., Rushforth et al., 2021). Leading to the creation of informal communities that function as safe spaces in which stories are shared, the official dismissal (or gaslighting) of individual concerns indicates the important role that "collective witnessing" plays in the construction of risk, including by helping people to recognise their own suffering "as patterned and legitimate" (Rushforth et al., 2021, p. 6). Future research should build upon these ideas to examine the implications of "strategic or accidental" institutional ignorance, including how risk perception becomes focused on "experimenting" with what is unknown rather than merely being shaped in relation to the reduction of uncertainty (Gross, 2016, p. 310). Along the same lines, the emphasis that is placed on unknown dynamics means that future research should also explore how anticipation, or the pre-empting of threats becomes key to the construction of risk, as well as the obvious labour considerations therein (Kazansky, 2021).

The important role that institutional information sources play in shaping the conditions for risk perception means that a related area of future research lies in interrogating the shape and focus of official risk messaging. As Chapter 2 points out, expert information sources have often been seen as lying outside

this type of examination due to the perception that scientific knowledge is both neutral and unbiased. However, concern that COVID-19 public health information was based upon "homogeneous, normative assumptions about risk, living conditions, and culture" despite noted disparities in the impact of the disease, exposes the shortcomings of this approach (Gibson, 2023, p. 257). In turn, the prioritisation of information for "those with the lowest risks for complications and mortality", which typically include white, nondisabled, employed, housed and middle- to high-income populations, opens marginalised communities up to further harm by both limiting the amount of "actionable data" available to them and then pathologising a reliance on information sources that acknowledge the effect on their lives (Gibson, 2023, p. 257). Future research should build upon Gibson's study to examine the impact of one-dimensional and discriminatory conceptions of scientific knowledge upon risk perception, including how members of marginalised communities exert agency within these situations.

A third potential area for risk perception research lies in the role that risk plays within small-scale everyday and personal challenges. The emphasis that a sociocultural approach to risk places on what is at stake to a person illustrates that risk perception must also engage with concerns that may not seem immediately apparent or dangerous to others. Introducing a new focus to research that has typically centred technological or human-made hazards rather than everyday ones (Hawkes et al., 2009, p. 210), the foregrounding of risks that shape a person's life situation challenges the "dispassionate" tone that has tended to characterise risk literature to date (Wilkinson, 2006, p. 4) as well as unsettling established understandings about power and agency. As the language-learner example that opened the book (and which will be explored more in Chapter 5) illustrates, risk is configured by the interaction of the body with practices, relationships, and material objects, and it is important to acknowledge that risk-related discourses are constructed in isolation from as well as in relation to state interventions. Future research should build upon these ideas to examine the impact of regulation upon risk perception, including how people gain access to critical forms of information at a time when risk may be unrecognised. The scope that the everyday also provides for engagement with pleasurable or sought after risk also opens risk perception research up to a further reconsideration of emotion, including the informative shape of sensuality and excitement as well as other more 'positive' emotions.

References

Beck, U. (1995). *Ecological politics in an age of risk*. Polity Press.

Brown, P. (2020). Studying COVID-19 in light of critical approaches to risk and uncertainty: Research pathways, conceptual tools, and some magic from Mary Douglas. *Health, Risk & Society*, *22*(1), 1–14.

Bubeck, P., Botzen, W. & Aerts, J. (2012). A review of risk perceptions and other factors that influence flood mitigation behavior. *Risk Analysis 32*(9), 1481–1495.

Case, D. O., Andrews, J. E., Johnson, J. D., & Allard, S. L. (2005). Avoiding versus seeking: The relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *Journal of the Medical Library Association*, *93*(3), 353–362.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.

Cole, J., & Watkins, C. (2015). International employees' concerns during serious disease outbreaks and the potential impact on business continuity: Lessons identified from the 2014–15 West African Ebola outbreak. *Journal of Business Continuity & Emergency Planning*, *9*(2), 149–162.

Coleman, C. (1993). The influence of mass media and interpersonal communication on societal and personal risk judgments. *Communication Research*, *20*(4), 611–628.

Department of the Environment (1995). *A guide to risk assessment and risk management for environmental protection*. HMSO.

Douglas, M. (1985). *Risk acceptability according to the social sciences*. Routledge & Kegan Paul.

Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.

Douglas, M., & Wildavsky, A. (1982). *Risk and culture: An essay on the selection of technological and environmental dangers*. University of California Press.

Dunwoody, S., & Griffin, R. J. (2013). The role of channel beliefs in risk information seeking. In J. Arvai, & L. Rivers (Eds.), *Effective risk communication* (pp. 220–233). Routledge.

Emirbayer, M., & Mische, A. (1998). What is agency?. *American Journal of Sociology*, *103*(4), 962–1023.

Gibson, A. N. (2023). The problem with "most people": Racism and ableism in US COVID-19 public health communication. *The Annals of the American Academy of Political and Social Science*, *707*(1), 256–265.

Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, *26*(8), 1513–1530.

Gjernes, T. (2008). Perceptions of risk and uncertainty among Sámi women involved in reindeer herding in Northern Norway. *Health, Risk & Society*, *10*(5), 505–516.

Gregory, K. (2021). 'My life is more valuable than this': Understanding risk among on-demand food couriers in Edinburgh. *Work, Employment and Society*, *35*(2), 316–331.

Griffin, R. J., Dunwoody, S., & Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. *Environmental Research*, *80*(2), S230–S245.

Gross, M. (2016). Risk and ignorance. In A. Burgess, A. Alemanno, & J. Zinn (Eds.), *Routledge handbook of risk studies* (pp. 310–317). Routledge.

Hawkes, G., Houghton, J., & Rowe, G. (2009). Risk and worry in everyday life: Comparing diaries and interviews as tools in risk perception research. *Health, Risk & Society*, *11*(3), 209–230.

Hawkes, G., & Rowe, G. (2008). A characterisation of the methodology of qualitative research on the nature of perceived risk: Trends and omissions. *Journal of Risk Research*, *11*(5), 617–643.

Horlick-Jones, T., & Prades, A. (2009). On interpretative risk perception research: Some reflections on its origins; its nature; and its possible applications in risk communication practice. *Health, Risk & Society*, *11*(5), 409–430.

Jacobson, J., Lin, C. Z., & McEwen, R. (2022). Information behaviour paradox: Understanding perceptions of risk and online behaviour. *Library & Information Science Research*, *44*(4).

Kazansky, B. (2021). 'It depends on your threat model': The anticipatory dimensions of resistance to data-driven surveillance. *Big Data & Society*, *8*(1).

Kuhlthau, C. (1993). *Seeking meaning: A process approach to library and information services*. Ablex.

Lloyd, A. (2006). Information literacy landscapes: An emerging picture. *Journal of Documentation*, *62*(5), 570–583.

Lloyd, A. (2010). Framing information literacy as information practice: Site ontology and practice theory. *Journal of Documentation*, *66*(2), 245–258.

Lloyd, A. (2011). Trapped between a rock and a hard place: What counts as information literacy in the workplace and how is it conceptualized?. *Library Trends*, *60*(2), 277–296.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: The unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation*, 77(5), 1052–1072.

Lloyd, A., & Hicks, A. (2022). Saturation, acceleration, and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19 environments. *Journal of Documentation*, *78*(5), 1008–1026.

Lupton, D. (2013a). *Risk*. Routledge.

Lupton, D. (2013b). Risk and emotion: Towards an alternative theoretical perspective. *Health, Risk & Society*, *15*(8), 634–647.

Mahon, K., Kemmis, S., Francisco, S., & Lloyd, A. (2017). Introduction: Practice theory and the theory of practice architectures. In Kathleen Mahon, Susanne Francisco, Kathleen Mahon (Eds.), *Exploring education and professional practice: Through the lens of practice architectures* (pp. 1–30). Springer.

Rundmo, T., & Nordfjærn, T. (2017). Does risk perception really exist?. *Safety Science*, *93*, 230–240.

Rushforth, A., Ladds, E., Wieringa, S., Taylor, S., Husain, L., & Greenhalgh, T. (2021). Long Covid – The illness narratives. *Social Science & Medicine*, *286*.

Savolainen, R. (2007). Filtering and withdrawing: Strategies for coping with information overload in everyday contexts. *Journal of Information Science*, *33*(5), 611–621.

Schatzki T. (2001). Introduction: Practice theory. In T. Schatzki, K. Knorr Cetina & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1–14). Routledge.

Schatzki, T. R. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. Penn State University Press.

Seear, K. (2009). 'Nobody really knows what it is or how to treat it': Why women with endometriosis do not comply with healthcare advice. *Health, Risk & Society*, *11*(4), 367–385.

Sjöberg, L., Moen, B. & Rundmo, T. (2004). *Explaining risk perception. An evaluation of the psychometric paradigm in risk perception research*. Rotunde.

Slovic, P. et al. (2002). Rational actors or rational fools: Implications of the affect heuristic for behavioral economics. *Journal of Socio-Economics*, *31*(4), 329–342.

Thrift, N. (2004). Intensities of feeling: Towards a spatial politics of affect. *Geografiska Annaler*, *86B*(1), 57–78.

Wilkinson, I. (2001). Social theories of risk perception: At once indispensable and insufficient. *Current Sociology*, *49*(1), 1–22.

Wilkinson, I. (2006). Health, risk and "social suffering". *Health, Risk & Society*, *8*(1), 1–8.

Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a New Ecology*, *40*, 44–83.

Young, M. E., King, N., Harper, S., & Humphreys, K. R. (2013). The influence of popular media on perceptions of personal and population risk in possible disease outbreaks. *Health, Risk & Society*, *15*(1), 103–114.

Zinn, J. (2016). 'In-between' and other reasonable ways to deal with risk and uncertainty: A review article. *Health, Risk & Society*, *18*(7–8), 348–366.

4

UNDERSTANDING RISK

Book bans and censorship in UK school libraries

How is risk understanding informed?

Giraffes Can't Dance is a children's picture book that charts Gerald the giraffe's attempts to participate in the annual jungle dance-off. Recommended for children aged 3–7, the book has been praised for its anti-bullying message as Gerald defies warthog and rhino critics to "dance to a different song" (Andreae, 1999). The catchy humour of the rhyming couplets means that the story has also featured in various primary school lesson plans and read-aloud audiovisual performances on YouTube. Yet, for all this book's appeal, it is also one of an increasing number of titles that has been challenged in UK school libraries since 2021. These objections are often unexpected, not least because library worker roles are still frequently associated with the "quiet, intellectual life" (YouGov, 2015). For school library workers, though, who often work in solo positions and who are not protected by statutory legislation, as is the case with public and prison libraries, the risks of book banning are becoming only more apparent. Beyond the legal and financial risks that may be involved if school library workers become embroiled within a challenge to library materials, these professionals also face the risk of being targeted by their local community or by online groups if they become the subject of a pile-on on social media, with implications for future employment prospects. Perhaps the greatest risks of all, though, are to young people and school librarianship itself, including the danger of decimating reading programmes, reducing access to diverse and representative forms of library material and, ironically, exposing young people to further danger by driving the selection of reading material into unregulated online spaces.

The potential impact of these challenges as well as the growing number of attacks (Bayley, 2022) means that UK-based school library workers are

DOI: 10.4324/9781032719627-4

increasingly being forced to become informed about book banning and censorship, including related to their rights and responsibilities as well as more practical concerns about how to manage these threats. The need to develop an understanding of risk is complicated by the relative novelty of these challenges in the UK, which has limited the establishment of a broad knowledge base to date. This chapter examines these questions through a case study of how a specific group of cultural heritage workers construct risk knowledge in the face of challenges about the content and availability of reading materials. Forming the second case study in a series of three that explores risk-informed information practice, this chapter starts by defining risk understanding, which forms an under-developed aspect of risk research, before presenting the school library case study context in more detail. The chapter then presents four ways in which a focus on information contributes to the establishment of risk understanding, including through unpacking institutional knowledge, problematising support structures, imposing a temporal lens and rehabilitating reflexivity. The chapter finishes by outlining ways in which research into risk understanding might develop in the future including related to whose understandings of risk are prioritised.

Risk understanding: Technoscientific, cognitive and sociocultural approaches

Unlike risk perception, the concept of risk understanding is an under-developed area of risk research, with both theoretical and empirical literature paying scant attention to how people integrate and develop a relationship with hazard. Yet, in describing how individuals learn how to deal with uncertain situations, risk understanding is important because it emphasises how people know and make meaning of what they experience. Drawing attention to the processes by which people achieve and develop the ability to engage in risk activity, the foregrounding of risk understanding also goes some way to bridge a gap in knowledge about how people move between recognising (perceiving) and acting upon (managing) risk information.

In positioning the development of risk understanding as a key aspect of risk-informed information practice, one of the biggest challenges may be to establish the scope and meaning of the term, which is slippery at best. Frequently employed without further explanation in publication titles (e.g., Forscher, 1986; Meacham, 2001), risk understanding has also been used to refer to how consensus is built within organisations (e.g., Fineberg & Stern, 1996). Another common way in which the term has been employed is as the comprehension of written and numeric risk data (e.g., Eichmeyer et al., 2005; Weinstein, 1999, 2001). However, this definition reduces risk understanding to a compliance-focused and functional skill rather than how people render risk meaningful. A related issue is the conflation of risk understanding with other risk concepts.

In one of the few examples of research from information studies, Frank (2020) explicitly sets out to examine how individuals in digital preservation "construct their understanding of risk." However, while the paper succeeds in drawing attention to various factors that shape said understanding, including considerations of vulnerability, uncertainty and trust, it subsequently ping-pongs between references to risk understanding, perception, interpretation and analysis, with little explanation or rationale for doing so. The subsequent elision of meaning makes it harder to draw out both the scope of risk understanding as well as its relationship to associated dimensions of risk response.

In contrast, related language may offer a more fruitful approach to grasping risk understanding with Wall and Olofsson (2008) establishing "risk sensemaking" as one potential alternative. Defined as "the way people materialize meanings of risk within a social context" (Wall & Olofsson, 2008), risk sensemaking foregrounds how people attempt to make the unknown understandable (Wall, 2014). Referencing Karl Weick's (1995) theory of sense-making, the emphasis on context positions the development of risk understanding as influenced by interaction and social relations rather than forming a purely individual construct. However, the lack of detail on what is implied by sense as well as the sense-making process itself limits the application of these ideas. Another interesting approach lies in the work of Amundrud and Aven (2015), who reflect on the distinctions that the Norwegian language makes between risk acknowledgement and risk understanding. Arguing that risk understanding centres on knowledge of risks, Amundrud and Aven (2015, p. 44) position risk acknowledgement as shaped, instead, in relation to "necessary conclusions and actions." However, in emerging from emergency response research, this approach to risk understanding is formed by probabilistic assessment and the quantification of risk rather than considerations of time and experience. Given these issues of terminology and definition, this chapter positions risk understanding as developing judgement and insight about the risks that a person is facing. Differing from risk perception through the focus on the interpretation of risk rather than its recognition, this definition nonetheless acknowledges that risk understanding is similarly shaped through direct and indirect social interaction.

One of the reasons that might lie behind the sidelining of risk understanding is the typical emphasis that technoscientific or cognitive approaches to risk have placed on expert advice. While the stated goal of expert communication is often to help people understand the risks they face (Weinstein, 1999, p. 15), the association of understanding with the reception of information downplays the processes that lie behind the interpretation of risk. As Engdahl and Lidskog (2014, p. 706) point out, the presentation of risk as a "pre-defined package" limits a person's ability to engage with what is at stake by framing understanding as either the acceptance or rejection of expert evaluation. Differences between lay and expert approaches to risk are subsequently associated with ignorance while

"deficient risk understanding" becomes repurposed as a causal catch all explanation for any misfortune, including "a lack of communication, lack of compliance with requirements, missing or inadequate risk assessment, lack of competence, or sheer thoughtlessness" (Amundrud & Aven, 2015, p. 42). Beyond deficiency, the cognitive emphasis on variables that are seen to limit interpretation of danger, including experience, individual or collective orientation, place attachment and social class (Wall, 2011), does little to address the limitations of technoscientific research. Reinforcing a rational interpretation of risk understanding, similar issues are seen in research that positions risk understanding as unduly influenced by media reports (e.g. Andsager & Powers, 2001).

In comparison, the sociocultural perspective directly challenges technoscientific and cognitive perspectives by drawing attention to the situated shape of risk understanding. Referencing the contexts in which risk is interpreted and negotiated, a focus on the frameworks that shape social relations positions risk understanding as constructed in relation to "the people we meet and the places we frequent" (Wall, 2014, p. 1286). Drawing attention to a person's physical and social surroundings as well as the "complex exchange of individual, group and societal influences" (Wall & Olofsson, 2008, p. 432), these ideas underscore the inseparability of relationships between understanding and social worlds. More complexly, the emphasis on interpretation establishes that risk understanding is constructed through an active engagement in the world rather than merely through the assimilation (and remembering) of new knowledge. Shifting the focus of risk understanding from sources of knowledge to how risk knowledge is constructed and maintained, the foregrounding of social relations spotlights how people organise the unknown, including in relation to "narratives, epistemologies, discourses, rhetorical moves, choices of 'rational arguments' and courses of action" (Lupton & Tulloch, 2002, p. 320). In further centring the agentic processes through which people render risk intelligible (Wall, 2011, p. 736), the sociocultural perspective also moves beyond demographic characteristics to engage with emotional, embodied and reflexive responses to danger.

Evidence of the importance that local forms of knowledge have to the construction of risk understanding is found in a handful of risk studies, particularly those examining risk work. While risk understanding has not featured heavily within empirical literature, this research nonetheless provides some indication of the ways in which people use information to interpret and develop knowledge of danger. References to experiential knowledge, for example, demonstrate that observing supports the development of expertise over time, with mountain rescue workers developing understanding of avalanche risk through periodic inspection of cornices (Lois, 2001, p. 388) while Hallowell (2006, p. 14) reports that women often build understanding of cancer through observing the physical effects of the disease on their mothers. Similarly, care workers indicate that they build understanding about the risk of hospitalisation through noticing what seems "un(usual) for a particular resident" (Harrad-Hyde et al., 2022, p. 7).

Storytelling forms another activity that has been seen as useful for risk understanding, whether this is an organised dialogue, such as when care-workers collectively reflect on recent courses of action (Harrad-Hyde et al., 2022, p. 9), or more informal (Österholm et al., 2023). Facilitating access to collegial support, these sessions also support the construction of risk knowledge by allowing for consideration of appropriate professional responses to risk. However, given that the concept has only been peripherally explored to date, considerable further research is needed in the area.

Theoretical influences

Difficulties defining risk understanding provide some indication of the scant attention that the concept has received within theoretical work. While Douglas (1992, p. 55) suggests the importance of varied information sources to the development of risk understanding through her statement that "humans are social animals and we use social, as well as spatial, temporal and bodily reference schemes," there is little ensuing practical exploration of how these tools support the development of risk knowledge. Along the same lines, her acknowledgement that communities draw upon "shared, accumulated experience to determine which foreseeable losses are most probable" (Douglas, 1985, p. 69) overlooks how people physically access and engage with these collective understandings. In contrast, Beck (1992) and Giddens (1991) have been criticised for failing to recognise how the construction of risk knowledge differs across society (e.g., Lash, 1993) with Lupton and Tulloch (2001) arguing that the emphasis that is placed on grand narratives deliberately suppresses the impact of time and space on the development of risk understanding. And, while governmental approaches to risk (Foucault, 1991) draw attention to the impact that discourse has upon how knowledge is built, the emphasis on institutional understandings of danger, which are seen to be uniquely shaped through data, statistics and other forms of expertise, limits a more complex engagement with how individuals act within this world.

An alternative theoretical construct that may provide some insight into risk understanding is the concept of knowing. Originally coming to prominence within the field of organisational studies (e.g., Blackler, 1995), knowing has since played an important role in shaping practice-based perspectives of learning, where it has been used to challenge the traditional emphasis on knowledge (e.g., Nicolini et al., 2016). Arguing that references to a noun diminish the complexity of workplace activity by positioning expertise as "an asset" (Nicolini et al., 2016, p. 26) that can be "stored, transmitted, and circulated to other individuals" (Nicolini et al., 2016, p. 7), practice-based theorists suggest that, instead, knowledgeability is better regarded as something that is shaped in practice. These ideas have since positioned knowing as "a verb connoting action, doing, practice" (Orlikowski, 2002, p. 251) or as something that people

do rather than what they have (Blackler, 1995, p. 1023). From the perspective of risk understanding, these ideas are helpful because they focus attention on how people "get their work done" (Orlikowski, 2002, p. 249), or the situated actions that shape how knowledge is built rather than assuming its simple assimilation. They also underscore how an emphasis on ongoing activity provides a far richer and more complex overview of a phenomenon, including taken-for-granted assumptions related to its unfolding organisation (Nicolini et al., 2016, p. 28).

Understanding the risks of book bans in UK school libraries: A case study

The chapter will now present the case study that forms the basis for this exploration of risk understanding. Unlike the case studies that are featured in Chapters 3 and 5, the research presented in this chapter was specifically designed and carried out for the purposes of inclusion in this book. This means that the study specifically explored questions of risk understanding rather than being reanalysed later.

The study employed a qualitative research design that was informed by the principles of constructivist grounded theory (Charmaz, 2014). This approach was selected to allow for the representation of multiple possible realities as well as to acknowledge the production of data between researcher and participant. More specifically, the study employed semi structured interviews as the research method. Interviews were chosen to allow participants the time and space to reflect on their narrative of events as well as to gain a sense of the meaning that experiences held for them. Interviews were carried out online using end-to-end encrypted video conferencing tools and were audio-recorded and transcribed. Interview questions focused on how participants learnt or developed understanding about risks related to book banning and censorship within UK school libraries. Interviews lasted for between 34 and 56 minutes for an average of 41 minutes.

The study employed a maximum variation purposive sampling approach to ensure that the research explored a variety of book banning experiences, including related to type of school, geographic region, and severity/persistence of book challenges. Participants for the study were recruited through school library workers mailing lists in the UK as well as through the social media accounts of relevant professional bodies. Nine school library workers were interviewed (see Table 4.1). One additional participant chose to submit a written narrative of their experience instead of participating in an interview, which brought the number of study participants to 10. Inclusion criteria included working in a school library, regardless of professional status, and experience of challenges to library materials, whether these were locally or internationally coordinated, one-off or ongoing. Participants were predominantly located in

TABLE 4.1 Book ban participant data

Participant	*School type*	*Location*
S1	Mixed, State	London
S2	Single sex, Independent	Scotland
S3	Single sex, State	London
S4	Mixed, Independent	London
S5	Independent	Scotland
S6	Mixed, State	East of England
S7	MIxed, State	London
S8	Mixed, State	South of England
S9	Mixed, State	London
S10	Mixed, Independent	North of England

large urban settings but represented a range of geographic regions in the UK. Amongst the school library workers, participants worked in primary (age 5–11), secondary (age 11–18) and all through (3–18) schools that were either single sex or co-educational, in both the independent (private) and state sector.

Interview data were analysed through the constant comparative method that is characteristic of constructivist grounded theory (Charmaz, 2014). This approach allowed for an iterative analysis that started from each individual participant's activities and context. Data were initially coded by hand using an open coding process. Data were then subjected to a second round of more focused coding, which resulted in the production of six codes: *establishing guidance, seeking professional advice, disclosing, monitoring, observing reactions* and *pooling*. These codes were subsequently grouped into two categories, *mapping the terrain* and *roping together*. Limitations of the study included difficulties finding participants outside of large urban settings. It was also harder to find male participants although this is perhaps not surprising given that the library sector is 75% female (CILIP, 2023).

The study, which was approved by the UCL Arts and Humanities Research Ethics Committee, paid particular attention to ethical process (explored further in Chapter 7). Concern was initially placed on ensuring research participant confidentiality given the small size of the school library sector as well as the potential impact of identification. While some senior school leadership teams provided support to library workers who were facing challenges, others did not, and it was important that participation in the study did not jeopardise current or ongoing professional relationships. To this end, details of the library worker, the school and the specific details of the challenge have been anonymised. As the research continued, however, ethical considerations became focused on the children and young people who were impacted by challenges to library materials, particularly as participants talked about loopholes that they feared could potentially be exploited in future activist campaigns. Concern that

this research could be weaponised against school libraries means that comments that were perceived to place libraries at further risk of book challenges have been purposefully excluded from this narrative (see Chapter 7 for a more complete discussion of this ethical dilemma).

The overarching findings of this study suggest that information literacy supports the development of risk understanding through providing the means through which school library workers recognise how and why challenges to library materials pose a threat within their community. Illustrating that risk is constituted by potential damage to a school library worker's livelihood as well as professional threats, including the legitimacy of school librarianship and the wellbeing of young people, information literacy shapes an understanding of *how* these challenges pose a threat by facilitating engagement with how information is made manifest within a setting, including how it is afforded and contested. In further providing an opportunity to reflect on events, information literacy supports an understanding of *why* challenges constitute a threat by helping school library workers to situate past experience in relation to future opportunities within their professional sphere. Centred on both *mapping the terrain* and *roping together* activities, which provide a way for school library workers to chart both the practical and the emotional assistance that is available to them at this time, information literacy supports an embodied and affective response to harm. Yet, the recognition that information activities are shaped in relation to a community's legitimising discourses also illustrates that risk understanding is subject to enabling and constraining conditions as well as broader agential concerns. Findings from this study will now be used to explore the specific implications for risk understanding in more detail.

Extending risk understanding

Risk understanding is an overlooked concept that foregrounds how people interpret and comprehend danger within their everyday contexts. Analysis of how school library workers build knowledge of the risks associated with challenges to library materials, including book bans and attempted censorship efforts, extends comprehension of risk understanding through: unpacking institutional knowledge, problematising support structures, imposing a temporal lens and rehabilitating reflexivity.

Unpacking institutional knowledge

One of the first ways in which this study extends a comprehension of risk understanding is through unpacking or shedding light on the complex ways in which institutional knowledge constrains and enables the development of risk knowledge. Institutional knowledge has a chequered history within risk research. As previous sections have demonstrated, the prevailing belief that

uncertainty is mediated through the transmission of expert analysis and advice forms one potential reason why risk understanding has not been widely explored to date. Yet, in writing about the ways in which universities prepare medical students for professional practice, sociologist, Renée Fox, helpfully distinguishes between two different types of uncertainty; that which results from "incomplete or imperfect mastery of available knowledge", and that which is dependent upon "limitations in current… knowledge" itself (Fox, 1988a, p. 20). Questioning the fallibility of expertise, the emphasis on the boundaries of scientific truth means that expert advice should be understood as continually emerging or as shaped in relation to temporary "voids" (Fox, 1988a, p. 24) rather than forming "nicely invariant principles" (Fox, 1988a, p. 25). Applied to risk understanding, these ideas challenge the positioning of institutional knowledge as neatly packaged evidence with the associated implications of "ignorance or ineptitude" (Fox, 1988a, p. 20) whenever lay beliefs differ. The foregrounding of epistemic arrangements further illustrates how risk knowledge is shaped in relation to the development of relationships with information, including both how it is afforded and contested within a setting.

Institutional knowledge typically forms one of the first forms of information to which school library workers turn; faced with a volatile and uncertain situation, many school library workers immediately *seek professional advice* from trade unions and library associations to build a more accurate picture of the legal and social ramifications of the challenge that they face. However, the unexpectedness of disputes, as well as, in many cases, the lack of precedent, meant that these groups often seemed to be caught on the hop, with school library workers indicating that efforts to *seek professional advice* about how to deal with challenges were frequently unproductive: "I've kind of raised it with [trade union]… and they keep saying, 'Oh, yeah, we're gonna put on some event.' But nothing's happened" (S9). While national bodies have since offered more concrete direction, including statements and practical workshops, the relative lack of initial support suggests that institutional guidance was evolving in line with current events rather than being routinely based on objective knowledge and expertise. Indicating that risk understanding is coordinated somewhat haphazardly rather than in an orderly manner, these deficiencies also point to how risk knowledge is shaped through becoming positioned in relation to institutional tensions as well as broader procedures and expectations. (cf. Bonnet et al., 2021).

Further tensions are noted in the struggles that school library workers face in eliciting relevant information from school management structures, particularly when challenges are mediated by the school rather than library workers themselves. Providing further evidence of the emerging shape of risk knowledge, in which school library workers have to "press" for rules (S2) or meetings

with stakeholders (S1, S2, S9), efforts to *establish guidance* are additionally complicated when institutional direction contravenes professional library standards and values, such as principles of intellectual freedom (e.g. CILIP, n.d.). Institutional knowledge subsequently becomes associated with what Rayner (2012, p. 108) refers to as "uncomfortable knowledge" or truths that "societies or institutions actively exclude because they threaten to undermine key organizational arrangements." Recalling Mary Douglas' (1966/2002) ideas of dirt and pollution, in which matter that is out of place is considered to be dangerous, the association of institutional knowledge with advice that school library workers consider to be professionally indefensible highlights how, in this case, risk understanding is constructed in relation to the boundaries of what organisations consider to be knowable rather than absolute claims to truth. In further evoking considerations of power, the recognition that school library workers are forced to comply with advice that goes against their "basic beliefs" (cf. Flyvbjerg, 2013, p. 159) also illustrates that risk understanding is shaped in relation to who gets to define or enforce what is worth knowing.

At the same time, concern over the dismissal of professional library worker expertise suggests that efforts to *establish guidance* also provide a way to confront power imbalances, including organisational strategies designed to manage uncomfortable knowledge, such as denial and dismissal (Rayner, 2012, p. 113). Thus, the discussions that school library workers request to hold with head teachers as well as parent and governor stakeholders also represent a challenge to efforts to deny or exclude professional expertise from institutional decision-making. Along the same lines, quizzing line managers and school safeguarding leads about the implications of official guidance, which forms a way to "constantly signpost [the school library worker is] your expert in this" (S1), additionally remonstrates against attempts to dismiss the positioning of professional knowledge as inaccurate or misguided. Acknowledging the agency of school library workers, as they respond to strategies designed to marginalise professional judgement, these negotiations illustrate how risk understanding is shaped in relation to an active reconfiguring of the world rather than forming a deficit that requires greater access to expert perspectives. Nonetheless, the heightened stress and anxiety of this time draw attention to the damage that unsupportive work environments can cause, particularly when school library workers are already grappling with the implied accusations of professional malpractice.

Problematising support structures

A second way in which this research into book-banning develops a consideration of risk understanding is through drawing attention to the complex ways in which social support shapes the construction of risk knowledge. Social

support is often positioned as critical to information literacy; the (re)establishment of social networks is seen to be vital for refugee resettlement (Lloyd, 2020), while health research (Lloyd et al., 2014) illustrates how living with chronic health conditions is supported through information creation activities (such as the production of scrapbooks) that reorient a patient's friends and family to the realities of their illness (explored further in Chapter 5). However, to date, much of this research has focused on everyday settings, where the presence of personal support networks is frequently (though not always) more assured. Even in workplace environments, shared goals mean that co-workers are likely to be pulling together- perhaps also relying on teamwork for safety- even if tensions exist between certain colleagues (e.g., Lloyd, 2005). In contrast, far less focus has been placed upon the impact that the breakdown of collegial relationships has upon a person's ability to engage with information. For school library workers, the shock of the challenges that they face coupled with, in many cases, the sudden uncertainty over workplace backing, means that their localised support structures become less dependable even as they become more needed. In this instance, risk understanding becomes entangled with emotional and material needs, including assessing the strength of community feeling as well as the connections that can be relied upon for assistance.

Along these lines, the information activities that together constitute *mapping the terrain* support the development of risk understanding by helping school library workers to gauge who and what social support they can still depend on alongside identifying the rules and guidance that structure their new settings. In effect, attempts to *establish guidance* from stakeholders also constitute an attempt to chart what backing, if any, school library workers will receive from their school leadership teams, while *seeking professional advice* performs a similar function in relation to associations and organisations. School library workers also directly address the existence of support through their engagement in the information activity of *disclosing*, which refers to making new or previously secret information known to people. Being very "up-front" (S3) with new employers, for example, forms a way for school library workers who have previously had negative experiences with senior leadership teams to determine the likelihood of being protected in future. Similarly, *disclosing* events to "shocked" (S2) fellow teachers creates a way for school library workers to gauge whether they can still rely on colleagues for sympathy and understanding, while further helping them to shore up or nurture these relationships for future need. Providing an indication of the social isolation that some school library workers experience, attempts to assess potential sources of solidarity underscore that risk understanding is shaped in relation to community knowledge structures even when these networks may be hostile.

Beyond co-workers, school library workers also build risk knowledge through assessing support from their local community. Along these lines, participation

in the information activity of *observing* helps school library workers to gauge risk by providing an opportunity to pick up on validating gestures and testimonials as well as signs of conflict and debate. *Observing* young people's affirmations of librarian work, for example, including through letters (S3) and posters (S8), is seen as particularly heartening given that these voices are rarely given prominence in debates over challenges to school library materials. Similarly, *observing* a Black parent who picked up and "nodded" (S4) at a book aimed at young Black women provided another reassuring indication of the wider school community's lack of support for attempts to censor library materials. At other times, school library workers might purposely engineer a situation to test community response; in *observing* which members of a senior leadership team attended a photo opportunity at a potentially controversial author event (S4), school library workers build risk knowledge through physically attending to the reactions of their local community Illustrating the importance of tacit and highly contingent forms of knowledge to the construction of risk understanding, these non-verbal bodily cues also provide a vivid illustration of the personal demands of working with risk.

Imposing a temporal lens

The introduction of a focus on time forms a third way in which considerations of risk understanding are developed. Time is a key dimension of social experience, but it has yet to feature prominently within sociocultural risk research. Increasing interest in risk research on the role that experiential knowledge plays in mediating hazard indicates that there is some recognition of the temporal shape of risk; after all, knowledge that is based upon the "identification of subtle changes" and patterns (Harrad-Hyde et al., 2022, p. 7) cannot be forged overnight. However, references to time tend to be implied rather than overt and related concepts, including tempo, duration and sequence (Adam, 1990), remain largely underexplored. When time is considered within risk research, it is often understood in terms of clocks and calendars, an approach that draws attention to day-to-day rhythms, but which presents temporality as "serial, linear, progressive, or cumulative" (Adam, 1990, p. 6). In contrast, a practice theoretical approach introduces the concept of human or lived time, which ties time to "to the continuity and movement of action" (Schatzki, 2006, p. 156). Distinguished from objective time through the emphasis on past, present and future dimensionality, human time is seen to be essential to the coordination and organisation of social life (Schatzki, 2012). Drawing upon Heidegger's assertion that time forms the means through which human existence is united, the positioning of activity as shaped by social time sees risk understanding as opening up "between that toward which she is coming and that from which she is departing," (Schatzki, 2012, p. 19) rather than forming a successive ordering of events.

One of the major ways in which a temporal lens opens up risk understanding is through the recognition that it takes time for school library workers to construct risk knowledge. As Lemke (2000, p. 282) points out, "fundamental change… cannot take place on short timescales." Instead, it is in drawing on experiences across time, including past accounts and encounters, that school library workers are able to interpret ongoing events. From this perspective, school library workers develop risk understanding through considering their seemingly isolated and one-off book ban incidents in relation to previous experiences. Engagement in the information activity of *monitoring*, which forms the way through which school library workers track book band challenges on social media and professional groups, provides a particularly important method for accessing these historical accounts. Essential for a profession that is characterised by solo working, listening to colleagues' "little horror-stories" (S3) supports the development of risk understanding by drawing on the past to make sense of the present while also providing the means to gauge emerging comprehension of the bigger picture, such as whether there is anything else that they should be doing. *Monitoring* also supports the development of risk understanding by helping school library workers to recognise patterns in activist group tactics (S3), which further speaks to the construction of connection beyond the moment.

At the same time, the localised impact of challenges means that school library workers also interpret ongoing events in relation to their own prior experiences, including related to the texts, discourses and activities that regulate their working practice. In particular, many school library workers suddenly began to doubt their previous understanding of local values and priorities when they note misalignment between a school's responses to challenges and "the big deal" that is made of diversity celebrations, including Pride (S2). Along these lines, *observing* whether "anybody tries to deface [book displays that celebrate protected identity characteristics] or remove things from it" (S8) provides a useful test or measure of the accuracy of prior beliefs. In further creating an indication of support for censorship in the community (S2, S4, S8), *observing* supports the development of risk understanding by helping school library workers to reconcile their established knowledge with current events. And yet, in providing the means to moderate any unwelcome new surprises about support (or otherwise) for challenges (cf. Adams et al., 2009, p. 250), *observing* also actively orients school library workers to the future by establishing opportunities for further action, including related to the possibility of additional book displays. Illustrating how risk understanding is shaped through the construction of connections across future timescapes as well as past experience, the nervous energy or fear that accompanies these actions nonetheless illustrate how risk knowledge is "lived and felt as inevitable in the present" (Adams et al., 2009, p. 248) rather than forming mere speculation.

Importantly, the recognition that the construction of risk knowledge extends across time also draws attention to materiality or the ways in which things give

time "meaning, order and personal as well as collective qualities and characteristics" (Shove et al., 2009, p. 5). In providing the physical means through which school library workers can keep track of and maintain their engagement with past and present events, material objects support the construction of risk knowledge by coordinating and synchronising experience over time. *Monitoring* ongoing challenges to library materials, for example, is only made possible through the social networks and professional listservs through which school library workers share their histories, while the ability to draw on these testimonies is further made possible by the searchability and persistence of content on these tools. Allowing for the sustaining of knowledge over time, these tools also benefit from the presence of push/pull mechanisms, which support the visibility of current events. Along the same lines, *observing* local support for challenges is facilitated by the physical durability of library book displays, where scribbles and rips (S8) to materials on display enables the clear identification of how materials are received by a community. Allowing school library workers to connect with the physical and social dimensions of information, material objects also demonstrate that risk understanding is shaped through the conditions that the local community authorise.

Rehabilitating reflexivity

A final way in which this study develops a consideration of risk understanding is through rehabilitating the role that reflexivity plays in shaping knowing. Reflexivity is perhaps one of the terms that has been most associated with risk thanks to Beck's advancement of a theory of reflexive modernisation (Beck, 1992, p. 87). Comprising reflex and reflection stages, reflexive modernisation understands reflexivity to form the process through which an industrial society starts to see itself as a risk society or develop a greater awareness of the threats that the contemporary era presents. Yet, for all this notoriety, a careful reading reveals that the term remains somewhat "pallid" or underexplored (Archer, 2007, p. 33). Scholars note difficulties pinning down exactly what Beck counts as reflexive processes (Archer, 2007, p. 30), while Beck (Beck et al., 1994, p. 28) himself admits that he uses the concept of reflexivity to refer to self-confrontation rather than the more usual self-awareness. In further positioning reflexivity as initiated by the "recipients of unintended consequences" instead of those who are responsible for them (Archer, 2007, p. 31), these conceptualisations distance reflexive modernisation from activities that have always characterised human society while recentring the dominance of expert knowledge systems (Lupton, 2013, p. 147). The vagueness of the term, combined with Beck's marked failure to accord the concept the centrality that might be assumed, despite his "frequent use of the self-prefixes" (Archer, 2007, p. 33), provides evidence of the need to reconsider how reflexivity shapes risk understanding.

An ordinary activity that, nonetheless, rarely features prominently in everyday conversation, reflexivity becomes even more complex when it is freed from

the considerations of an increasingly global society. Defined by Archer (2007, p. 4) as "the regular exercise of the mental ability, shared by all normal people, to consider themselves in relation to their (social) contexts and vice versa," reflexivity refers, in its most basic sense, to inner dialogue, or the (often silent) ways that we talk to ourselves within our own head (Archer, 2007, p. 2). Differing from Beck's understanding of the term through the emphasis on the "questioning exploration of subject in relation to object," reflexivity forms the means through which we speculate on questions that we pose about the world and its relationship to us (Archer, 2007, p. 73). Reflexivity may additionally be a particularly important tool for people, such as school library workers, who are "performing isolated work tasks" (Archer, 2007, p. 2). More explicitly, the recognition that it is through engagement in information activities that school library workers review their interpretation of a situation suggests that risk understanding is not just shaped by informative content but also by the reflexive opportunities that information sources afford.

Along these lines, the information activity of *monitoring* provides a useful indication of the reflexive construction of risk understanding. While keeping an eye on social media and list-servs serves the purpose of keeping school library workers up to date with challenges to library materials, these activities also catalyse broader professional reflection, including related to "what it is to be a librarian [or] what libraries mean" (S10). Helping to contextualise professional working environments, engagement in *monitoring* illustrates that consideration of challenges "in a more philosophical sense" (S10) supports risk understanding through inviting school library workers to reconcile or situate knowledge in relation to professional values and beliefs. At other times, reflexivity becomes far more emotionally charged, as school library workers become frustrated and angry when they identify what they see as failings in the way the profession is addressing censorship issues, including a lack of "bravery" and "strategic sense" (S3). Centring the body within the performance of work, these sensory cues suggest that risk understanding is further shaped through a consideration of how knowledge is constrained in a community as well as how it is enabled. Sensory and contingent forms of information further illustrate that reflexivity is affectively shaped, including in relation to images and sensations that may be hard to represent within external conversation (Archer, 2007, p. 67).

The importance of reflexivity to risk understanding is additionally underscored through the opportunities that the information activity of *observing* provides for school library workers to develop thought about their concerns. Much like with monitoring, *observing* forms an important way in which school library workers inform themselves about the immediate risk to themselves, particularly during times of unexpected contingency. However, this form of noticing also animates broader attempts to understand the motivation and rationale for attacks on professional judgement, such as "where challenges are coming from" (S10) and what the "bigger story" is (S4). Providing another way to

contextualise the current situation, the observations of school library workers demonstrate that attempts to build "perspective" (S10) shape risk understanding by drawing attention to the structural conditions that give rise to the challenges they face. At the same time, *observing* also becomes more distressing when it leads to a broader consideration of the impact that challenges to library materials might have, including how much diverse collections might be needed if a child is "in a homophobic environment at home" (S4). Bringing additional conceptualisations of what is at stake through library challenges into sharp relief, the "beauty" (S3) and fragility of personal information that students occasionally share with school library workers indicates that risk understanding also centres on a consideration of the power relations that influence which forms of information are sanctioned and legitimised.

Next steps for risk understanding

This chapter has drawn upon a case study of book banning and censorship within UK school libraries to examine how risk understanding is informed. Relatively underexplored within literature, challenges to library materials represent a threat that is both unexpected and highly emotive as well as one that references increasingly shrill moral panic (Burkholder et al., 2024). However, in drawing attention to the various information strategies that school library workers employ to interpret and analyse the challenges that they face, this chapter establishes the value of examining the construction of risk knowledge in more detail, including how risk understanding is shaped in complex social contexts. More explicitly, this chapter suggests that the construction of risk knowledge is far more precarious than the previous focus on the transfer of expert advice might assume; the evolving shape of institutional knowledge coupled with a more nuanced consideration of how risk is shaped over time positions risk understanding as dynamic as well as constantly changing. In turn, the emphasis on reflexivity means that this chapter also challenges the positioning of risk understanding as something that happens to passive agents. Instead, while institutional power structures impact school library workers' opportunities for action, careful engagement with the discourses and narratives of a setting positions the construction of risk knowledge as both actively mediated and an agential response to concerns. From this perspective, information literacy supports risk understanding by forming the means through which people build an awareness of how and why knowledge shapes the courses of action available to them.

Beyond the findings of this study, the relatively underdeveloped state of scholarship on this topic means that there are numerous additional avenues for research into risk understanding. One particularly important direction is the need to consider the voices that are missing from risk understanding research; whose understandings of risk are prioritised and sidelined? Over the last thirty

years, scholars have placed considerable emphasis on the need to broaden the focus of risk research; from advocating for the inclusion of lay perspectives within studies of risk perception (e.g., Wynne, 1996) to more recent attempts to think about how risk work is co-produced (e.g., Gale et al., 2019). Yet, as the case study that is presented in this chapter demonstrates, the recognised need to widen these perspectives does not always extend to a consideration of children and young people (although see Gibson et al., 2021), despite their right to information, to be heard, and to be party to decisions of relevance to them (United Nations General Assembly, 1989). Work examining hospital experiences further confirms the importance of heeding young people's perspectives on events that will impact them (e.g., Bray et al., 2022). Given that Adams (1995, p. 1) confirms that "most decisions about risks involving infants and young children are taken by adults," future research should explore how the under-18s build up and develop risk knowledge, including how they develop the capacity to protect themselves from harm in the future.

A second area for research relates to the need to examine the impact that wider social dynamics have upon the development of risk understanding. While school library workers have strong professional networks, the solitary nature of their employment, combined with a lack of statutory protection, means that their understandings of risk are necessarily shaped in relation to localised educational hierarchies; the impact of gender in this situation, given that school librarianship is highly feminised, should also not be underestimated. Given this isolation, it might be assumed that greater opportunities for knowledge sharing would have a beneficial impact on the development of risk understanding within large organisations. However, the recognition that social workers filter certain forms of information from their case reports illustrates how the construction of risk understanding can also be hindered by peers and team-mates, particularly when evidence is seen as ambiguous or hard to substantiate (Mitchell & Demir, 2021). Future research should examine the impact that partial or hidden information, including errors and mistakes, has upon risk understanding, particularly in organisations that people rely on for safety or income, such as government agencies (cf. Rayner, 2012, p. 122). Research should also explore how risk workers manage the "emotional, moral and existential" (Fox, 1988b, p. 537) dimensions of these forms of uncertainty given that the construction of risk understanding depends on "the public believing that [the professionals] know what they are doing" (Light, 1979, p. 310).

A final area of research relates to the need to explore the intersections between labour and risk understanding in more detail. Labour has been silently referenced within this study through the effort to which school library workers go to map the terrain of the challenges that they face as well as in the time they take to keep up to date with developments. Forming what Clarke (2016) refers to as anticipatory labour, this work is also affectively shaped, as demonstrated by a fear that the next time a school library worker buys or puts out a book could be

"the one that makes it happen again" (S3). Future research should move beyond the current focus upon salaried risk workers to examine the impact that additional labour such as this places upon the construction of risk understanding, particularly as responsibility for health and environmental concerns continues to shift into the home (cf. Clarke, 2016). To this we must also add considerations of emotional labour, as attempts to understand challenges to library materials showcase some of the "unacceptable and indefensible" (Bessant & Broadley, 2016, p. 102) employment practices that characterise school library working environments. Situations (S1, S2, S3, S4, S9) where school library workers have lost their job or have been (explicitly or implicitly) threatened by their school's senior leadership teams indicate that future research should also examine the disruptive impact of risk understanding as well as the burden that verbal and emotional harm places upon professional risk responses.

References

Adam, B. (1990). *Time and social theory*. Polity Press.

Adams, J. (1995). *Risk*. Routledge.

Adams, V., Murphy, M., & Clarke, A. E. (2009). Anticipation: Technoscience, life, affect, temporality. *Subjectivity*, *28*, 246–265.

Amundrud, Ø., & Aven, T. (2015). On how to understand and acknowledge risk. *Reliability Engineering & System Safety*, *142*, 42–47.

Andreae, G. (1999). *Giraffes can't dance*. Orchard Books.

Andsager, J. L., & Powers, A. (2001). Framing women's health with a sense-making approach: Magazine coverage of breast cancer and implants. *Health Communication*, *13*(2), 163–185.

Archer, M. (2007). *Making our way through the world: Human reflexivity and social mobility*. Cambridge University Press.

Bayley, S. (2022). Serious concerns as almost a third of librarians asked to censor material. *The Bookseller*. https://www.thebookseller.com/features/serious-concerns-as-almost-a-third-of-librarians-asked-to-censor-material

Beck, U. (1992), *Risk society: Towards a new modernity*. Sage.

Beck, U., Giddens, A., & Lash, S. (1994). *Reflexive modernization: Politics, tradition and aesthetics in the modern social order*. Polity Press.

Bessant, J., & Broadley, K. (2016). Transparency and 'uncomfortable knowledge' in child protection. *Policy Studies*, *37*(2), 93–112.

Blackler, F. (1995). Knowledge, knowledge work and organizations: An overview and interpretation. *Organization Studies*, *16*(6), 1021–1046.

Bray, L., Appleton, V., & Sharpe, A. (2022). 'We should have been told what would happen': Children's and parents' procedural knowledge levels and information-seeking behaviours when coming to hospital for a planned procedure. *Journal of Child Health Care*, *26*(1), 96–109.

Burkholder, J. M., Hall, R. A., & Phillips, K. (2024). Manufactured panic, real consequences: Why academic librarians must stand with public and school libraries. *College & Research Libraries News*, *85*(6), 254–257.

Charmaz, K. (2014). *Constructing Grounded Theory*. SAGE Publications.
CILIP (Chartered Institute of Library and Information Professionals). (2023). *Workforce mapping*. https://www.cilip.org.uk/page/workforcemapping
CILIP (Chartered Institute of Library and Information Professionals). (n.d.). *CILIP's ethical framework*. https://www.cilip.org.uk/page/ethics
Clarke, A. E. (2016). Anticipation work: Abduction, simplification, hope. In G. Bowker, S. Timmermans, A. Clarke, & E. Balka (Eds.), *Boundary objects and beyond: Working with Leigh Star* (pp. 85–120). MIT Press.
Douglas, M. (1966/2002). *Purity and danger: An analysis of concepts of pollution and taboo*. Routledge.
Douglas, M. (1985). *Risk acceptability according to the social sciences*. Routledge & Kegan Paul.
Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.
Eichmeyer, J. N., Northrup, H., Assel, M. A., Goka, T. J., Johnston, D. A., & Williams, A. T. (2005). An assessment of risk understanding in Hispanic genetic counseling patients. *Journal of Genetic Counseling*, *14*, 319–328.
Engdahl, E., & Lidskog, R. (2014). Risk, communication and trust: Towards an emotional understanding of trust. *Public Understanding of Science*, *23*(6), 703–717.
Fineberg, H. V., & Stern, P. C. (Eds.). (1996). *Understanding risk: Informing decisions in a democratic society*. National Academies Press.
Flyvbjerg, B. (2013). How planners deal with uncomfortable knowledge: The dubious ethics of the American Planning Association. *Cities*, *32*, 157–163.
Forscher, F. (1986). Understanding risks. In H Didsbury (Ed.), *Challenges and opportunities: From now to 2001* (pp. 25–32). Transaction Publishers.
Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 87–104). Harvester/Wheatsheaf.
Fox, R. (1988a). Training for uncertainty. In R. Fox (Ed.), *Essays in medical sociology: Journeys into the field* (pp. 19–50). Transaction Books.
Fox, R. (1988b). The evolution of medical uncertainty. In R. Fox (Ed.), *Essays in medical sociology: Journeys into the field* (pp. 533–571). Transaction Books.
Frank, R. D. (2020). The social construction of risk in digital preservation. *Journal of the Association for Information Science and Technology*, *71*(4), 474–484.
Gale, N., Brown, P., & Sidhu, M. (2019). Co-production in the epidemiological clinic: A decentred analysis of the tensions in community-based, client-facing risk work. *Social Policy & Administration*, *53*(2), 203–218.
Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, *26*(8), 1513–1530.
Giddens, A. (1991), *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.
Hallowell, N. (2006). Varieties of suffering: Living with the risk of ovarian cancer. *Health, Risk & Society*, *8*(1), 9–26.
Harrad-Hyde, F., Williams, C., & Armstrong, N. (2022). Hospital transfers from care homes: Conceptualising staff decision-making as a form of risk work. *Health, Risk & Society*, *24*(7–8), 317–335.
Lash, S. (1993). Reflexive modernization: The aesthetic dimension. *Theory, Culture & Society*, *10*(1), 1–23.

Lemke, J. L. (2000). Across the scales of time: Artifacts, activities, and meanings in ecosocial systems. *Mind, Culture, and Activity*, *7*(4), 273–290.
Light Jr, D. (1979). Uncertainty and control in professional training. *Journal of Health and Social Behavior*, *20*(4), 310–322.
Lloyd, A. (2005). Information literacy: Different contexts, different concepts, different truths?. *Journal of Librarianship and Information Science*, *37*(2), 82–88.
Lloyd, A. (2020). Shaping the contours of fractured landscapes: Extending the layering of an information perspective on refugee resettlement. *Information Processing & Management*, *57*(3).
Lloyd, A., Bonner, A., & Dawson-Rose, C. (2014). The health information practices of people living with chronic health conditions: Implications for health literacy. *Journal of Librarianship and Information Science*, *46*(3), 207–216.
Lois, J. (2001). Peaks and valleys: The gendered emotional culture of edgework. *Gender & Society*, *15*(3), 381–406.
Lupton, D. (2013). *Risk*. Routledge.
Lupton, D., & Tulloch, J. (2001). Border crossings: Narratives of movement, 'home' and risk. *Sociological Research Online*, *5*(4), 26–36.
Lupton, D., & Tulloch, J. (2002). 'Risk is part of your life': Risk epistemologies among a group of Australians. *Sociology*, *36*(2), 317–334.
Meacham, B. (2001). Understanding risk. In *Proceedings of the Australian Building Codes Board Conferences, Building Tomorrow's Future-International and National Partners. Canberra, Australia*.
Mitchell, G., & Demir, I. (2021). Translating risk: How social workers' epistemological assumptions shape the way they share knowledge. *Health, Risk & Society*, *23*(1–2), 17–33.
Nicolini, D., Gherardi, S., & Yanow, D. (2016). Introduction: Toward a practice-based view of knowing and learning in organizations. In D. Nicolini (Ed.), *Knowing in organizations: A practice-based approach* (pp. 3–31). Routledge.
Orlikowski, W. J. (2002). Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science*, *13*(3), 249–273.
Österholm, J., Olaison, A., & Taghizadeh Larsson, A. (2023). 'How shall we handle this situation?' Social workers' discussions about risks during the COVID-19 pandemic in Swedish elder care. *Health, Risk & Society*, *25*(1–2), 28–44.
Rayner, S. (2012). Uncomfortable knowledge: The social construction of ignorance in science and environmental policy discourses. *Economy and Society*, *41*(1), 107–125.
Schatzki, T. (2006). The time of activity. *Continental Philosophy Review*, *39*(2), 155–182.
Schatzki, T. (2012). A primer on practices. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 13–26). Sense Publishers.
Shove, E., Trentmann, F., & Wilk, R. (2009). Introduction. In E. Shove, F. Trentmann, & R. Wilk (Eds.), *Time, consumption and everyday life. Practice, materiality and culture* (pp. 1–13). Bloomsbury.
United Nations General Assembly. (1989). *Convention on the rights of the child*. United Nations.
Wall, E. (2011). Structure of meaning and sense-making of risk: An operationalisation of sense-making tested by grouping individuals according to their structure of meaning. *Journal of Risk Research*, *14*(6), 735–755.

Wall, E. (2014). Sense-making of risk and role-taking emotions: How young Swedes construe road traffic risk. *Journal of Risk Research*, *17*(10), 1285–1299.

Wall, E., & Olofsson, A. (2008). Young people making sense of risk: How meanings of risk are materialised within the social context of everyday life. *Nordic Journal of Youth Research*, *16*(4), 431–448.

Weick, K. E. (1995). *Sensemaking in Organizations*. Sage Publications.

Weinstein, N. D. (1999). What does it mean to understand a risk? Evaluating risk comprehension. *JNCI Monographs*, *1999*(25), 15–20.

Weinstein, N. D. (2001). Public understanding of risk and reasons for smoking low-yield products. In National Cancer Institute (Ed.), *Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine* (pp. 193–198). National Cancer Institute.

Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a New Ecology*, *40*, 44–83.

YouGov. (2015). Bookish Britain: Literary jobs are the most desirable. https://yougov.co.uk/politics/articles/11565-bookish-britain-academic-jobs-are-most-desired

5

MANAGING RISK

Learning a language overseas

How is risk management informed?

Travelling overseas as a tourist is an enormous privilege that can, nonetheless, be fraught with challenges. From figuring out visas and the best place to stay to dealing with new currency and customs, visiting a culturally unfamiliar setting creates various risks for the visitor, including related to physical safety as well as legal concerns. Risks may be additionally heightened when a different language is involved, which can complicate understanding of both official and unspoken rules, as well as communication with locals and authorities. For undergraduate language-learners who are spending time overseas as part of their degree, the risks of travel are further intensified by the underlying academic objectives of their stay; residence abroad forms a unique but strictly time-delimited period in which students are pressured to improve their language capacity before returning home to final exams and later, the job market. For those on a strict budget or who are visiting a far-flung location, travel may additionally bring significant financial risks, while the timing of this sojourn, which typically occurs in the student's second or third year of undergraduate study, may also create risks for relationships at home, including being excluded or left behind. Although a period overseas is often exciting and language-learners have linguistic expertise alongside knowledge of the host culture, it can also challenge their ability to manage the demands of this time. The vital role that becoming informed plays in mitigating risks, including solving practical issues such as opening a bank account as well as more tacit concerns, such as becoming oriented to the nuances of new social expectations, speaks to the importance of examining the connections between information literacy and risk management in more detail.

DOI: 10.4324/9781032719627-5

This chapter explores these ideas through a case study of students who are learning a language overseas as part of their undergraduate degree. The final case study in a series of three that unpacks risk-informed information practice, the chapter starts by defining risk management, including the role that information has typically been seen to play in risk responses, before presenting the case study in more detail. The chapter then presents four ways in which information literacy extends understandings of risk management, including by foregrounding information creation activities, introducing questions of authority and credibility, complicating social information activities, and centring identity and subjectivity. The chapter finishes by reflecting on future research areas, including how an information focus may deflect attention from other forms of useful support.

Risk management: Technoscientific, cognitive and sociocultural approaches

Much like with risk understanding, far less attention has been paid to the concept of risk management within both risk and information literature. An exception is found in enterprise focused research, where institutional risk management strategies have formed a dominant area of concern since the 1980s (Huurne, 2008, p. 12). However, the emphasis on organisational rather than individual needs and strategy means that this literature is somewhat distanced from an exploration of risk-informed information practice and will not be considered as part of this chapter. In contrast, the management of risk in everyday situations has been far less commonly explored. Limiting definitional work, the lack of research is further complicated by the broad variety of terms that have been used to refer to the concept; beyond references to mitigating, responding or handling risk, risk management has also often been commonly associated with the concept of risk avoidance. In turn, the sociocultural emphasis on value means that terms as broad as risk resistance and risk-taking could also conceivably be understood as falling under a risk management umbrella. In the absence of broad consensus, this chapter adopts Brown and Gale's (2018, p. 4) definition of risk management as an intervention to minimise risk. In further recognising that risk perceived must be seen as risk acted upon (Adams, 1995, p. 30), this chapter also positions the management of risk as interdependent with or mutually constituted by its identification and understanding.

One of the main reasons why literature may have been limited to date is due to the techno-scientific approach to risk that has tended to dominate the field. Premised upon the idea that society "can and should be rationally manageable" (Zinn, 2008, p. 440), the emphasis that positivist approaches to risk place upon expert-led understanding has tended to position risk management as uniquely happening through the communication of scientific knowledge to the public (Huurne, 2008, p. 12). Setting up the handling of risk as centred upon "passive

but attentive" acceptance of expert knowledge and authority (McKenzie & Carey, 2000), this obvious solution to danger provides one explanation for the lack of more detailed research. Another likely reason for the sidelining of the topic lies in the tendency for techno-scientific and cognitive research to position avoidance as the only rational response to risk; as Lupton and Tulloch (2002, p. 114) point out, "to take unnecessary risks is commonly seen as foolhardy, careless, irresponsible, and even 'deviant', evidence of an individual's ignorance or lack of ability to regulate the self." Referencing the rational actor paradigm, in which risk-taking stems from a lack of knowledge, this research is further limited through the conceptualisation of risk management as the product of individual rather than social activity (Rhodes, 1997, p. 213).

In contrast, a sociocultural approach to risk extends risk management literature through drawing attention to the impact that meaning and value has upon the way in which people handle risk. Referencing the positioning of risk as a way of seeing rather than as an objective fact, a sociocultural lens recognises that how people evaluate and act on change is also shaped in relation to the significance that risk has for them. Establishing that risk responses form "deliberate" or agential decisions rather than a deficit that requires remediation (Michael, 1996, p. 119), the emphasis on significance further opens the door to positive or even pleasurable conceptions of risk. From this understanding, what might be considered as 'risk-taking' through a techno-scientific or cognitive lens can be reconceptualised as a form of risk management; as Rhodes (1997) points out in relation to people who inject heroin, drug use may not be the only risk nor even the most dangerous in their lives. Similarly, the recognition that skydivers "spend more time preparing for a jump than they do making it" (Lyng, 1990, p. 874), including by checking their equipment and the sequence of their formations, provides another example of how risk management is linked to an engagement with danger rather than its avoidance.

In turn, these ideas impact understanding of the role that information plays in risk management. A focus on the provision of expert information, which references human mastery over nature, in which "unknowns about the physical and social environment [are translated] into the domain of the known" (Taarup-Esbensen, 2019, p. 752), means that risk management is positioned as passive as well as something that is outside of everyday control. However, as Douglas (1992, p. 103) points out, a cultural approach to risk means that a "refusal to take sound hygienic advice is not to be attributed to weakness of understanding." Instead, it must be seen as a decision or a preference that is shaped by social interaction or the logics and beliefs that give "form and substance" to risk phenomena (Lupton, 2013, p. 44). From this perspective, sociocultural approaches to risk management focus attention on how information is used to negotiate change, including how increasing knowledgeability helps people to become more adept at anticipating and mediating risk in their lives. Drawing attention to the role that mastery plays within risk response, the

recognition that people forge identity "in activity in the world" (Lave, 1992), also highlights how risk management is entwined with the development of subjectivity.

Theoretical influences

In positioning risk management as shaped by cultural context, the influence of Mary Douglas is evident. However, although dealing with risk is indisputably important to her given the threat that she sees pollution posing to social order, most of her work has focused on why risks are brought into being rather than how people respond to danger (Lupton, 2013, p. 52). In fact, Douglas (1985, p. 2) herself explicitly recommends that readers who wish to learn about the handling of risk should "save their time and read no more" in the introduction to *Risk Acceptability According to the Social Sciences*. While she clearly acknowledges the sociocultural shape of risk management, as demonstrated by her indignant questioning of how we could have survived on this planet "if our thinking was so inherently flawed?" (Douglas, 1992, p. 14), she does not explicitly expand on these ideas further. Other sociocultural approaches to risk fare little better, and there is scant interest in everyday approaches to risk management in the work of Beck and Giddens either. Although Beck (1992, p. 35) acknowledges that the wealthy (in income, power or education) can "purchase safety and freedom from risk" there are few details about how this might happen beyond a brief acknowledgement that it is linked to becoming informed (Beck, 1992, p. 53). Similarly, Beck's emphasis on reflexivity often seems to foreground acceptance of expert advice as the only means of handling concerns.

In contrast, the emphasis that the governmentality approach to risk places on social regulation offers a more complex take. On the surface, Foucauldian theorising seems to foreground risk avoidance as the sole means of managing risk; expert calculations of normalised behaviour give rise to advice that productive citizens are expected to follow if they are to reduce their potential exposure to harm. Although this approach differs from techno-scientific approaches to risk through the emphasis on self-actualisation, in which people are encouraged to actively take responsibility for conforming to established norms, there is a similar elevation of professional risk guidelines to the exclusion of other forms of knowledge. And yet, research has also begun to chart noncompliance with these power structures, such as how people challenge healthcare messaging that is seen to be excessively burdensome, time-consuming or to form a catalyst for additional harm (Seear, 2009; Armstrong & Murphy, 2012). Foucault (1984, p. 442) himself acknowledged that individuals are not trapped within power relations, stating that "the idea that power is a system of domination that controls everything and leaves no room for freedom cannot be attributed to [him]". While these statements have not translated into a more overt engagement with how people respond to everyday risk-discourses, the

more recent association of resistance with various forms of information, including biomedical advice as well as experiential knowledge (Seear, 2009; Armstrong & Murphy, 2012), provides an indication of how the relationship between information and risk management may be more complex than has been suggested.

Managing risk during an overseas sojourn: A case study

The chapter will now present the language-learning case study that forms the basis for this exploration of risk management. The original aim of this research (Hicks, 2018) was to examine the information literacy practices of students who were learning a language overseas as part of their undergraduate degree. However, in illustrating how information literacy mediates the academic, physical and financial stress that is produced through participation within a new setting, this study also provides insight into the connections between information and risk management.

The research that formed the basis for this study employed a constructivist grounded theory methodological framing (Charmaz, 2014). Situating the researcher within the construction of meaning, the study further employed semi-structured interviews and visual elicitation methods to generate data. Carried out online using end-to-end encrypted video conferencing tools, interviews were audio recorded and transcribed. Photo elicitation methods were introduced at the end of the first interview, and after a brief training on the ethics of photo research, participants were encouraged to take photos of anything that had helped them to settle in when they moved overseas. These photos subsequently became the focus of each participant's second interview towards the end of their stay overseas. Questions for the initial interview were open ended and focused on how people resolved everyday challenges overseas. Interviews lasted between 24 minutes and 94 minutes, for an average of 56 minutes, and participants took 160 photos for an average of 7.

Participants were recruited through 190 targeted emails that were sent to directors and staff associated with undergraduate language-learning programmes in the UK, Canada, Australia and the US. The study's sample comprised 26 participants (See Table 5.1). Participants were learning one of eight languages in 14 different North, Central and South American, Asian and European countries for between four and 12 months. While most students were studying at a host university during this time, roughly one third were working overseas. Interview data were analysed using the constant comparative approach that is characteristic of constructivist grounded theory. Data were also subjected to situational analysis (Clarke, 2005) to open up analysis further though photos were analysed as part of the interview data rather than being separately examined. Limitations of the study included difficulties recruiting participants who were studying languages other than French, German or

TABLE 5.1 Language learner participant data

Participant	*Country of visit*	*Language studied*	*Occupation abroad*	*Origin country*
Alex S.	Germany	German	Study	UK (Wales)
Alex W.	Hong Kong	Mandarin	Study	US
Ben	China	Mandarin	Study	Canada
Charlotte	Italy	Italian	Work	UK (England)
Chloe	China	Mandarin	Study	Australia
Chris	Germany	German	Teaching	UK (England)
Eli	Iceland	Icelandic	Study	US
Evelyn	Austria	German	Work	UK (England)
Fiona	France	French	Study	Canada
Genevieve	Russia	Russian	Study	US
Helen	Guadeloupe	French	Work	UK (England
Holly	Canada (Quebec)	French	Study	Australia
James	Japan	Japanese	Study	UK (Wales)
Jemma	France	French	Teaching	UK (England)
Julia	Melilla/Spain	Spanish	Teaching	UK (Scotland)
Kamila	France	French	Study	Canada
Laura	Bolivia	Spanish	Volunteer	UK (England)
Laurel	Spain	Spanish	Study	US
Luan	Belgium	French	Work	UK (England)
Matt	France	French	Teaching	UK (England)
Mckenna	Italy	Italian	Study	US
Niko	Japan	Japanese	Study	US
Patrick	Russia	Russian	Study	US
Stuart	China	Mandarin	Study	UK (England)
Tiffany	Chile	Spanish	Study	US
Timothy	Canada (Quebec)	French	Study	Australia

Spanish while the use of interviews created a retrospective narrative of performance rather than a record of experience (Charmaz, 2014, p. 78). Full details of the original methodology can be found in the associated papers (Hicks, 2018, 2019).

The overarching findings of this study indicated that for overseas language-learners, information literacy supports the development of linguistic proficiency through providing the means to mitigate academic, physical and financial risks that were produced through the brevity of their stay overseas. Supporting the management of risk through connecting students with the affordances of their setting, information literacy also scaffolds risk responses through building mastery within this new context. From this perspective, information literacy supports risk management through enabling the development

of nuanced and flexible ways of knowing that facilitate the reconstruction of understanding within a new setting. Centred on calibrating and repositioning activities, which provide a way for learners to both orient and situate themselves within local practice, information literacy forms a local and contextualised response to risk. At the same time, the complexity of social interaction demonstrates that risk management is also shaped in relation to the arrangements of the local context, including how locals may position students as outsiders. Limiting access to valued forms of knowledge, these arrangements illustrate that risk is also managed through continued reflection as language-learners interpret and adjust how they participate during this time overseas. These ideas are presented through the study's establishment of the grounded theory of mitigating risk, which states that risk catalyses the enactment of information literacy practices that mediate transition overseas.

Findings from this study, which originally focused more explicitly on information literacy and transition, will now be used to draw out the specific implications for risk management.

Extending risk management

Risk management forms a nuanced activity that has typically focused on institutional strategy rather than considering how people deal with issues that are of importance to them. Analysis of how language-learners mitigate risk during time overseas extends understanding of risk management through: foregrounding information creation activities, introducing questions of authority and credibility, complicating social information activities, and centring identity and subjectivity.

Foregrounding information creation activities

A first way in which this examination of language-learners extends understanding of risk management is through drawing attention to the role that information creation plays in coordinating the development of risk knowledge. Just as with risk perception, information seeking has typically been understood as the primary way in which information and risk management are connected. Echoing techno-scientific and cognitive understandings of risk management, in which risk is perceived to be handled through the transmission of expert advice, the prominence of information seeking is also noted within sociocultural approaches to risk management, which see the acquisition of information as the means through which people can, as responsible citizens, "ward off" potential dangers and hazards (Tulloch & Lupton, 2003, p. 77). As both Tulloch and Lupton (2003) and Beck (1992) point out, engagement with specialist sources of information, including magazines, the internet and colleagues who work in scientific communities, help people to make the "invisible visible"

(Tulloch & Lupton, 2003, p. 5) or build judgement by throwing light onto expert claims. More recently, there has been some consideration that information may play a more complex role in helping to manage risk, with research starting to point out how sharing and observing information mediates the dangers associated with on-demand food delivery (Gregory, 2021, p. 327) or female nights out (Moore, 2020, p. 20). Others have hinted at the role that suppressing information plays in handling risk, including in search and rescue missions (Lois, 2001, p. 395) and migrant repatriation (Hernández-Carretero & Carling, 2012, p. 414). Yet, research into the shape and purpose of these alternative information activities has tended to be limited in scope.

One valuable form of information activity that has tended to be neglected in both information and risk research to date is information creation, which refers to how people "make contributions to the information world" (Koh, 2013, p. 1826). Traditionally sidelined within information research due to the perception that it forms the outcome of information activity, information creation nonetheless helps language-learners to manage the challenges that they face within an unfamiliar setting by stabilising and maintaining their understandings of local practice. The information activity of *noting*, for example, which refers to the capturing of information for a temporary purpose, provides the means for language-learners to negotiate an overwhelming array of new stimuli as well as the ephemerality of tacit and nuanced forms of local knowledge. Thus, annotating physical timetables (Helen) or taking photos and screenshots of business open hours (Genevieve) allows students to manage the risks of being excluded from their new setting by helping them to coordinate day-to-day life as well as the larger project of language-learning. In further allowing language-learners to prepare for their participation within new activities, including through taking screenshots of maps to mitigate the risk of getting lost (Alex S, Stuart), *noting* also supports student engagement within a setting by allowing them to coordinate and reproduce their activities over time and space as well as to engage recursively with the nuances of daily activity.

Beyond helping to organise day-to-day life, information creation is also used to mitigate language-learners' future-oriented concerns, including risks associated with the end of their stay overseas. Worried that geographic distance and the passing of time might cause them to forget about or lose access to their overseas experiences, students engage in information creation activities to consolidate their memories and to perpetuate connection to meaningful aspects of their stay. Thus, the information activity of *archiving*, which refers to the collection of information in written, photographic or material form for the purposes of posterity, provides students with the means to substantiate their activity overseas as well as to portray this knowledgeability over time. Manifest through the purposeful posting of photos on social media for future reminiscing purposes (Kamila) as well as the compilation of mundane ephemera such as paper newspapers or tickets (Genevieve), *archiving* also helps

students to manage the risks of discontinuity by providing them with an entry back into their time abroad after they have left; as Ben points out "I think I did cool stuff so I want to do cool stuff again if I can… it's to remember." In further facilitating the construction of a "continuous, useful past" (Bowker, 2005, p. 9), *archiving* additionally creates stability by helping language-learners to build a cohesive personal narrative of their stay overseas. Referencing the therapeutic role that objects play in mediating transitional processes (Parkin, 1999), these activities speak to how risk is managed through the making of future time as well as reflection on "what is worth remembering and what can be forgotten" (Shankar, 2009, p. 161).

Lastly, the foregrounding of information creation activities further necessarily spotlights the role that material objects play within risk management, both in terms of the informative content that is created as well as the tools that are used to produce these mementos. As Chapter 2 points out, materiality is inextricably bound up with the structuring and enactment of practice, with human and non-human organisms seen to both anchor activity and give shape to the world. Within this framing, the production of material objects facilitates risk management through helping students to anticipate and synchronise their activity as well as to interact with the sites of knowledge that structure a setting. A form of boundary object (Star & Griesemer, 1989, p. 414) that bridges different worlds, created information may be physical or digital, with the tangibility of physical artefacts producing a reassuring sense of control and the durability and visibility that is afforded by digital mementoes helping to sustain knowledge beyond temporal and geographic boundaries. At the same time, risk is also managed through the employment of material objects, including everyday tools such as mobile phones and guidebooks. Providing a convenient way for language-learners to keep a reliable record of performance within a new space, these tools also allow students to interact with the sites of knowledge that structure a setting, including by incorporating experience that is born of movement into their reflective activity.

Introducing questions of authority and credibility

A second means through which risk management is extended is the introduction of a more concerted focus on how people recognise and establish social influence. Cognitive authority is a theoretical construct that provides a framework for understanding how people decide whether an information source is credible or authoritative for them. Developed through the work of LIS scholar, Patrick Wilson, cognitive authority emerged from the premise that people develop understanding of the world based on first-hand experience as well as second-hand interpretation and hearsay. Yet, as Wilson (1983, p. 13) points out, not all hearsay is reliable. Cognitive authority refers to how we ascertain the influence that second-hand sources have on us – or how we decide whether

someone has "a good basis for saying what he (sic) does" (Wilson, 1983, p. 15). Moving beyond the concept of administrative authority as well as absolute measures of expertise, cognitive authority recognises that who we turn to for information or advice (Wilson, 1983, p. 18) is dependent upon various considerations, including our assessment of reputation and plausibility, amongst other characteristics (Wilson, 1983, pp. 15–25). Cognitive authority has been used within LIS to explore how people assess influence within contested spaces, including related to pregnancy and parenting (Mansour & Francke, 2017; McKenzie, 2003). However, despite the important role that the "social influence on decisions" (Douglas, 1992, p. 12) plays within risk perception, far less attention has been given to the ways in which questions of credibility shape risk management. This section draws upon cognitive authority to explore how these judgements shape the ways in which language-learners handle risk.

The tendencies for risk to be localised during language-learners' time overseas places even greater emphasis on the assessment of second-hand or indirectly experienced knowledge (Wilson, 1983); unlike with COVID-19, a lack of national guidance means there is no self-evident form of information to which students can turn while previously-established methods of assessing spheres and degrees of authority may no longer be successful within a culturally unfamiliar setting. The creation of new cognitive authorities mitigates risk by providing language-learners with the means to connect to local and expert forms of knowledge that they need to resolve the issues that they face. One of the most obvious (and important) forms of cognitive authority for language-learners are often local or native speakers. Although this group cannot be considered as authoritative due to what Wilson (1983, p. 21) terms "occupational specialization," a local or native speaker's cultural heritage and long-term exposure to the target language means that they are immediately associated with expertise. Other important cognitive authorities are peers who have recently returned from their own time abroad. Considered to be authoritative by virtue of their achievements or "index of special competence" (Wilson, 1983, p. 23), peers demonstrate credibility through presenting knowledge derived from experience as well as through forming a source of inspirational motivation for students poised to embark on their own overseas voyage. Together, these groups mitigate risk by expanding language-learners' frames of reference and enabling possibilities that may not otherwise have been available to them.

The visible ability that knowledgeable others have to navigate new settings or to provide insight into local and expert practice means that they form a natural focal point for newcomers. Creating a model against which students can gauge their activity, language-learners mediate risk through *calibrating*, which refers to the adjustments that they make to their activity through comparison to local practices. One way in which *calibrating* enables language-learners to respond to risk is through helping them to map new information environments. Faced with a limited sense of what to expect from their new surroundings, *calibrating* against the

advice and recommendations of local speakers helps students to manage risk by exposing them to new ways of accessing and using information, including the "the sites that… people look at when they live here" (Evelyn) or the resources on which local and native speakers rely. In recognising that knowledgeable others also proffer useful advice about "how to treat certain pieces of information" (Wilson, 1983, p. 18), *calibrating* also helps students to mediate risk through providing them with a way to orient themselves to the tacit and collective ways of knowing that they need to negotiate their new space. Knowledgeable others further support risk management by providing a comforting way for language-learners to start envisioning themselves within their new setting before departure; as McKenna pointed out "hearing from … students our age that went and did it and them telling us… it is kind of reassuring." Setting the information activities that orient students towards their time overseas in motion, including engaging with images (Helen) and maps (Evelyn) of their new location, *calibrating* lays the groundwork for risk management by enabling language-learners to start building an awareness of their physical presence within the new context as well as the setting itself.

Another way in which *calibrating* helps language-learners to mitigate risk is through providing a standard against which students can assess their own activity. With no prior experience to serve as a template against which they can gauge their understanding of local practices, *calibrating* helps to mediate the pressures that language-learners face by providing them with the feedback that they need to validate their interpretation of knowledgeable activity as well as to adjust their own performance for the future. Thus, the information activity of *checking*, which refers to determining the accuracy of information against the authority of local experience, facilitates risk management by creating a pragmatic safeguard against misunderstanding, including financially and temporally costly travel (Luan) and university registration (Fiona) errors. At the same time, *checking* also relates to students' own performance within a setting rather than merely constituting a query about the accuracy of information that they have found. Forming a reflexive feedback mechanism through which students corroborate whether their own information activities constitute acceptable local practice, *checking* actions with a host mother (Laura) or a local friend (Kamila) helps language-learners to mitigate risk through ascertaining what it means to act knowledgeably within a new setting. In further providing a way for students to adjust their performance for the future, *checking* also mediates risk by bringing past, present and future activity together or helping students to maintain and regulate their participation within a new setting over time.

Complicating social information activities

A third way in which this research shapes an understanding of risk management is by considering the impact of social interaction in more detail. As Chapter 4 points out, social sources of information have traditionally been

seen as problematic within risk literature due to concerns about the accuracy of 'non-expert' advice as well as the fear that risks could be spread contagiously. Since then, research that has adopted a sociocultural approach has challenged many of these anxieties through emphasising the vital role that social interaction plays in shaping how risk and information literacy are operationalised. Yet, as the exploration of the conditions and arrangements that shape the construction of risk demonstrates, social activity can neither be idealised nor positioned as a simple solution to concerns about how lay people respond to risk. Instead, social interaction both facilitates and complicates risk management as the intersubjective spaces in which we connect with each other influence the "bodily doings and sayings" of practice (Schatzki, 2002, p. 72). These issues are equally visible within language-learning literature, where friends and family have been seen as an "umbilical cord" (Kinginger, 2011, p. 67) that disincentivises student engagement overseas. At the same time, this literature gives far less consideration to the affective dimensions of a move overseas and to the ways in which locals and native speakers can isolate students from their local information environments (although see Siegal, 1996). These oversights obscure a more nuanced understanding of the role that social information sources play within risk management.

Being positioned by local and native speakers as an outsider often forms one of the biggest sources of frustration to language-learners; while travel abroad is a chance to connect the classroom with what they perceive as authentic activity, engagement with these ways of knowing is also shaped by the willingness of local and native speakers to afford access to useful information. Restricting student's abilities to situate themselves within an information environment, whether this is because they look (James) or sound (Niko) different or are subject to different regulations (Tiffany), the risk that this exclusion poses to their continued engagement overseas means that they are forced to develop alternative strategies to work around these challenges. One way in which students manage these constraints is through *sharing* information with co-located peers, an activity that has often been maligned within language-learning literature (e.g., Mikal, 2011). Bearing some resemblance to pooling strategies, in which refugees work together to combine fragmented pieces of information (Lloyd, 2015), *sharing* information mediates risk by providing another avenue through which language-learners can access unavailable local knowledge (Julia, Chris). A shared existence outside local power structures means that these activities also constitute a form of organising, a strategy also employed by food couriers in the face of physical risks (Gregory, 2021). Illustrating that social norms inhibit what students can do or express, a more nuanced exploration of how social information activities shape risk management also challenges the assumption that co-located peers only detract from participation overseas (e.g., Mikal, 2011).

Another underexplored aspect of social information activity relates to the affective impact of students' time overseas; social sources do not merely

mediate risk through providing access to local ways of knowing. Instead, language-learners also draw on social sources of information to access the emotional support that they may need to cement and maintain their engagement overseas, particularly given the uncertainty of this time. Along these lines, *sharing* information also provides a way for learners to foster the relationships that are crucial for their ongoing participation overseas; in mediating information about their new lives overseas to friends and family back home (Genevieve, Julia), language-learners manage risks to their wellbeing by constructing a supportive network as well as a collective narrative about their new experiences. *Sharing* information with co-located peers forms a similar strategic attempt to extend these structures into their overseas space. Providing students with the means to signify information in relation to a setting as well as to process their learning, the creation of supportive connections suggests that communication with friends and family back home might increase student engagement within their new setting rather than limiting their involvement, as language-learning literature often suggests (e.g., Mikal, 2011). In further forming an attempt to mitigate the threat of being forgotten about as they work and study multiple time zones away from home, situating friends and family in relation to their new setting also illustrates how risk management centres on emotional as well as practical concerns as students work to ensure the continued presence of connection in their lives.

Finally, an exploration of social information activities must also acknowledge that social interaction can overwhelm language-learners; a move overseas requires students to manage a wide array of communication-focused tasks and responsibilities, including finding accommodation, fulfilling legal registration requirements, and figuring out everyday necessities. The need to sequence these demands at a time when language-learners may also be unsure about the best course of action demonstrates how the intensity of this period can create additional risks to wellbeing, including the threat of being overwhelmed. Issues may be further complicated though the additional cognitive load associated with working across languages. One way in which language-learners respond to these risks is through spatio-temporally distancing themselves from new information environments, including through retreating to quiet or isolated locations at specific times of the week as Evelyn illustrates: "I quite enjoy weekends retreating and really having my own space." Constituting a form of information *triaging*, which refers to how language-learners sort and order their obligations, these actions provide a vivid illustration of the affective burden that the stream of new interactions places on language-learners. In effect, while avoiding interaction may seem to increase the risk that language-learners will not improve their language capacities, the creation of breathing space should instead be understood as an important prioritisation of self-care in the face of competing demands.

Centring identity and subjectivity

Lastly, beyond shedding light on the nuanced ways in which information is entwined with the mediation of hazard, this research extends an understanding of risk responses by speaking to how risk management is linked to the development of knowing within a specific context. Uncertain about the changes in their lives, language learners mediate risks that are produced through their move overseas by learning to recognise how knowledge is located in their new setting as well as the information activities that will connect them to everyday interactions. Allowing them to map and locate themselves within their new information environments, the development of nuanced and flexible ways of knowing also represents an increasing sense of situated expertise as students start to participate in their settings in more knowledgeable ways. A form of mastery that enables students to become more adept at both anticipating and responding to hazards, knowing further reflects a shift in agency as language-learners reconfigure how they participate in social life. The typical association of risk management with information transmission means that human development has not previously been widely considered in relation to risk responses. However, research into edgework, which refers to purposeful participation in dangerous activities, hints at the importance of situated expertise to risk management through the recognition that planning and preparation are integral to many forms of dangerous activity (Lyng, 1990, p. 874). The careful ways in which language-learners reorientate themselves in society provides an example of the vital role that the construction and modification of knowledge plays within the handling of risk.

At the same time, the sociocultural perspective that informs risk-informed information practice indicates that mastery cannot just be understood as a change in knowledge (Packer & Goicoechea, 2000). Instead, increasingly competent participation in community ways of knowing also invoke a reconfiguration of self or what Lave and Wenger (1991, p. 51) refer to as a "change in person." Risk management consequently becomes entwined with both the formation and the re-formation of subjectivity as language-learners participate in the activity of their local setting. Subjectivity forms a consistent theme within sociocultural approaches to risk; while Beck's risk society imagines new ways of relating to the self, the governmentality approach centres the configuration of idealised self-regulating agents (Lupton, 2013, p. 143). Douglas, too, foregrounds questions of subjectivity through establishing risk as produced through the violation of shared conventions and values. Positioning subjectivity as a form of membership in a community (Douglas, 1966, p. 2), threats to a community are further consolidated through the notion of a taboo, which she positions as a device for protecting "distinctive categories of the universe" (Douglas, 1966, p. xi) and blame, which, in forming a means of "manning the gate and at the same time, arming the guard" (Douglas, 1992, p. 19) is seen to

encourage social cohesion. However, while Douglas and other sociocultural theorists clearly link risk to identity, far less emphasis has been placed on the development of selfhood. These questions are particularly important given the association of risk with cultural unity.

For language-learners who are studying and working in an unfamiliar context, Douglas' emphasis on the integrity of a community provides a particular challenge; the plurality of meanings that characterise language expertise problematises the concept of a cohesive social system. However, the recognition that language-learners have very different roles and responsibilities within the target linguistic community means that risk is managed through students' shift from being a classroom-based language-learner to becoming a language-learner in the context of residence abroad. Referencing the transition from learning within a university context, which is mediated through the legitimised values and information sources of the academy, to learning within an everyday setting, which is negotiated in relation to the informal and vernacular sources of information that structure local ways of knowing, these processes of becoming acknowledge that language-learners manage risk through building what Wenger (1998, p. 56) refers to as an "identity of participation" within their new setting. At the same time, the emphasis that risk management places on the shared meanings and constructions of a community (cf. Lloyd, 2005, p. 86) means that subjectivity should instead be understood in terms of intersubjectivity, in which language-learning identity is shaped in relation to collective sites of knowledge rather than uniquely through self-determining agency. Positioning subjectivity as "drawn from the intersubjective project" (Lloyd, 2021, p. 3), the reframing of identity also places agentic performance at the heart of risk management activities.

Next steps for risk management

This chapter has drawn upon a case study of undergraduates who are learning a language overseas to explore the connections between information literacy and risk management. Constituting the third case study that explores risk-informed information practice, this chapter challenges the dominant focus on institutional risk management by examining how individuals mediate the dangers and hazards that they are facing in their lives. In drawing attention to the creative and social information activities in which students engage as well as the importance of cognitive authorities, this chapter has illustrated that risk is managed through language-learners' increasingly knowledgeable participation within an information environment. From being seen as a site of expert knowledge transfer, risk management is consequently reimagined as a "critically intensive learning period" (cf. Kilminster et al., 2010, p. 556) that directs attention to the shift from a classroom to an overseas language learning identity. A focus on information consequently reframes the handling of danger in terms

of action, in which thought and activity are shaped through social cooperation rather than through the acquisition of generic information handling skills. From this perspective, information literacy supports risk management through reconfiguring agency, including an awareness of possibilities within an information environment.

Beyond overseas learning, however, there are many other ways in which risk management research should be extended in future. One area of future research is a consideration of how responsibility for others shapes risk management activities. While care has been hinted at through language-learners' reliance on friends and family, students' risk management activities typically remained centred on their own goals for this period. However, as a handful of risk research studies have pointed out, there is also a need to consider how risk responses are shaped in relation to others' needs. One obvious focus relates to risk professionals, who are driven by the need to be accountable to clients as well as to themselves (Österholm et al., 2023). Noting that the risk-focused documentation and synthesis work in which hospital workers engage could expand ideas related to information creation (Harrad-Hyde et al., 2022), research into information sharing could further extend the notion of cognitive authority, including in relation to collegial scrutiny (Österholm et al., 2023). Another important area of study relates to people with caring responsibilities. Introducing the concept of information suppression, in which people hide information to maintain the social relationships that will allow them to continue giving care, studies of caregivers further draw attention to how a changed physical appearance might inadvertently impede these goals (Seppola-Edvardsen et al., 2016). Providing another challenge to the rationality of information activities, the decision to avoid sharing information also raises interesting questions related to identity, including how risk management supports "continuity of self in the future" (Hallowell, 2006, p. 21).

A second area of future research is a broader consideration of the ways in which local power structures shape the ways in which risk management supports identity construction. For some people, risk management is an empowering act, with eco-conscious pregnant women noting how carrying out research to mitigate environmental risk boosts the construction of their mothering identity (AbiGhannam & Atkinson, 2016, p. 463). For others, however, the situation is more complex, with Gibson et al. (2021, p. 12) pointing out that although formal learning standards may associate risk management with developmental learning processes, attempts by Black, Indigenous and People of Color (BIPOC) youth to develop an activist ethos are often read as "maladaptive" or "oppositional" by adults in authority. Questions should also be raised about "responsible subjectivity" in which risk management becomes entwined with decisions about the existence of 'normal' and 'abnormal' subjects (Hall, 2016, p. 119). Seen most vividly in genetic counselling, in which potential parents are encouraged to manage the risk of disease through

making thoughtful choices about "how, when, and who to reproduce" (Hall, 2016, p. 120), normative ideals suggest that risk management can easily become associated with dangerous, ableist thinking. While these examples provide an extreme illustration of weaponised discourse, they nevertheless demonstrate that future research should explore risk management as a site of tension and contestation further.

A final important consideration for future research is the need to challenge the information focus of risk management, including how information might impede risk responses. As the preceding sections have shown, knowledge plays a vital role in helping people to mediate challenges. However, risk may also be intensified by the provision of information, including by reducing the availability of physical and material support. Educational training programmes for young mothers, for instance, exacerbate risk by disregarding more basic needs for nappies and formula (Romagnoli & Wall, 2012) while the replacement of care services with information interventions risks creating poorer health outcomes for elderly people through ignoring the emotional aspects of becoming informed (Barnes & Henwood, 2015). Information may further increase uncertainty, as the example of Francis, an elderly patient with dementia whose sense of security was challenged by power imbalances brought about by his wife's access to information, demonstrates (Barnes et al., 2016, p. 518). The belief that information will automatically and autonomously improve people's lives, which aligns with the positioning of information literacy as an affirmative and virtuous 'moral good' for society (Hicks et al., 2023), constitutes a form of information-solutionism, in which simply adding information is presented as a quick and easy way to address a complex issue. These taken-for granted discourses speak to the need for research that takes a more nuanced approach to the impact that becoming informed has upon risk management activities.

References

AbiGhannam, N., & Atkinson, L. (2016). Good green mothers consuming their way through pregnancy: Roles of environmental identities and information seeking in coping with the transition. *Consumption Markets & Culture*, *19*(5), 451–474.

Adams, J. (1995). *Risk*. Routledge.

Armstrong, N., & Murphy, E. (2012). Conceptualizing resistance. *Health*, *16*(3), 314–326.

Barnes, M., & Henwood, F. (2015). Inform with care: Ethics and information in care for people with dementia. *Ethics and Social Welfare*, *9*(2), 147–163.

Barnes, M., Henwood, F., & Smith, N. (2016). Information and care: A relational approach. *Dementia*, *15*(4), 510–525.

Beck, U. (1992), *Risk society: Towards a new modernity*. Sage.

Bowker, G. C. (2005). *Memory practices in the sciences*. MIT Press.

Brown, P., & Gale, N. (2018). Theorising risk work: Analysing professionals' lifeworlds and practices. *Professions and Professionalism*, *8*(1), e1988–e1988.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.

Clarke, A. (2005). *Situational analysis: Grounded theory after the postmodern turn*. SAGE Publications.

Douglas, M. (1966/2002). *Purity and danger: An analysis of concepts of pollution and taboo*. Routledge.

Douglas, M. (1985). *Risk acceptability according to the social sciences*. Routledge & Kegan Paul.

Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.

Foucault, M. (1984). The ethics of the concern for self as a practice of freedom. In S. Lotringer (Ed.), *Foucault live: Collected interviews 1961–1984* (pp. 432–449). Semiotext(e).

Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, *26*(8), 1513–1530.

Gregory, K. (2021). 'My life is more valuable than this': Understanding risk among on-demand food couriers in Edinburgh. *Work, Employment and Society*, *35*(2), 316–331.

Hall, M. (2016). Disability as/at risk: The biopolitics of disability. In M. Hall (Ed.), *The bioethics of enhancement: Transhumanism, disability, and biopolitics* (pp. 119–134). Lexington Books.

Hallowell, N. (2006). Varieties of suffering: Living with the risk of ovarian cancer. *Health, Risk & Society*, *8*(1), 9–26.

Harrad-Hyde, F., Williams, C., & Armstrong, N. (2022). Hospital transfers from care homes: Conceptualising staff decision-making as a form of risk work. *Health, Risk & Society*, *24*(7–8), 317–335.

Hernández-Carretero, M., & Carling, J. (2012). Beyond "Kamikaze migrants": Risk taking in West African boat migration to Europe. *Human Organization*, *71*(4), 407–416.

Hicks, A. (2018). *The theory of mitigating risk: Information literacy and language-learning in transition* (Doctoral dissertation, Högskolan i Borås, Sweden).

Hicks, A. (2019). Mitigating risk: Mediating transition through the enactment of information literacy practices. *Journal of Documentation*, *75*(5), 1190–1210.

Hicks, A., Lloyd, A., & Pilerot, O. (2023). Introduction: Themes, patterns and connections. In Hicks, A., Lloyd, A., & Pilerot, O. (Eds.), *Information literacy through theory*. Facet.

Huurne, E. F. ter (2008). *Information seeking in a risky world: The theoretical and empirical development of FRIS: A framework of risk information seeking*. Doctoral thesis, University of Twente, Netherlands.

Kilminster, S., Zukas, M., Quinton, N., & Roberts, T. (2010). Learning practice? Exploring the links between transitions and medical performance. *Journal of Health Organization and Management*, *24*(6), 556–570. doi:10.1108/14777261011088656

Kinginger, C. (2011). Enhancing language learning in study abroad. *Annual Review of Applied Linguistics*, *31*, 58–73. doi:10.1017/S0267190511000031

Koh, K. (2013). Adolescents' information-creating behavior embedded in digital media practice using scratch. *Journal of the Association for Information Science and Technology*, *64*(9), 1826–1841. doi:10.1002/asi.22878

Lave, J. (1992). Learning as participation in communities of practice. In *Annual Meeting of the American Educational Research Association, San Francisco, CA* (pp. 1–5).

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Lloyd, A. (2005). Information literacy: Different contexts, different concepts, different truths? *Journal of Librarianship and Information Science*, *37*(2), 82–88. doi:10.1177/0961000605055355

Lloyd, A. (2015). Stranger in a strange land: Enabling information resilience in resettlement landscapes. *Journal of Documentation*, *71*(5), 1029–1042. doi:10.1108/JD-04-2014-0065

Lloyd, A. (2021). *The qualitative landscape of information literacy research: Perspectives, methods and techniques*. Facet Publishing.

Lois, J. (2001). Peaks and valleys: The gendered emotional culture of edgework. *Gender & Society*, *15*(3), 381–406.

Lupton, D. (2013). *Risk*. Routledge.

Lupton, D., & Tulloch, J. (2002). 'Life would be pretty dull without risk': Voluntary risk-taking and its pleasures. *Health, Risk & Society*, *4*(2), 113–124.

Lyng, S. (1990). Edgework: A social psychological analysis of voluntary risk taking. *American Journal of Sociology*, *95*(4), 851–886.

Mansour, A., & Francke, H. (2017). Credibility assessments of everyday life information on Facebook: A sociocultural investigation of a group of mothers. *Information Research*, *22*(2). Retrieved from http://www.informationr.net/ir/22-2/paper750.html

McKenzie, P. J. (2003). Justifying cognitive authority decisions: Discursive strategies of information seekers. *The Library Quarterly*, *73*(3), 261–288. doi:10.1086/603418

McKenzie, P. J., & Carey, R. F. (2000). "What's wrong with that woman?"–Positioning Theory and Information-Seeking Behaviour. In *Proceedings of the Annual Conference of CAIS/Actes du congrès annuel de l'ACSI*.

Michael, M. (1996). *Constructing Identities: The Social, the Nonhuman and Change*. Sage.

Mikal, J. (2011). When social support fits into your luggage: Online support seeking and its effects on the traditional study abroad experience. *Frontiers: The Interdisciplinary Journal of Study Abroad*, *21*, 17–40. Retrieved from http://eric.ed.gov/?id=EJ991041

Moore, S. (2020). Risk rituals and the female life-course: Negotiating uncertainty in the transitions to womanhood and motherhood. *Health, Risk & Society*, *22*(1), 15–30.

Österholm, J., Olaison, A., & Taghizadeh Larsson, A. (2023). 'How shall we handle this situation?' Social workers' discussions about risks during the COVID-19 pandemic in Swedish elder care. *Health, Risk & Society*, *25*(1–2), 28–44.

Parkin, D. (1999). Mementoes as transitional objects in human displacement. *Journal of Material Culture*, *4*(3), 303–320. doi:10.1177/135918359900400304

Rhodes, T. (1997). Risk theory in epidemic times: Sex, drugs and the social organisation of 'risk behaviour'. *Sociology of Health & Illness*, *19*(2), 208–227.

Romagnoli, A. & Wall, G. (2012). 'I know I'm a good mom': Young, low-income mothers' experiences with risk perception, intensive parenting ideology and parenting education programmes. *Health, Risk & Society*, *14*(3), 273–289.

Schatzki, T. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. Pennsylvania State University Press.

Seear, K. (2009). 'Nobody really knows what it is or how to treat it': Why women with endometriosis do not comply with healthcare advice. *Health, Risk & Society*, *11*(4), 367–385.

Seppola-Edvardsen, T., Andersen, R. S., & Risør, M. B. (2016). Sharing or not sharing? Balancing uncertainties after cancer in urban Norway. *Health, Risk & Society*, *18*(7–8), 367–384.

Shankar, K. (2009). Ambiguity and legitimate peripheral participation in the creation of scientific documents. *Journal of Documentation*, *65*(1), 151–165. doi:10.1108/00220410910926167

Siegal, M. (1996). The role of learner subjectivity in second language sociolinguistic competency: Western women learning Japanese. *Applied Linguistics*, *17*(3), 356–382. doi:10.1093/applin/17.3.356

Star, S. L., & Griesemer, J. (1989). Institutional ecology, 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–1939. *Social Studies of Science*, *19*(3), 387–420.

Taarup-Esbensen, J. (2019). Making sense of risk- A sociological perspective on the management of risk. *Risk Analysis*, *39*(4), 749–760.

Tulloch, J., & Lupton, D. (2003). *Risk and everyday life*. SAGE Publications.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

Wilson, P. (1983). *Second-hand knowledge: An inquiry into cognitive authority*. Greenwood Press.

Zinn, J. O. (2008). Heading into the unknown: Everyday strategies for managing risk and uncertainty. *Health, Risk & Society*, *10*(5), 439–450.

6

THE CONCEPTUALISATION OF RISK-INFORMED INFORMATION PRACTICE

Why conceptualise?

From national health emergencies to cultural censorship and educational opportunities, the preceding chapters have demonstrated both the need to consider how information literacy shapes risk responses and the contributions that an emerging framework for risk-informed information practice makes to our understanding of how risk is informed. Centred on the sociocultural belief that "an understanding of literacy requires detailed, in-depth accounts of actual practice in different cultural settings" (Street, 2001, p. 431), the case studies that form the basis of the preceding chapters have foregrounded what people do with information in a risk context and why they do it. This approach, which positions information use as shaped by activity, identity and culture, offers insight into overlooked aspects of risk responses as well as challenging long-standing assumptions about the shape and form of information activities during times of emotional intensity. Yet, as Street (2001, p. 430) goes on to point out, it is not enough "to extol simply the richness and variety of literacy practices made accessible through such ethnographic detail." Instead, risk-informed information practice is also in need of theoretical conceptualisation if the "scope, depth, power and relevance" (Charmaz, 2014, p. 231) of its analysis is to be fully realised. In moving beyond merely describing information actions, the value in conceptualising risk-informed information practice lies in both elucidating and interrogating the inherent complexity of what it means to be apprised of risk. The purpose of this chapter is to set this conceptualisation in motion.

Conceptualisation is a vital aspect of research; beyond helping to explain what and why something happens, it also supports a more abstract interpretation of a studied phenomenon (Charmaz, 2014, p. 228). Allowing for an

DOI: 10.4324/9781032719627-6

accounting of reality that transcends immediate and situated action, conceptualisation further advances knowledge through supporting the articulation and exchange of understanding across fields of study. The constructivist grounded theory methods that have underpinned each of these studies provide additional support for the development of theoretical sensitivity. In the case of risk-informed information practice, conceptualisation is particularly important due to previously limited theoretical treatment. As Chapter 1 points out, more complex understandings of risk responses have been displaced through continued debates about "metatheoretical orientations" (Rosa, 1998, p. 16) while information literacy research has long been critiqued for the domination of "provision and attainment" narratives (Hicks et al., 2023, p. xiii). In providing the means to "dive under the surface" of these perspectives, conceptual work offers an opportunity to interrogate what risk-informed information practice is and how it happens as well as how it is operationalised within everyday social life (Hicks et al., 2023, p. xiii). This chapter addresses these shortcomings through drawing out the critical features that give shape to the definition and conceptualisation of risk-informed information practice.

The conceptualisation of risk-informed information practice

In exploring how information literacy shapes the perception, understanding and management of risk, the three case studies presented in this volume establish a broad definition and conceptual framework for risk-informed information practice. This work has led to the establishment of the definition of risk-informed information practice as:

> The knowing of risk through connection to and interpretation of the forms of risk knowledge that, in being practically or situationally of value to a person, contribute to the development of situated risk expertise.

Drawing attention to the many ways in which people operationalise access to an information environment, this definition recognises that information is only seen as useful if it bears on or facilitates responses to a concern. In further centring changes in understanding and meaning, the definition also reframes risk responses as critical learning events in which the development of situated expertise leads to a corresponding shift in identity. At the same time, the foregrounding of social context ensures that risk-informed information practice is positioned as negotiated in relation to the arrangements of a social site rather than uniquely being centred on individual endeavour. Influencing how risk knowledge is valued and legitimised within a specific setting, these conditions also configure agential possibility as people become positioned by specific risk discourses and constructions.

In creating a rich explanation for how risk-informed information practice happens, this definition conceptualises risk as a complex social construct that is opened up through information literacy or a consideration of how people come to know. The clear focus on how people build connection within an information environment means that an information lens extends the sociocultural focus on value (Aven & Renn, 2009) through positioning risk as an event that requires significant readjustment rather than forming a neat and simple transaction. The introduction of rich and multi-layered information environments, in which the difference that information makes can be discordant as well as cooperative (Lloyd & Hicks, 2022, p. 1018), further emphasises the importance of considering the meaning that is attributed to the stakes of action (Battistelli & Galantino, 2019, p. 68). The creation of a definition for risk-informed information practice additionally extends understandings about the outcomes or consequences of risk (Aven & Renn, 2009); in establishing risk understanding and management as key components of risk responses, alongside the more typical focus on risk perception, the definition builds upon oblique references to mastery in edgework literature (Lyng, 1990) to establish a developmental trajectory as one of the key results of risk-related activity. Recognising the impact of risk on human activities, the reframing of risk as a learning rather than a communication problem also positions risk responses as shaped in relation to the dynamics of change or how people restore continuity in the face of new challenges and concerns.

In turn, the definition of risk-informed information practice conceptualises information literacy as an expansive social practice that is further unlocked through a consideration of situations when something that humans value is at stake. Building upon the definition of information literacy as a "way of knowing the many environments that constitute an individual's being in the world," (Lloyd, 2007, p. 182), the lens of risk extends the established sociocultural focus on context through challenging the typical emphasis that information literacy research places on disciplinary or professional identity; in referencing specific projects in which people are involved, risk-informed information practice centres the multiple ends for which people act (cf. Schatzki, 2012, p. 15) as well as drawing attention to how the development of knowing operates on the level of institutions and other people as well as in relation to the self (cf. Lloyd & Hicks, 2021, p. 1067). Considerations of context are further challenged through the recognition that risk-informed information practice straddles the neatly delimited academic, workplace or health boxes into which typical library organisational structures place information literacy. Beyond considerations of discursive space, a foregrounding of the stakes of action supports the emerging relationship between transition and information literacy by illustrating how the development of knowing holds space for what is lost through change as well as what is gained.

Critical features of risk-informed information practice

The definition and conceptualisation of risk-informed information practice is further explained through a consideration of its critical features. Helping to articulate key interpretive threads that give structure and shape to risk-informed information practice, these features create a more detailed conceptual framework for how risk is informed, including by building awareness of meanings and actions within the context of a specific situation. This analytical depth also creates core concepts or jumping off points for future empirical, theoretical, methodological and pedagogical research. Along these lines, risk-informed information practice is positioned as set in motion through change that triggers the creation of liminality which, in representing a loss of structure and normality, give rise to uncertainty, where the unknowability of new information demands and flows brings risk into view. Precipitating the need to understand and manage potentially hazardous situations, uncertainty catalyses information literacy practices which, in facilitating the reconstruction of knowledge and the development of situated expertise, support the transition to new forms of participation within risk information environments. Taking place over time and shaped materially, this transition is further structured through social and political conditions that moderate the configuration of power and the exercising of agency within a specific risk context. These features, which represent key structuring elements in the conceptualisation of risk-informed information practice (see Figure 6.1), will now be presented in more detail.

Liminality and uncertainty

Liminality, along with uncertainty, forms one of the most visible structural features of risk-informed information practice. Referring to a space "betwixt and between the normal, day to day, cultural and social states" (Turner, 1979, p. 465), liminality was originally coined to describe a phase during social rites of passage (Van Gennep, 1960), which refer to changes of "place, state, social position and age" (Turner, 1969, p. 94). However, in drawing attention to how these transitions signify the detachment from known social arrangements in favour of realms with "few or none of the attributes of the past or coming state" (Turner, 1969, p. 94), liminality also represents a sudden loss of structure and normality within everyday life. From this perspective, liminality represents a spatially or temporally "in-between position" (Thomassen, 2018, p. 40) in which familiar informational structures, including support networks, forms of knowledge and the meanings associated with them are either abandoned or are no longer valid, reliable or existent. Encompassing social liminality, in which the entire fabric of society may be impacted by dislocations, as in the COVID pandemic, displacements may also refer to individual experiences, in which some aspects of society "stay 'normal'" (Thomassen, 2018, p. 40), as in the case

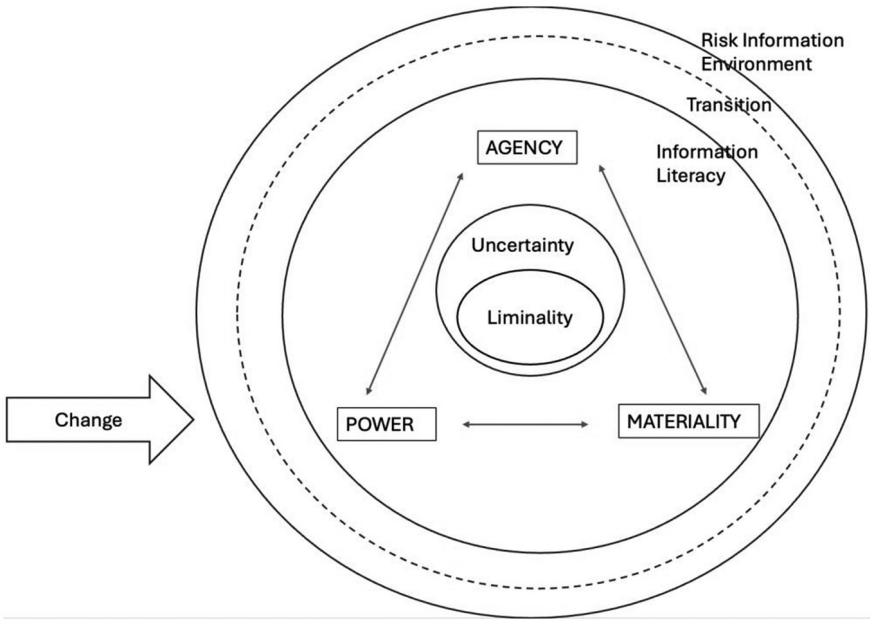

FIGURE 6.1 The conceptualisation of risk-informed information practice.

of learning a language overseas or book banning. The emphasis on unpredictability recalls Douglas' (1966) preoccupation with boundaries and the threats that 'otherness' poses to social order.

At the same time, liminality does not just draw attention to changes in social structure. Instead, the in-betweenness of liminal or interstitial situations creates the conditions for risk-informed information practice by giving rise to uncertainty, in which information environments become either unknown or unknowable. The unfamiliarity of information environments during the COVID-19 pandemic, for example, leads to considerable uncertainty about social arrangements, including how to act within previously straightforward situations, such as visiting a supermarket. Along the same lines, the uncertainty that language-learners face when travelling overseas is compounded by information that is presented in unforeseen or hard to access ways. Positioning uncertainty as a "state of not-knowing" (Mestre, 2023), the emphasis on the dislocation or contestation of stable sites of knowledge demonstrates that risk-informed information practice is shaped through the loss of immediate connection to known information environments, whether this is through the disappearance or acceleration of recognisable information flows. Changing social states also demonstrate that risk-informed information practice is shaped by the need to develop tools or strategies to deal with the demands of uncertainty, as illustrated by the new responsibilities that book-ban challenges create

for school library workers. Importantly, the positioning of uncertainty as shaped through participation in the liminal zone rather than forming an internal deficit or a personality trait acknowledges that risk-informed information practice emerges from and in relation to shared systems of meanings.

In turn, uncertainty about the shape of information environments gives rise to risk; in becoming confusing or unknown, new contexts become potentially hazardous. In effect, risk is shaped through uncertainty that is produced through the ambiguity of liminal spaces. Positioning risk as an information problem, this framing recognises how risk references limits in understanding and agency within information-rich social structures. At the same time, the recognition that uncertainty creates the conditions for doubt means that risk-informed information practice also becomes somewhat distanced from traditional understandings of the relationship between risk and uncertainty; while the bracketing of risk and uncertainty is common, risk has typically been positioned as produced through uncertainty about the "probability or consequences of a threat" (Frank & Rothfritz, 2023). Since then, a sociocultural lens has started to challenge this technical definition (Aven & Renn, 2009, p. 4), including by framing uncertainty in terms of "what is unpredicted in life" (Boholm, 2003, p. 167) as well as "undesired events" (Zinn, 2016, p. 350). Introducing a focus on the future as well as the dynamic shape of uncertainty (Boholm, 2003, p. 167), these developments acknowledge the knowledge dimensions of uncertainty. However, in centring the "red thread" of information (Bates, 1999, p. 1048), risk-informed information practice facilitates a far more complex understanding of the connections between concepts.

Laying the conditions for risk-informed information practice does not, however, form the only connection between information, uncertainty and risk. Most famously explored within LIS through Kuhlthau's Principle of Uncertainty (1993) and Wilson's uncertainty project (1999), uncertainty is also typically understood as reduced and resolved through an engagement with information. Emerging from the premise that uncertainty is produced through a lack of understanding, a gap in meaning or a limited construct (Kuhlthau, 1993, p. 347), these ideas are also commonly noted within risk literature, with Douglas & Wildavsky (1982, p. 5) establishing insufficient information as the problem that lies behind uncertain knowledge - and research as the solution. Within the context of risk-informed information practice, information evidently plays a vital role in managing uncertainty; ambiguity about how to deal with book-ban challenges, for example, prompts school library workers to seek advice from professional associations while the unfamiliarity of a new setting causes language-learners to check their understanding with locals. Yet, the presentation of uncertainty as something that can be "managed and controlled through reliable access to information" (Mestre, 2023, p. 43) also recalls the rationalism of technoscientific and cognitive perspectives on risk in which uncertainty is uniquely seen to impede effective decision-making. While this framing

acknowledges the impact of risk on the user, rather than just the system, the emphasis that cognitivism places upon "oversimplified linearity" (Mestre, 2023, p. 44) also limits broader understanding of the relationship between risk, information and uncertainty.

One noticeable oversight lies in the overwhelming association of uncertainty with information seeking; language learner engagement in *noting* and *archiving* as well as school library workers' *disclosing* activities suggest that responses to uncertainty are more wide-ranging than may otherwise have been assumed. The important role that friends and family play in both the language-learner and the COVID study further illustrates that uncertainty is produced through social exchange rather than, as literature has tended to imply, forming a uniquely individual activity. Another issue relates to the tendency to see uncertainty as negative; although the alleviation of uncertainty has typically always been assumed to form the goal of an active information user, *compartmentalising* during the COVID pandemic illustrates how people purposefully sustain and expand uncertainty to protect themselves from danger during times of emotional intensity. The unhelpful institutional advice that school library workers encounter further illustrates the limited way in which information mediates certain forms of doubt and ambiguity. Demonstrating how the reduction of uncertainty forms one of only "several possible responses to events and circumstances marked by unpredictability, ambiguity, or insufficient information" (Brashers et al., 2000, p. 64), these activities position doubt as functional rather than as hindering the functioning of social life. In further challenging depictions of "needy" (Mestre, 2023, p. 46) information users who are reliant on expert help, uncertainty also becomes positioned as both generative and socio-materially shaped, as the indeterminacy of knowledge boundaries produces opportunities for creative possibility.

In summary, liminality and uncertainty shape risk-informed information practice through establishing unfamiliar and therefore, potentially risky information environments. Extending the small amount of work that has connected risk with liminal status (e.g. Warner & Gabe, 2004), the examination of liminal time and space also develops the underexplored relationship between risk and uncertainty. Correspondingly, uncertainty is mediated through information literacy, including through the seeking of information as well as its creation, use and avoidance. Highlighting the generative shape of not-knowing alongside its more commonly assumed impediment, the rehabilitation of uncertainty further draws attention to how information makes the social and material dimensions of ambiguity visible.

Transition, change and time

The emphasis that information literacy places upon the reconstruction of stable sites of knowledge means that transition, which is characterised by change

over time, forms a second important structural feature of risk-informed information practice. Encompassing "continuities and discontinuities in the life processes of human beings," transition refers to both the disruption that precipitates change and a person's responses to this interference (Chick & Meleis, 1986, p. 238). Transition has typically been understood as a shift that is both located within a person and attributed to individual human development. In a sociocultural framing, though, transition is positioned as a shift that is mediated through changing participation within community activities (Rogoff, 2003, p. 52). Connecting change to involvement in social structures, the emphasis on interactions between people and their material environment further links transition to alterations in roles and responsibilities within the broader community context. Transition is not a concept that is often considered in relation to risk; while Douglas' (1966/2002, p. 96) concern with boundaries explicitly associates transitional states with danger, her interest lies in the rites and rituals used to control liminality rather than processes of re-equilibration. Similarly, Beck's risk thesis (1992) merely understands Western societies as living in a transitional period. Yet, in centring how people rebuild meaning within a new situation, transition provides a useful theoretical tool through which to consider how risk responses are organised and coordinated.

One of the first contributions of a transitional lens is to position risk as shaped in relation to increasingly knowledgeable forms of participation within risk information environments. In highlighting how changing forms of community participation are mediated through an engagement in information activities, a focus on transition draws attention to how risk information landscapes are constructed, including how they are entered, experienced and stabilised (Lloyd & Hicks, 2021, p. 1067). At the same time, the association of new ways of knowing with a corresponding shift in identity (cf. Packer & Goicoechea, 2000) means that a second contribution of a transitional lens is to foreground the shaping of subjectivity. Drawing upon the premise that new roles and responsibilities require a reconfiguration of self, the positioning of transition as shaped in relation to new ways of being as well as new ways of doing establishes risk-informed information practice as a time of learning and growth rather than a site of expert transfer. In further creating a focal point for the transformation that occurs through the development of knowing, transition also establishes risk-informed information practice as mediated through the reflexive examination of practice rather than generic and predetermined information skills. The positioning of transition to complex risk information environments as multiple and non-linear rather than constituting a chronological or neatly partitioned entry-passage-exit trajectory (Chick & Meleis, 1986, p. 242) provides a further example of the analytical value of a transitional lens.

Change and time form two elements that give further structure to the concept of transition. Change is often used indistinguishably from transition, but the two terms should not be used synonymously; as Schumacher and Meleis

(1994, p. 121) point out, change does not always lead to transition. Instead, change catalyses or sets transition in motion (Meleis et al., 2000, p. 12) but it is only conceptualised as a transition when it incorporates "accompanying passages between different life conditions, statuses and phases, and the resulting self-definitions over time" (Messias, 2010, p. 226). Foregrounding a sense of movement, change constitutes a form of discontinuity that triggers alterations in social circumstances, including related to the creation of new roles and the loss of established networks and support systems. Within the context of risk-informed information practice, transition is set in motion through changes within information environments, whether these are precipitated through events over which a person has limited control, such as the spread of the COVID pandemic and the rise of book-banning or planned events such as learning a language overseas. These changes subsequently catalyse transition as people are forced to learn where and how to access the forms of knowledge required to mediate these events. Acknowledging the impact of spatiotemporal disruption upon a person, the value of foregrounding change also lies in drawing attention to the disjuncture that occurs when information environments become fractured (Lloyd, 2017).

Time forms the second important element of transition. Typically referring to chronological time, the positioning of the beginning and end of a transition as separate establishes transition as extending "from the first anticipation of transition until stability in the new status has been achieved" (Chick & Meleis, 1986, p. 239). Challenging the more typical spatial focus of transition, in which change is linked to movement between settings, a temporal lens emphasises process as well as the unfolding shape of experiences and events. Considerations of time add additional context to risk-informed information practice, including through acknowledging that transitions into new risk information environments are informed by temporal patterns that shape when new forms of knowledge are accessed and used. Most extensively explored in relation to the COVID-19 pandemic, in which transition is shaped within distinct unfolding, intensifying and maintaining phases, time highlights how evolving information environments establish the conditions for related activity. These temporal configurations also reflect the growth of situated expertise by referencing an increasingly sophisticated mapping and operationalisation of how risk information is accessed within a new context. Positioning transition as cyclical as well as encompassing iterative processes of reconstruction, time further highlights how human development forms a longer-term and more complex process then might otherwise be assumed.

In recognising that responses to disruption "require time as people gradually disengage from old behaviours and ways of defining self" (Kralik et al., 2006, p. 326), a temporal lens additionally draws attention to the importance of slow and emerging forms of activity to risk-informed information practice. Seen most vividly in relation to book banning, where reflexivity is recognised

as vital for the development of risk understanding, the tempo of transition is also referenced within *compartmentalising* activities during the COVID pandemic, where the ability to reconcile new forms of knowledge is predicated upon the creation of time and space. Within this framing, risk-informed information practice is positioned as shaped in relation to the purposeful regulation of everyday temporalities. In foregrounding enduring experience, risk-informed information practice becomes somewhat distanced from the more typical association of risk with acute events; the reliance that technoscientific and cognitive approaches to risk place on predictive modelling techniques, for example, assumes the application of "fast, actionable data" during periods of uncertainty (cf. Lancaster & Rhodes, 2023, p. 2). Dependence on experts may further compress time, with Molas and Whittaker (2024, p. 11) noting that egg donors' capacity for anticipating risk was impacted by "rushed" interactions. Questioning the temporal logics that have underpinned the connection between information and risk to date, considerations of speed further challenge "point of need" approaches to risk information provision that fail to recognise both the long-term and the transitional shaping of crisis (Lancaster & Rhodes, 2023, p. 6).

The prominence accorded to forecasting additionally centres risk responses upon considerations of future time. Referencing teleological time or the motivational "past-present-future dimensionality of activity" (Schatzki, 2012, p. 18), future time is often positioned as static or fixed in shape within approaches to risk that rely on predictive models. Rendering risk governable, the positioning of the future as knowable results in the inevitable prioritisation of certain forms of "actionable information" (Lancaster & Rhodes, 2023, p. 1) while foreclosing the possibilities of others. In contrast, the information creation activities in which language-learners engage, including capturing and recording overseas activities for posterity, draw attention to how future time is continually being made rather than forming a pre-existing and immutable given. The imaginaries that lie behind engagement in *compartmentalising*, where action is predicated on the potential impact of certain events, further illustrate that future time is shaped affectively as well as in relation to cognitive concerns. Demonstrating that time plays a constitutive role in the shaping of information activity rather than forming an abstract container in which activities occur (cf. Savolainen, 2006, p. 113), the introduction of possibility means that risk-informed information practice challenges the more typical association of change with seamless forward continuity. At the same time, the positioning of future time as lived and felt in the present, which recalls Zinn's (2016) association of risk with feelings of hope, also invites the possibility of extending the temporal focus of risk-informed information practice towards longer-term conceptualisations of the past, present and future.

To summarise, risk-informed information practice centres transition to new risk information landscapes. Precipitated by changes within an information

environment and shaped through chronological and teleological time, transition references both the reconstruction of knowledge and the development of risk knowing. In further being mediated through information activities that support a person's changing participation in the activities of their community, transition reimagines risk responses in terms of human development or the redefinition of self and situation.

Power and agency

As the site of collective and socially shaped transitional processes, risk-informed information practice is further structured by the historical, political and economic interests that produce and regulate a setting. Incorporating considerations of power and agency, a focus on social structures and the ways in which people manoeuvre the conditions of their lives is deemed essential if risk research is to move beyond a technoscientific and cognitive focus on rationality (Rhodes, 1997, p. 217). Power, which forms the more explored of these two concepts, has a long history within considerations of risk. While Douglas does not explicitly refer to power dynamics within her work, her identification of organisational interests that shape the construction of risk (Douglas, 1992, p. 78) as well as her emphasis on the need for accountability from experts who are at fault acknowledges the impact of social structures upon an ability to perceive and manage danger. The positioning of people as 'at-risk', or as "vulnerable to the events caused by others" (Douglas, 1992, p. 28) provides a further indication of Douglas' connection of risk with power distributions. The risk theorist who is often associated with considerations of power is Foucault (1991), whose work establishes risk as a "governmental strategy of regulatory power by which people are monitored and managed" (Lupton, 2013, p. 116). Acknowledging the inherent moralism of dispersed forms of authority, in which groups who deviate from guiding norms are considered to require interventions, Foucault's writing nonetheless focuses more overtly on the influence that the normalised knowledge constructions that underpin configurations of risk have on society rather than on the powerful interests that shape the content of this knowledge (cf. Brown, 2015, p. 167).

Considerations of power form a newer focus within information literacy but the sociocultural emphasis upon social interaction has started to replace interest in individual motivations with an examination of the conditions that shape access to information environments. Within this framing, power forms a complex concept that both gives and denies a person the ability "to do things and to think of themselves in a specific way" (Nicolini, 2012, p. 6). Greater scrutiny of the impact that power structures have upon the development of knowing has developed through the theorisation of information literacy as a social practice (e.g., Lloyd, 2010). Drawing upon the positioning of practice as shaped through arrangements that structure and connect human coexistence

(Schatzki, 2005), a practice theoretical lens illustrates that information literacy is both constrained and enabled by set-ups of material objects that moderate engagement in activity. Qualifying the possible paths that a person's activity could take (Schatzki, 2002, p. 44), arrangements also highlight how it is both actions and artefacts that impact the potential courses of activity in which people engage. Power is also referenced within transitions research, where community and social conditions are seen to facilitate and inhibit the integration of disruption (Meleis et al., 2000). Drawing attention to the impact that the receptiveness of a local environment has on responses to change, conditions of transition also draw attention to the impact of class, race and gender markers (Meleis et al., 2000).

Differences in social power and privilege form one of the arrangements or conditions that has the biggest impact on risk-informed information practice. Typically referencing situations in which organisations have legal or disciplinary power over people, unequal power relationships shape risk responses by configuring how a person participates in the world, including through influencing what counts as information as well as how this information comes to be known. During the COVID-19 pandemic, for example, the UK government's categorisation of lockdown identities, such as being vulnerable or working from home, limited access to risk information through situating people as subject to specific risk discourses and constructions. Power hierarchies also impeded the development of understanding about the risks of book-banning as senior management teams withheld relevant information from school library workers as well as over-riding professional advice and concerns. A predominantly female school library workforce further suggests the impact that power dynamics related to gender have upon the construction of risk knowledge. Drawing attention to how particular forms of knowledge are sanctioned and legitimised within a setting, power foregrounds the relational aspects of risk-informed information practice, including connections between people as well as between people and the material world. At the same time, the foregrounding of the "consequences of practice" (Mahon et al., 2017, p. 14) or the creation of authorised forms of inclusion and exclusion further positions risk-informed information practice as a site of potential tension as people face unevenly distributed and coercive (Gibson et al., 2021) disciplinary regimes.

The impact of power structures upon risk-informed information practice also goes beyond merely constraining access to information. Instead, the association of participation within information environments with the reconfiguration of self means that the dynamics of power also impact the construction of subjectivity within a risk context. Within a language-learning context, the impact of power dynamics is most clearly identified through the ways in which local and native speakers position students as outsiders within their new context. Judgments linked to physical differences, such as appearance and accent, inhibit students' ability to situate themselves within an information

environment by limiting the quality and type of information to which they have access abroad. This scrutiny also constrains access to the nuanced and contingent forms of information that, in reflecting embodied ways of knowing, hinder the development of subjectivity through impeding access to everyday or vernacular knowledge. Recalling the actions of gatekeepers, who decide who, how and when people engage with information (Metoyer-Duran, 1993), the willingness of locals and native speakers to afford access (or not) to useful information positions risk-informed information practice as intentionally structured and shaped (cf. Billett et al., 2004). The recognition that power is mediated through local community structures rather than uniquely through institutional and governmental authority, which recalls Foucault's governmental approach to risk, further demonstrates that risk-informed information practice is shaped through dispersed rather than just top-down forms of authority.

Agency forms the second concept for which risk research needs to account if it is to develop a sociocultural approach. Semantic analyses of risk definitions often point to agency as one of the key features that differentiates risk from threat and danger (Battistelli & Galantino, 2019). However, the continued influence of rationalism means that human agency has more typically been considered as either lacking, in a technoscientific approach to risk, or as constrained by a person's ignorance about the threat to which they are subject, as per a cognitive perspective. Scholars have also noted analogous issues within Beck and Giddens' risk society theses, in which the assumption that risk is controllable through a person's individual resources appears to embody a similarly rational-calculative approach to agency (Wynne, 1996). In contrast, other sociocultural theorists have offered a more nuanced take. While Douglas' later grid group work (Douglas & Wildavsky, 1982) introduces fatalists who believe they have little control over risk, her earlier interest in blame and taboo draws attention to how social actors shape the conditions of their lives. Similarly, while agency might seem to be absent from the governmentality positioning of power as 'everywhere', Foucault's (1984, p. 442) insistence that this was not his intention has since opened risk research to questions of compliance or how people resist controlling discourse (e.g., Seear, 2009; Armstrong & Murphy, 2012).

Within information literacy research, agency has often been tacitly inferred yet has rarely been the subject of empirical examination. Frequently associated with the expectation that literacy will 'autonomously' lead to improved outcomes (Street, 2001), considerations of agency have, just as with power, since been placed upon more solid ground through the introduction of a practice theoretical lens. While it is practice rather than practitioners that form the basic unit of analysis within a practice theory approach (Nicolini, 2012, p. 7), the foregrounding of bodily and material arrangements nonetheless illustrates how agency forms the "central motor" (Schatzki, 2002, p. 189) for the ordering and perpetuation of social life. Within this framing, information literacy is positioned as both cast and recast (Hicks et al., 2023) through information activities

that, in exerting power over social structures, shape the formation of information landscapes. Invoking agency through the positioning of practice as happening or taking place, the emphasis on the reproduction and transformation of structural environments acknowledges the active shaping of information literacy rather than its more typical association with preconceived goals (Hicks et al., 2023). At the same time, the recognition that human agency "makes the future within an extant mesh of practices and orders that prefigures what it does" (Schatzki, 2002, p. 210) underscores that information literacy is shaped through the site of social practice rather than through human agency alone.

The association of information literacy with transformative potential means that one of the major ways that agency is implicated within risk-informed information practice is through challenging constraining conditions of action. Referenced through resistance to the established logics and values of a setting, as people seek to exert "influence over the narratives that attempt to define them" (Lloyd & Hicks, 2022, p. 1017), human agency is manifest through information activities that aim to both confront and reframe local possibilities. The workarounds developed by language-learners in the face of local and native speaker marginalisation offer one such example of agential orientation; in sharing relevant information between co-located peers, students gain access to nuanced and contextual information that they might not otherwise have encountered. The requests that school library workers made for guidance about book-banning, which represent an attempt to remind local educational authorities of professional expertise, provide another illustration of agentic information strategy in the face of structural impediments. Demonstrating that agency is prefigured through the context of action, the emphasis on unfolding situations positions risk-informed information practice as creative as well as confrontational as people draw from structural constraints to invent "new possibilities for thought and action" (Emirbayer & Mische, 1998, p. 984). At the same time, the efforts that people make to distance themselves from practical constraints show that risk-informed information practice is shaped by a person's orientation to past actions and present judgements as well as future trajectories of action (Emirbayer & Mische, 1998).

A second example of how agency shapes risk-informed information practice is found in the many ways in which information activities are entwined with self-care and wellbeing. Alluding to the emotional intensities of risk, agentic performance is foregrounded through information activities that prioritise a person's affective shifts during concentrated phases of action, particularly when their own health appears to be in danger. One of the clearest illustrations of agentic action comes from the COVID-19 pandemic when anxiety linked to the rapidity and frequency of information dissemination precipitates engagement in *compartmentalising* activities. Enabling transition by creating a protective buffer zone from which people negotiate the emotional impact of change, agency is brought into view through reflexivity about capacity to make meaning

in the face of information demands (Lloyd & Hicks, 2022, p. 1017). A similar self-awareness is noted in language-learners' engagement in *triaging*, in which students purposefully remove themselves from their information environment to manage the emotional demands of the time. Speaking to the fragmentation of risk, in which certain forms of risk discourse are more accessible than others, the centring of personal boundaries positions agency as reactive or as shaped in relation to the conditions of a setting rather than uniquely in terms of proactive preparation and empowerment (Lloyd & Hicks, 2022, p. 1020). Changing relationships with risk, which additionally recognise that informational difference can be discordant as well as cooperative (Lloyd & Hicks, 2022, p. 1018), further centre risk-informed information practice on conflict as intended actions clash with instrumental understandings of danger.

In summary, power and agency are central to risk-informed information practice. Enacted through the social and political conditions that create the possibility of action, power moderates risk-informed information practice through shaping how information and knowledge are understood as well as opportunities to participate in the activities of a community. In constituting the means through which people challenge constraints on interaction, agency influences risk-informed information practice through maintaining access to information environments.

Materiality

The positioning of risk-informed information practice as connected to changing forms of participation in social activity further introduces considerations of materiality to how risk is informed. Referring to "tools, technologies, bodies, actions and objects" (Fenwick, 2010, p. 69), materiality is foregrounded through the practice theoretical lens that shapes risk-informed information practice, which establishes the social site as "embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" (Schatzki, 2001, p. 11). Materiality is subject to a variety of interpretations within practice theory, with some ascribing agency to matter (e.g., Gherardi, 2009) and others merely affording it "compositional significance" (Schatzki, 2010, p. 132). While both approaches note the significance of non-human objects, the alignment of risk-informed information practice with Schatzkian theoretical development means that materiality is positioned as an ingredient rather than an actor within this exploration of social practice. Centring the objects that structure engagement in information activity, this approach also draws attention to the material ways in which people develop connections to information sources. In contrast, risk research has tended to foreground materiality through a consideration of risk assemblages, in which risk is afforded through the interaction of the body with material objects, amongst other discursive considerations (Lupton, 2013). Introducing a

more-than-human perspective to inquiry, the emphasis on the interplay between human and non-human actors nevertheless recognises the active shaping of risk knowledge as well as the vital contributions that material resources make to these configurations.

It is in shedding light on the dynamics of risk knowledge creation that materiality most clearly matters within risk-informed information practice. Drawing from the premise that social life hangs together through material arrangements (Schatzki, 2010, p. 130), the importance of artefacts and objects is further foregrounded through the positioning of materiality, alongside meaning and competence, as central to the persistence of practice, or how activity is carried out, reproduced and performed over time (Shove et al., 2012). This framing, which positions artefacts as sites for know-how knowledge (Lloyd, 2012), also draws attention to how risk information takes hold or contributes to the shaping of knowing. The mailing lists through which school library workers engage in *monitoring* book-ban challenges and the screenshots and annotations that language-learners use for *noting*, for example, illustrate that the construction of risk knowledge is spatially and temporally coordinated. Along the same lines, the use of material objects to prolong perpetuity illustrates that the development of risk knowledge is not permanent; language-learner engagement in *archiving*, in which they save items for future use, demonstrates that knowing is negotiated over time rather than constituting an immediate sweeping revelation. Demonstrating how learning is made possible, including by affecting "what, when, how, and by whom something can be done" (Mahon et al., 2017, p. 8), a focus on material arrangements further positions risk-informed information practice as constituted through ongoing and repeated performance.

Artefacts and tools do not, however, constitute the only matter of interest within risk-informed information practice. Instead, an emphasis on what people do also foregrounds embodied action within considerations of how risk is informed. Centring how the body makes information visible, corporeality is also predicated upon the inclusion of a person's whole being in the world (Lloyd, 2012, p. 776). Embodiment has been consistently underexplored within risk research; while the body as "bounded system" is central to Douglas' (1966/2002, p. 115) conceptualisation of danger, empirical work been limited to a focus on the role that emotion (Lupton, 2013) and experiential knowledge (Baillergeau & Duyvendak, 2016) play in shaping risk responses. In contrast, corporeal concerns have been richly theorised within information literacy research. Drawing from the premise that the dissociation of embodiment from ways of knowing limits understanding of social life, the positioning of the body as both a site of embodied and situated knowledge and an information source that is accessed by co-located others (Lloyd, 2012) establishes information literacy as shaped corporeally as well as socially and epistemically. Centring bodily interaction, including tacit cues and sensitivities as well as explicit physical activities, these ideas emphasise the need to account for know-how as well as know-what within the construction of risk knowledge.

Within risk-informed information practice, it is the bodies of other people that become particularly significant resources. The importance of these bodies, which constitute a "visible representation of practice" (Lloyd, 2014, p. 92), draw attention to how the construction of risk knowledge is predicated upon knowing how to act within a social world rather than merely the application of "declarative, procedural and conditional" (Billett, 2001, p. 434) categories of knowledge, as is so often presumed within considerations of risk responses. Thus, watching (and listening to) other bodies helps language-learners and people during the COVID-19 pandemic to establish a physical response to risk, including how to position their own body in relation to community expectations and norms. For school library workers, who often engage in *observing* to infer local support for their actions, the association of visual clues with their own personal safety mean that other bodies became even more significant to the construction of risk knowledge. Situating people within and in relation to a risk information environment, corporeal forms of information extend understanding about experiential knowledge (Baillergeau & Duyvendak, 2016) through centring the physical body within practice. The recognition that risk knowledge forms a situated and embedded activity rather than an object that can be possessed means that embodied action also creates another challenge to the presumed durability and stability of risk information.

To summarise, risk-informed information practice is shaped through and in relation to the materiality of social life. Referencing both objects and bodily experiences, materiality operationalises risk-informed information practice through affording access to the doings of practice, including the physical set-ups that structure how risk is known.

Next steps for risk-informed information practice

This chapter has drawn out the definition and conceptual framework for risk-informed information practice, including by presenting critical features that give shape to its conceptualisation. Drawing attention to both the complexity and creativity of how risk is informed, this chapter expands the theoretical reach of risk-informed information practice through "explicating tacit phenomena" (Charmaz, 2014, p. 259) or advancing interpretive sensitivity related to the various ways in which information shapes varied risk situations. This emerging conceptualisation informs and lays the groundwork for future research and pedagogical practice.

References

Armstrong, N., & Murphy, E. (2012). Conceptualizing resistance. *Health*, *16*(3), 314–326.

Aven, T., & Renn, O. (2009). On risk defined as an event where the outcome is uncertain. *Journal of Risk Research*, *12*(1), 1–11.

Baillergeau, E., & Duyvendak, J. W. (2016). Experiential knowledge as a resource for coping with uncertainty: Evidence and examples from the Netherlands. *Health, Risk & Society*, *18*(7–8), 407–426.

Bates, M. (1999). The invisible substrate of information science. *Journal of the American Society for Information Science*, *50*, 1043–1050.

Battistelli, F., & Galantino, M. G. (2019). Dangers, risks and threats: An alternative conceptualization to the catch-all concept of risk. *Current Sociology*, *67*(1), 64–78.

Beck, U. (1992), *Risk society: Towards a new modernity*. Sage.

Billett, S. (2001). Knowing in practice: Re-conceptualising vocational expertise. *Learning and Instruction*, *11*(6), 431–452.

Billett, S., Barker, M., & Hernon-Tinning, B. (2004). Participatory practices at work. *Pedagogy, Culture and Society*, *12*(2), 233–258.

Boholm, Å. (2003). The cultural nature of risk: Can there be an anthropology of uncertainty?. *Ethnos*, *68*(2), 159–178.

Brashers, D. E., Neidig, J. L., Haas, S. M., Dobbs, L. K., Cardillo, L. W., & Russell, J. A. (2000). Communication in the management of uncertainty: The case of persons living with HIV or AIDS. *Communications Monographs*, *67*(1), 63–84.

Brown, P. (2015). Social theories of risk. In A. Elliott (Ed.), *Routledge handbook of social and cultural theory* (pp. 157–174). Routledge.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.

Chick, N., & Meleis, A. I. (1986). Transitions: A nursing concern. In P. L. Chinn (Ed.), *Nursing research methodology: Issues and implementation* (pp. 237–257). Aspen.

Douglas, M. (1966/2002). *Purity and danger: An analysis of concepts of pollution and taboo*. Routledge.

Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.

Douglas, M., & Wildavsky, A. (1982). *Risk and culture: An essay on the selection of technological and environmental dangers*. University of California Press.

Emirbayer, M., & Mische, A. (1998). What is agency?. *American Journal of Sociology*, *103*(4), 962–1023.

Fenwick, T. (2010). Re-thinking the "thing" sociomaterial approaches to understanding and researching learning in work. *Journal of Workplace Learning*, *22*(1/2), 104–116.

Foucault, M. (1984). The ethics of the concern for self as a practice of freedom. In S. Lotringer (Ed.), *Foucault live: Collected interviews 1961–1984* (pp. 432–449). Semiotext(e).

Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: Studies in governmentality* (pp. 87–104). Harvester/Wheatsheaf.

Frank, R. D., & Rothfritz, L. (2023). Designated community: Uncertainty and risk. *Journal of Documentation*, *79*(4), 880–897.

Gherardi, S. (2009). Knowing and learning in practice-based studies: An introduction. *The Learning Organization*, *16*(5), 352–359. doi:10.1108/09696470910974144

Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, *26*(8), 1513–1530.

Hicks, A., Lloyd, A., & Pilerot, O. (2023). Introduction: Themes, patterns and connections. In A. Hicks, A. Lloyd, & O. Pilerot (Eds.), *Information literacy through theory*. Facet.

Kralik, D., Visentin, K., & van Loon, A. (2006). Transition: A literature review. *Journal of Advanced Nursing*, *55*(3), 320–329.

Kuhlthau, C. C. (1993). A principle of uncertainty for information seeking. *Journal of Documentation*, *49*(4), 339–355. doi:10.1108/eb026918

Lancaster, K., & Rhodes, T. (2023). Problematising the emergence of outbreak science in the governance of global health: Making time for slow dis-ease. *Critical Public Health*, *33*(5), 838–847.

Lloyd, A. (2007). Learning to put out the red stuff: Becoming information literate through discursive practice. *The Library Quarterly*, *77*(2), 181–198.

Lloyd, A. (2010). Framing information literacy as information practice: Site ontology and practice theory. *Journal of Documentation*, *66*(2), 245–258.

Lloyd, A. (2012). Information literacy as a socially enacted practice: Sensitising themes for an emerging perspective of people-in-practice. *Journal of Documentation*, *68*(6), 772–783.

Lloyd, A. (2014). Informed bodies: Does the corporeal experience matter to information literacy practice?. In C. Bruce, K. Davis, H. Hughes, H. Partridge, & I. Stoodley (Eds.), *Information experience: Approaches to theory and practice* (pp. 85–99). Emerald.

Lloyd, A. (2017). Researching fractured (information) landscapes: Implications for library and information science researchers undertaking research with refugees and forced migration studies. *Journal of Documentation*, *73*(1), 35–47.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: The unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation*, *77*(3), 1052–1072

Lloyd, A., & Hicks, A. (2022). Saturation, acceleration and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19-environments. *Journal of Documentation*, *78*(5), 1008–1026.

Lupton, D. (2013). *Risk*. Routledge.

Lyng, S. (1990). Edgework: A social psychological analysis of voluntary risk taking. *American Journal of Sociology*, *95*(4), 851–886.

Mahon, K., Kemmis, S., Francisco, S., & Lloyd, A. (2017). Introduction: Practice theory and the theory of practice architectures. In K. Mahon, S Francisco, & S. Kemmis (Eds.), *Exploring education and professional practice – Through the lens of practice architectures* (pp. 1–30). Springer.

Meleis, A. I., Sawyer, L., Messias, D. H., Im, E.-O., & Schumacher, K. (2000). Experiencing transitions: An emerging middle-range theory. *Advanced Nursing Science*, *23*(1), 12–28.

Messias, D. K. H. (2010). Migration transitions. In A. Meleis (Ed.), *Transitions theory: Middle range and situation-specific theories in nursing research and practice* (pp. 226–231). Springer.

Mestre, J. (2023). Parsing through paradigms: Uncertainty and decision-making in human information behavior. *Journal of Documentation*, *80*(1), 39–53.

Metoyer-Duran, C. (1993). The information and referral process in culturally diverse communities. *RQ*, *32*(3), 359–371.

Molas, A., & Whittaker, A. (2024). Tempting luck: Temporalities and risk anticipation among egg donors in Spain. *Science, Technology, & Human Values*, *49*(6), 1256–1280.

Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford University Press.

Packer, M., & Goicoechea, J. (2000). Sociocultural and constructivist theories of learning: Ontology, not just epistemology. *Educational Psychologist*, *35*(4), 227–241.

Rhodes, T. (1997). Risk theory in epidemic times: Sex, drugs and the social organisation of 'risk behaviour'. *Sociology of Health & Illness*, *19*(2), 208–227

Rogoff, B. (2003). *The cultural nature of human development*. Oxford University Press.

Rosa, E. A. (1998). Metatheoretical foundations for post-normal risk. *Journal of Risk Research*, *1*(1), 15–44.

Savolainen, R. (2006). Time as a context of information seeking. *Library & Information Science Research*, *28*(1), 110–127.

Schatzki T. (2001). Introduction: Practice theory. In T. Schatzki, K. Knorr Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1–14). Routledge.

Schatzki, T. (2002). *The site of the social: A philosophical account of the constitution of social life and change*. Pennsylvania State University Press.

Schatzki, T. (2005). Peripheral vision: The sites of organizations. *Organization Studies*, *26*(3), 465–484. doi:10.1177/0170840605050876

Schatzki, T. (2010). Materiality and social life. *Nature and Culture*, *5*(2), 123–149. doi:10.3167/nc.2010.050202

Schatzki, T. (2012). A primer on practices. In J. Higgs, R. Barnett, S. Billett, M. Hutchings, & F. Trede (Eds.), *Practice-based education: Perspectives and strategies* (pp. 13–26). Sense Publishers.

Schumacher, K. L., & Meleis, A. I. (1994). Transitions: A central concept in nursing. *Image: Journal of Nursing Scholarship*, *26*(2), 119–127.

Seear, K. (2009). 'Nobody really knows what it is or how to treat it': Why women with endometriosis do not comply with healthcare advice. *Health, Risk & Society*, *11*(4), 367–385.

Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice: Everyday life and how it changes*. SAGE Publications.

Street, B. V. (2001). The new literacy studies. In E. Cushman, G. R. Kintgen, B. M. Kroll, & M. Rose (Eds.), *Literacy: A critical sourcebook* (pp. 430–442). St Martin's Press.

Thomassen, B. (2018). Thinking with liminality. In A. Horvath, B. Thomassen, & H. Wydra (Eds.), *Breaking boundaries: Varieties of liminality* (pp. 39–58). Berghahn Books.

Turner, V. (1969). *The ritual process: Structure and anti-structure*. Routledge & Kegan Paul.

Turner, V. (1979). Frame, flow and reflection: Ritual and drama as public liminality. *Japanese Journal of Religious Studies*, 6(4), 465–499.

Van Gennep, R. (1960). *Rites of passage*. Routledge & Kegan Paul.

Warner, J., & Gabe, J. (2004). Risk and liminality in mental health social work. *Health, Risk & Society*, *6*(4), 387–399.

Wilson, T. D. (1999). Exploring models of information behaviour: The 'uncertainty' project. *Information Processing & Management*, *35*(6), 839–849.

Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a New Ecology*, *40*, 44–83.

Zinn, J. (2016). 'In-between' and other reasonable ways to deal with risk and uncertainty: A review article. *Health, Risk & Society*, *18*(7–8), 348–366.

7

RESEARCHING RISK-INFORMED INFORMATION PRACTICE

Introduction

A final important consideration of risk-informed information practice relates to methodological and ethical concerns. Methods have often been somewhat overlooked within both risk and risk information research even as the field has moved further round the sociocultural turn. Yet, if risk-informed information practice is to continue being conceptualised, it is vital that methodological questions and the implications of research design for both participants and the researcher are foregrounded. The slipperiness or intangibility of risk-informed information practice means that one set of methodological questions must necessarily centre on how we access data about the tacit and nuanced ways in which risk is informed. The focus on the construction of meaning signifies that a second set of methodological questions must consider the ethics of research, particularly related to the moral imperative of carrying out or continuing research into how risk is informed. The potential for research to touch on emotionally challenging situations means that a third set of methodological questions must engage with the impact of risk-informed information practice research on the researcher, who may be placed in a vulnerable position. Together, a consideration of these issues will help to build a more nuanced and complex understanding of risk-informed information practice. The relative lack of emphasis that has previously been paid to risk research methods means that this chapter will draw upon research from sociology and education to establish considerations related to accessing risk-informed information practice, including future studies and speculative methods. Research from conflict, crisis and grief studies will further be used to explore the ethics of risk-informed information practice research while oral history research will inform considerations about the potential impact on the researcher.

DOI: 10.4324/9781032719627-7

Research methods within risk research

As Chapter 2 points out, the traditional emphasis that has been placed on positivist understandings of risk means that, to date, risk research has tended to be dominated by quantitative methods and methodologies. A focus on rational decision-making meant that the need for "objective, systematic and scientific" (Lupton, 1993, p. 427) research methods took precedence while interest in cognitive processes led to the establishment of measures designed to test and model risk acceptance variables as standard. Together, these objectives led to the installation of laboratory experiments, gaming situations and close-ended surveys as the primary means to research risk (Lupton, 1993, p. 427; Gustafson, 1998). Typically taking place in controlled conditions that were detached from social context, these methods were also limited to pre-categorised responses (Henwood et al., 2011, p. 256) with Slovic's psychometric research, which was based upon asking test subjects to rank the risk characteristics that researchers assumed would be important, forming a case in point (Hawkes & Rowe, 2008, p. 619). Methods additionally left little scope for alternative perspectives with Saitta (2012, p. 1300) noting that a desire for comparability with international surveys led to the administration of "illogical" test instruments, even in otherwise responsive disaster research methods. In effect, the most commonly used research methods could be critiqued for taking notions of risk for granted (Saitta, 2012, p. 1300), for not being "sensitive enough" to access people's risk ambivalences and imaginaries (Henwood et al., 2011, p. 256), and for downplaying "the deeper cultural, political, and historical processes that have produced sources of risk and perceptions" (Saitta, 2012, p. 1300).

As risk research started to engage more concretely with the sociocultural turn, researchers began to question the field's dependence on "rationalistic, probabilistic [and] exclusively science-driven" risk research methods (Henwood et al., 2011, p. 254). By 2002, for example, McKechnie and Welsh were bemoaning the lack of emphasis on tracing "the way people work reflexively with ideas about the environment, or about themselves and others, in different contexts" (p. 287), while 2008 saw Henwood et al employ the concept of "risk framing" to draw attention to methodological dilemmas related to how risk is defined and used. Coupled with research that outlined the paucity of methods used within qualitative risk research (Hawkes & Rowe, 2008), these discussions sparked interest in alternative, more reflexively orientated risk research methods. The next decade subsequently saw scattered interest in diary research methods, which were seen to allow researchers to "collect information… that is more descriptive or reflective in nature" (Hawkes et al., 2009, p. 211) and visual methods, which were understood to give "participants the freedom to define and illustrate the risks around them" (Wall, 2016, p. 358, Heidenstrøm, 2020). Researchers also explored how narrative elicitation methods provided a way for researchers to "avoid suppressing epistemic differences, neglecting diverse

sources and contexts for risk knowledge, and being limited to interpreting people's risk responses only within their own prior investigative frame" (Henwood et al., 2011, p. 269; Smith et al., 2006).

These methodological explorations, which coincided with reflections on the value of informal risk knowledge (Wynne, 1996) and experiential risk decision-making practices (Zinn, 2008) within the wider field of risk research, speak to a growing understanding about the impact that methodological choices have upon risk research. However, surprisingly little space is given to exploring the value of these research methods in the context of risk research with most literature focusing on the efficiency or effectiveness of new research methods in comparison to more established designs (e.g., Hawkes et al., 2009; Wall, 2016). In fact, the most comprehensively examined methodological issue within risk research to date seems to relate to concerns about whether presenting a study to participants in terms of risk (or worry) might invalidate the findings of the research, an anxiety that encapsulates the field's slow transition towards a sociocultural approach (e.g., Hawkes & Rowe, 2008; Henwood et al., 2008). There is also an equally surprising lack of focus on other aspects of risk research methods within risk literature. While risk researchers have called for increased ethnographic or video reconstruction research (Hawkes & Rowe, 2008), for example, less attention has been paid to the potential impact that the use of these methods might have on the researcher's own physical and mental wellbeing. Similarly, reflection that goes beyond standard institutional review processes to engage with the ethics of carrying out risk research, particularly in relation to disaster, crisis and health vulnerabilities, seems to have been equally sidelined.

Research methods within information research

At first glance, information research methods parallel developments within broader risk research. Griffin et al.'s (1999) *Risk Information Seeking and Processing Model* and Kahlor's (2010) *Planned Risk Information Seeking Model*, for example, emerged in relation to findings from experimental and survey-based research with undergraduates in the 1980s (Ajzen & Madden, 1986), and similar methods have since been used to validate and extend this theorisation (e.g., Yang et al., 2014). Questionnaires also formed the method of choice within other early studies of risk information, whether this was with the general public (Huurne & Gutteling, 2008) or undergraduates (Catellier & Yang, 2012) while later risk information research has returned to a more conceptually driven approach (e.g., Choo, 2017; Nara, 2007).

In contrast, Chatman's (1996) establishment of risk-taking as a key component of the information seeking and sharing activities of marginalised communities arose through her use of ethnographic methods (Chatman, 1990, 1992). While Chatman does not reflect on the impact that her research methods had

upon her risk information theory building, she makes clear that conceptualisation emerged through her focus on lived experience rather than being decided a priori. Gibson et al. (2021) similarly credit participatory methods, including information world mapping, with enabling them to meet their research goal of engaging teens and tweens of colour with sensitive questions related to risk, safety and information seeking. Within the language-learning research reported in Chapter 5, the unexpected emergence of risk as the overarching theme of the study is linked to the emphasis that grounded theory places upon social process or data that "get beneath the surface of social and subjective life" (Charmaz, 2014, p. 22). The impact of the study was further extended through visual methods, which cemented "the site of knowledge construction within participants' representations of their social life" (Hicks, 2018, p. 198). At the same time, none of these studies has reflected in detail on the impact that methodological choices have upon risk-informed information practice.

The methodological considerations of risk-informed information practice

The chapter will now turn to exploring three key methodological questions related to risk-informed information practice, including how methods open up and close off access to the field as well as broader ethical and researcher related considerations.

Accessing risk-informed information practice

One of the first methodological considerations for risk-informed information practice relates to how researchers can access data about the ways in which information literacy shapes the perception, understanding and management of risk. Within risk research, one of the points of difference between the technoscientific and the sociocultural turn has been the growth of interest in accessing lay understandings of risk (e.g., Wynne, 1996). Seen to provide vital insight into the cultural conditions and belief systems that people use to make decisions about hazards, opening up the business of thinking about risk beyond expert judgement has also been positioned as a way to avoid reducing risk to a purely epistemic framing (Guggenheim et al., 2017). These developments have subsequently led to experimentation with various forms of qualitative methods, as detailed above, which were seen to facilitate access to the nuanced emotions and values that shape non-expert perspectives on risk. A similar user-centred turn has been noted within information research when interest in the situated uniqueness of information activity started to replace the previously dominant system-focused perspective (Dervin & Nilan, 1986). Shifting attention to what constitutes information, as well as the impact that local context has upon information activities, the user-centred turn also emphasised the

role that inductive qualitative methods played in accessing situated user activity (Dervin & Nilan, 1986, p. 16). These shifts have several implications for access to risk-informed information practice data.

Accessing non-normative aspects of risk-informed information practice

A particularly important consideration for risk-informed information practice relates to how to access the forms of information, as well as the information activities and processes, that people employ to perceive, understand and manage risk. This challenge becomes even more important within an everyday context, when people may rely less upon institutional risk messages in favour of localised or nuanced and contingent sources of information. As Lloyd (2014, p. 100) points out, while accessing institutional or normative aspects of information literacy practice is "reasonably achievable", capturing the information sources that constitute social and embodied forms of knowing proves to be far more complex. This may be because localised ways of knowing that "rely on social interaction for distribution" (Lloyd, 2014, p. 101) or that are only accessible at the "moment of practice" (Bonner & Lloyd, 2011), are harder to record. It may also be linked to the blackboxing (Pilerot, 2014, p. 64) or the sudden invisibility of everyday activities that are central to the development of risk knowledge outside the local context (McKenzie & Dalmer, 2020, p. 2). Either way, the complexity of information means that risk-informed information practice research cannot merely be confined to straightforward accounts of how people use, produce, access and share information. Instead, research methods must foreground the distributed messiness of risk information environments, including ongoing and emerging interactions. They must also centre reflexivity on the part of the researcher to ensure that indications of "the investment of time and effort, conditions, tools and resources related to the information phenomena under study" are being surfaced (Dalmer & Huvila, 2020, p. 103).

Visual research methods, which provide a way to move beyond language-based understandings of risk (Heidenstrøm, 2020, p. 380), provide an example of an effective way of accessing the non-normative shape of risk-informed information practice, as Chapter 5 demonstrates. While visual methods have been used in risk research, it is important to highlight that the value of these methods does not just lie in capturing a broader view of what is considered to form a risk in everyday life (e.g., Wall, 2016). Instead, visual methods facilitate access to tacit, taken-for-granted or intangible aspects of risk-informed information practice, particularly in relation to informal settings, by providing participants with an opportunity to express their own understanding about what constitutes risk information (Hicks & Lloyd, 2018). Associated discussions of photographs or sketches further allow for embodied recollections that capture the ambiguity of a risk situation, which provides another way to connect with

social and corporeal forms of risk information (Hicks & Lloyd, 2018). Visual mapping methods may further provide participants with an opportunity to depict risk-informed information practice without being constrained to one place in time (McKenzie & Dalmer, 2020, p. 8). The use of visual methods additionally provides a way to broaden participant engagement; if risk research is serious about understanding everyday or lay experiences of risk then it must also address the methodological implications of this shift, including by providing a way for participants who may not be comfortable with traditional research methods to engage (Hicks & Lloyd, 2018). Visual research methods further provide a way for participants to control what aspects of their experiences are portrayed, which addresses some of the ethical concerns related to risk-informed information practice research (explored further below).

Another method that provides a similarly reflexive approach to understandings of risk information landscapes is Interview to the Double (ITTD), which is a method designed to "articulate and represent practice" (Nicolini, 2009). Emerging from a Marxist tradition with the goal of legitimising "the local knowledge that workers learned on the job and passed on to novices" (Nicolini, 2009, p. 197), ITTD requires participants to provide detailed instructions so that the 'double' who will take their place at work the next day will not be unmasked. Adopted within organisational studies (Nicolini, 2009) and information literacy research (Lloyd, 2014; Jenkins et al., 2022), ITTD provides a useful way to access socially sanctioned practices (Nicolini, 2009, p. 201) or embedded, multimodal knowledge. From a risk perspective, the technique could be adapted by asking participants to provide instructions about what informed action looks like within a specific risk context, such as how to stay safe in a workplace, or walking through a city. Foregrounding taken-for-granted or tacit ways of knowing, the emphasis on a 'double' rather than a generic person ensures that attention remains focused on the values that legitimise risk knowledge rather than 'ideal' behaviours (cf. Nicolini, 2009, p. 199). In effect, ITTD facilitates access to local risk knowledge by making the "discursive and moral environment" in which risk unfolds visible (Nicolini, 2009, p. 206). The option to draw instructions or to frame the research in terms of video creation means that the technique could also be successfully adopted for work with children (Jenkins et al., 2022).

A final approach that may be useful for accessing the complexity of risk-informed information practice is walking methods. Walking methods have a long heritage, being variously employed in go-along (Kusenbach, 2003) or the walking interview (Jones & Evans, 2012) to explore environmental perception and spatial practices, amongst other themes. For risk research, walking methods provide a useful way to attend to contextual, material or sensory understandings of risk-informed information practice, including through facilitating access to "physically and spatially distributed informational tools" (McKenzie & Dalmer, 2020, p. 6) as well as structural information breakdowns and

constraints (cf. Heidenstrøm, 2020, p. 389). Walking methods could also be combined with visual methods to address challenges related to spaces that may be inaccessible to the researcher, for example, personal spaces (Hicks & Lloyd, 2018). At the same time, walking research creation methods have also been positioned as the means to challenge individual humanist intentionality (Springgay & Truman, 2017, p. 7) or "the ways that walking and the senses produce gendered, racialized, and classed bodies" (Springgay & Truman, 2017, p. 11). From this perspective, synaesthetic, haptic or sound walks could also be used to interrogate how affect shapes how risk-informed information practice happens. Given that embodiment could also be characterised as representing the immediacy of connection between body and place, walking methods could also be used to explore friction within local risk knowledge, including how emplacement may not be informative for the broader networks of "risk, harm, culpability and responsibility' within which humans are entwined (Alaimo, 2016, p. 3).

Accessing the not-yet temporality of risk-informed information practice

A second challenge for research relates to how to deal with and anticipate the not-yetness of risk-informed information practice or its slippery, constantly moving and intangible shape (cf. Coleman, 2017). By its very definition, risk must be understood as shaped in relation to an indeterminate future; as Douglas and Wildavsky (1982, p. 1) argue: "Can we know the risks we face, now or in the future? No, we cannot; but yes, we must act as if we do." For other theorists, these issues are complicated by the assumption that these seemingly intangible dangers are "largely beyond the reach of sense perception" (Adam & van Loon, 2000, p. 1). Yet, future-oriented research in sociology illustrates how not-yetness plays a significant role in shaping how the world is "organized, governed and experienced" (Coleman, 2017). Feelings of fear and anticipation, for example, often characterise governing power structures (Anderson, 2010) and algorithmic awareness (Haider & Sundin, 2021) while hope is often used by medical professionals and terminally ill patients alike as a "post-formal" way of mediating uncertainty (Brown & de Graaf, 2013). Illustrating the affective materiality of the intangible, the impact of pre-emption also demonstrates how the future shapes how we "inhabit the present " (Lyon & Carabelli, 2016) rather than forming a neutral or immaterial space. In effect, the future may elude us but any difficulties gaining access to these spaces point to the need to adapt our methods of inquiry rather than distancing futurity from risk-informed information practice research (cf. Adam, 2010).

Given the discernible impact of future-facing emotions such as fear and anticipation upon our understanding and construction of risk, an engagement with affect provides one way in which research can access the not-yetness of risk-informed information practice. Within this framing, the emphasis that

visual and sensory methods place on the ephemeral or that which is difficult to put into words mean that they are ideally suited to engage with affective states, including verbal and non-verbal understandings of a time that has still to be lived. Providing the means to access the affect related to "micro-intensities of everyday life" (Ivinson & Renold, 2013, p. 373), visual and sensory methods also "enlarge the scope for understanding research participants' sense of the… past, present, and future" (Lyon & Carabelli, 2016, p. 431) by providing often intimate insight into wishes, fears and insecurities (Lyon & Carabelli, 2016, p. 438). From a risk perspective, affective and sensory methods may facilitate access to underlying or unexpressed issues that are driving information activity, including the types and forms of information that people draw on in the construction and mediation of these concerns.

Another means of engaging with the not-yetness of risk-informed information practice is through working with the imagination, where opportunities to envision different futures may capture the affective intensities of the broader environment in which risk unfolds. In the field of education, which has become increasingly characterised by technological development, speculative research approaches have been introduced as "tactics" for interrogating digital futures (Ross, 2022, p. 6). Along these lines, speculative educational research specifically cites the creation of 'what if' questions that examine how things can or could happen (Hopkins, 2020) and objects to think with, including researcher or participant created "low-tech wireframes, stories or models" (Ross, 2022, p. 172) as ways to approach the future. Within risk-informed information practice research, speculative methods could facilitate access to data by providing an accessible and productive way in to exploring the uncertainty that lies at the root of conceptualisations of risk. In positioning the "future as a space of uncertainty," speculative research makes clear that the goal of these methods is to use this uncertainty "creatively in the present" (Ross, 2022, p. 13) rather than to perpetuate normative perceptions of progressive temporality (Springgay & Truman, 2019). The emphasis on exploring rather than resolving complexity means that a speculative approach is also grounded in a spatially and temporally framed context instead of forming a 'frameless' technosolutionist prediction.

A further way in which these future-focused approaches could be put into practice within risk-informed information practice research is through story completion methods. A projective technique (Frith, 2018) that emerged from the psychoanalytic tradition, the story completion method is a form of narrative enquiry that asks participants to respond to a story stem or opening that is created by the researcher (Lupton, 2020). Typically centring on fictional characters and the experiences of others rather than the participant themself, the story completion method is valued for facilitating access to sensitive topics and for helping participants to manage fears of being seen as irrational or silly (Frith, 2018, p. 5), an approach that may be particularly useful for risk-informed information practice research that engages with everyday concerns.

Storytelling techniques have also been noted as stimulating access to embodied, affective or sensory experiences that may either be difficult to "bring to mind" or to articulate, whether this is because they are perceived as too mundane or too personal (Lupton, 2020, p. 3). At the same time, story completion methods help to elicit the sociocultural discourses that people draw on to develop understandings about the world rather than providing essentialist insight into a person or situation (Lupton, 2020, p. 4). And, while storytelling forms a speculative technique, participants similarly draw upon their own experiences or "the cultural situatedness of thinking" (Guggenheim et al., 2017, p. 146) rather than purely fantastical images.

Notwithstanding, a considerable reframing of both the purpose and scope of empirical research would be needed if speculative methods were to become adopted within risk-informed information practice research. To date, both information and risk research has often focused on observation or the capturing, measuring and determining of people's concrete actions. This has been seen as particularly important given that outcomes of these studies have often been linked to the design of appropriate interventions, whether this is a technical information system or a risk communication plan. However, when risk-informed information practice becomes centred on the exploration and creation of "perceptible futures", the task for empirical research is to grapple with "questions around and efforts towards the luring of the potentiality of experiences" (Wilkie et al., 2017, p. 114) rather than the determination of relevant phenomena. The introduction of speculative methods consequently unsettles risk-informed information practice research by shifting the focus from observation or "what is here" to the "stimulation of latent realities" (Coleman, 2017, p. 134). It also disrupts the problems that are being addressed within risk-informed information practice research by reframing research methods as "a means of posing rather than necessarily answering a question" (Coleman, 2017, p. 134). In further recognising that "the social is not settled but is always in the process of being made or performed" (Coleman, 2017, p. 134), these changes would be complex for a field of study that is not accustomed to "expand[ing] the actual, inventively" (cf. Lury & Wakeford, 2012, p. 13).

The ethics of risk-informed information practice

A second methodological consideration relates to the ethical dimensions of risk-informed information practice research. The ethics of engaging in research within crisis situations, whether this is related to natural disasters, health concerns or other pressing social issues, is apparent (e.g. Stallings, 1990), although the topic has not always garnered as much attention as it could have done within risk literature. However, as Chapter 5 demonstrates, risk-informed information practice also introduces other more nuanced concerns to considerations of empirical research, including related to the ethics of making certain

forms of risk knowledge visible. The potential for harm calls for a renewed consideration of the ethics of carrying out, continuing or publishing risk-informed information practice research or whether certain forms of research should take place and certain findings should be shared. Evidently, any research design will have been subject to stringent institutional ethical protocols and approvals as well as prior researcher training. Yet, institutional approvals must be distinguished from situational ethical challenges that may arise, particularly in fragile settings where both the welfare of participants and the integrity of the research may be swiftly and easily challenged (Akinlolu Shadare, 2021, p. 221). Creating what researcher Akinlolu Shadare (2021, p. 218) calls "ethical tensions and ethical moments," these uncertainties mean that any risk-informed information practice research needs comprehensive reflection on the part of the researcher.

The need for ethical reflexivity became particularly prominent within the course of this research when school library workers started mentioning the various loopholes that they feared that book ban activists or even overly cautious headteachers could exploit in pursuit of even stricter controls of library materials (Chapter 5). While it is unlikely that hostile groups would ever come across this study, the notorious online savviness of activists (Massanari, 2018) raised the possibility of perpetuating indirect harm to participants and the decision was made to exclude these statements from the research findings. At the same time, the extirpation of these comments also caused unease; as Sabar and Sabar Ben-Yehoshua (2017, p. 416) point out, these actions could be interpreted as taking away the "autonomy and personhood of the interviewee" as well as reinforcing the "asymmetric power relations" that characterise so many research interactions particularly given that participants had given consent to participate in this study. The premise that these school library workers have "special authority" in relation to their own fields of knowledge further suggests that they should have the ability to "shape how their work appears to others" as well as how their work gets done (cf. Suchman, 1995, p. 56). While the decision to exclude data was eventually based upon the harm that publication of this data could have caused to school library workers who were not participating in this study, this experience provides a vivid illustration of the ethical reflexivity that is needed when working with potentially severe consequences (cf. Aven & Renn, 2009).

This episode also clearly highlights the potential ethical ramifications of accessing non-normative aspects of risk-informed information practice; as Mckenzie and Dalmer (2020, p. 10) point out, making previously hidden information activities visible "may create undesirable opportunities for surveillance," as the school library worker example illustrates. However, the focus that risk-informed information practice places on value as well as the severity of consequences (Aven & Renn, 2009), means that accessing informed action may also introduce other ethical concerns, including the exposure of activities that appear to violate the law. Professional ethical standards oblige

researchers to guarantee the highest possible degree of confidentiality for research participants yet there may be situations in which these responsibilities conflict with the need to uphold the law (Surmiak, 2020). Known as guilty knowledge, which refers to "an awareness of any deviant or criminal activities of the group or individual under study" despite not personally being involved (Lumsden, 2013, p. 258), these disclosures (whether illegal or not) induce emotional labour (Clay, 2024) including by potentially introducing distance between researcher and participant when experiences of risk information activity differ (cf. Lumsden, 2013 p. 273). While the case studies that formed the basis for risk-informed information practice were free from these concerns, the potential for research to engage with more controversial activities (see Chapter 8), illustrate how shifting methodological considerations also refocus ethical concerns.

Beyond considerations of disclosure, the emphasis that risk-informed information practice research places on the value that risk holds for a person means that researchers are increasingly likely to be engaging with a wide range of sensitive, distressing or emotionally difficult topics. Research from conflict, crisis and grief studies provides a useful way to draw out three key questions that researchers should ask themselves when they are considering whether to start or to continue research.

Is this the right time for this research?

A key consideration for the risk-informed information practice researcher is whether this is the right time for the research to take place, particularly if there is a chance of exacerbating or prolonging risk. Crisis studies literature has, unsurprisingly, dedicated considerable energy to the ethics of carrying out research within crisis or disaster situations, including during post-disaster instability. Researchers are swift to point out, for example, that it may be unethical to continue fieldwork when participants and their families face "issues of survival" (Mitchell et al., 2022, p. 305) or to incentivise participation when people are "individually and collectively distracted by lingering illness, job loss, or the death of loved ones" (Bond et al., 2020, n.p.). Crisis researchers also note that collecting data from a risky situation without "critical evaluations of the social and scientific urgency of such work" may reinforce "existing structures of oppression" by elevating research priorities over those of the research participants (Bond et al., 2020, n.p.). The rush to produce research may further add to the already complex burden of coping by overlooking past or present trauma and contributing to participant (re)traumatisation (Wordsworth et al., 2021, p. 86). From this perspective, research that takes place within a recent or ongoing crisis should take care to weigh up the opportunity of gaining insight into a 'unique' situation with broader considerations of precarity, exploitation and the quality of data.

Beyond disaster research, the risk of touching upon sensitive or emotionally complex issues within even the most mundane of research scenarios calls for a consideration of the researcher's 'right' to carry out (or continue) a study that "causes people to feel emotional pain" (Rosenblatt, 1995, p. 144). These questions have been explored extensively in grief studies research, including related to the violation of privacy and the appropriate representation of experiences (Carmack & Degroot, 2014). One particular area of interest is where the limit of research lies, with some researchers opining that the surfacing of pain is too high a cost for any form of study. Others, however, reflect on how "hurting may be a part of healing" (Rosenblatt, 1995, p. 144), particularly when the researcher sits together with the participant's pain. At the same time, researchers acknowledge the judgement that goes into making ethical decisions about whether to continue emotionally heavy research, including making a call about when research appears to recall or provoke anguish. Along these lines, researchers should take care to reflect on and recognise the ethical dilemmas that may arise in a research situation, including the possibility for risk-informed information practice to provoke messy emotions such as tears and other obvious signs of distress. Researchers should also plan how they will remain alert to pain during the research encounter, including by paying attention to what people are saying and other non-verbal communications, as well as whether these interactions are communicating ethical permission to continue (or not), even when they are accompanied by the articulation of feelings (cf. Rosenblatt, 1995, p. 144).

Is the research taking place for the right purposes?

Another key consideration for research is whether the research is taking place for the right purposes. Reflexivity is key within all forms of research; it draws attention to positionality and assumptions as well as the legitimisation of what is deemed to be useful or important. Yet, the need for reflexivity becomes even more crucial within risk-informed information practice research, particularly given how we may have been schooled to see information scholarship as universally useful or as contributing "expert knowledge to a difficult situation" (cf. Fitzgibbon, 2021, p. 23). Along these lines, Fitzgibbon (2021, p. 23) urges researchers to be open to how our goals and purposes may be influenced by other concerns, including "professional ambition, self- interest, or insecurity" as well as the pursuit of results to "satisfy someone or something else." Crisis research is also particularly clear on the ethical pitfalls of trying to "outdanger" other researchers in pursuit of the "least accessible data before anyone else" (Bond et al., 2020, n.p.). These concerns should also play a key role within risk-informed information practice research; the 'newness' of the field of study may lend itself to a skimped "interrogation of purpose" (Fitzgibbon, 2021, p. 23) while the potential for this research to contribute to both academic and practical policy work brings additional tensions and demands. Inevitably,

design choices will lead to exclusions from research, and there is a need to decide whether these omissions are beneficial.

Beyond personal privilege, crisis studies research also urges researchers to consider the power implications of research, particularly related to challenging, reproducing or reinforcing power dynamics with scholarship (Bond et al., 2020, n.p.). Making assumptions about the vulnerability of a community forms one of the most complex dynamics within crisis research, with researchers warning that assumptions based on "membership of a particular group or because [a group has] particular characteristics" are particularly fraught (Thompson & Chambers, 2012, p. 28). Along the same lines, researchers are urged to consider whether the fragility of crisis situations skews representations of social realities by assuming a "perspective of deficiency whereby only debilitating problems [are] the focus" (Akinlolu Shadare, 2021, p. 225). Veering into paternalistic territory, assumptions such as these further risk disempowering participants through the perceived need for 'protection' (Thompson & Chambers, 2012, p. 27). Risk-informed information practice research is similarly exposed to these issues as literature exploring how the deficit perspective has been and continues to be employed within LIS demonstrates (e.g., Heinbach et al., 2021). The tendency for information research to focus on empowerment narratives rather than transitional vulnerabilities suggests that researchers may also be less experienced giving complex emotions and feelings the time and space that they need, too. Risk-informed information practice research must consequently overtly reflect on how a study might expose or create burdens or vulnerability rather than falling into assumptions about what sensitive research entails (cf. Thompson & Chambers, 2012, p. 28). Researchers must similarly ensure that they have created an environment in which participants feel enabled to choose whether to continue with the research process including by building in the time and space to sit with any emotions that may arise during and after the data capture period (cf. Thompson & Chambers, 2012, p. 28).

Is this the right person to carry out this research?

A final consideration for risk-informed information practice research is whether the researcher is the right person to carry out the research. Both information and risk research have started to interrogate the dominance of European, North American and English-speaking voices within their respective fields (Zinn & Brown, 2022, p. 3) as well as the "patterns of inequity" that silence other already-marginalised groups (e.g., Gibson, 2019). Yet in risk situations, it becomes even more important to consider how to centre silent voices, particularly given the potential policy implications for this work. Fitzgibbon (2021, p. 25) points out, for example, that employing academic expertise may lead to a sense of 'felt' responsibility wherein researchers position themselves as the "problem-solvers" who have "already decided what the problem is and

how it should be fixed." Meanwhile, researchers in disability studies warn of 'academic parasitism' whereby scholarship compounds oppression by feeding on "other's miseries" (Hunt, 1981, p. 11). These issues are of concern within risk-informed information practice research, too, not least because of the well-documented tendency towards "vocational awe" (Ettarh, 2018) within information-related professions as well as claims of white saviourism (e.g. Galvan, 2015; Schlesselman-Tarango, 2016). Along these lines, researchers must reflexively examine how they recognise and allow for participants to either refuse or "dictate the terms of our 'help'" (Fitzgibbon, 2021, p. 25). In doing so, researchers must also be open to how it may not be expected voices that need to be heard "in *this* time and *this* way" (Fitzgibbon, 2021, p. 25, italics in original).

Another point of reflection that emerges from crisis and conflict studies relates to the use of proxy researchers, particularly when the risk of travel to the crisis or conflict zone is deemed to be too great. In these situations, institutional regulations may require data collection to be outsourced to nationals who are already on the ground within the region or community being studied. Yet, as various researchers have pointed out, these practices result in the transfer of risk-taking from western or global north researchers to local contractors "who are treated as *petites-mains* ("little hands")," a form of privatisation that reinforces hierarchies and hardens power relations (Baczko & Dorronsoro, 2020, n.p.). While these outsourcing practices may be more common within crisis and conflict studies, given the frequent international scope of this work, they reinforce the importance of thinking about who carries out risk-informed information practice research (and how this is done), including the need to consider the costs of involvement (explored more in the next section). They also provide an opportunity for us to consider how we might use this research to create more meaningful allyships or equitable scholarship practices (cf. Fitzgibbon, 2021, p. 24). Conversely, a consideration of who is the right person to carry out risk-informed information practice research may further allow for reflexivity on how scholarship is impacted by cautious institutional risk assessment models, including what researchers have referred to as the "neoliberal bureaucratization of research" or the push to limit the legal risk to institutions (Baczko & Dorronsoro, 2020, n.p.)

The risk-informed information practice researcher

A third methodological consideration for risk-informed information practice research relates to the impact that empirical investigation may have on the researcher. Wellbeing has not always been prioritised within risk research; while institutional ethics protocols require researchers to detail how they will protect participants from harm, it has not been until relatively recently that attention has turned to the impact that sensitive research may have upon the

researcher (Bloor et al., 2010; Olson, 2021). Potentially linked to ongoing (or unconscious) biases towards positivist research methods, wherein the ideal researcher is "objective, "value-free," and detached truth-finder" (Blakely, 2007, p. 59) a lack of attention may also be connected to the assumption that "noisy affectivity" detracts from research (Lather, 2013). Others suggest that a focus on researcher vulnerabilities "deflects attention" from research participants or may lead to "stigmatization and reputational and socioeconomic harm" (Jessee, 2019, p. 325). Yet, when we understand risk from a sociocultural perspective as something that is important to our subjectivity and wellbeing (Lupton, 2013, p. 6) then it is almost inevitable that researchers will be engaging with participant emotion, whether this is low-level or more complex. This section draws upon literature from oral history and archival studies, which have started to grapple with the impact of emotionally demanding work on researchers and practitioners within these communities, to explore the potential impact that risk-informed information practice research might have on the researcher in more detail.

This section is further expanded through drawing on personal experience of researching risk; the integration of informal memos taken at the time of the COVID-19 research outlined in Chapter 3 requires a brief transition into a first-person narrative. My research collaborator and I had received ethical approval for what had been classified as a low-risk study to explore how people used information to learn about and understand risk during COVID lockdowns, as detailed in Chapter 3 (Lloyd & Hicks, 2021). For the most part, interviews went well, and I found that these points of contact sustained me, giving me a clear focus at a time when structure seemed to have disappeared from my life. However, as lockdown continued, I found that the interactions were taking an increasing toll on me, with my notes starting to refer to the stress of trying to recruit and carry out interviews at a time when my day job was continuing to intensify, as well as the difficulties I had remaining professional when people's views began to collide with my own. These issues then culminated in two extremely difficult interviews, in which a participant recounted painful details about the number of family members he had lost to COVID over the last few months and a new mother spoke movingly about her social isolation. In both cases, I paused the interviews immediately, checking and later following up about access to family and professional support. I further urgently contacted my collaborator with whom I could debrief about events without breaking confidentiality. Notwithstanding, the intensity of these experiences, coupled with the recognition of the space that a sociocultural approach to risk gives to emotions, alerted me to the essentiality of considering the impact of risk-informed information practice research on the researcher.

One of the more complex sets of emotions that my co-researcher and I experienced during the COVID research was what I labelled as invasive co-presence, in which it felt like the research was slowly taking over our life. Researching the

risks of being stuck at home while being confined to the house myself meant that my memos noted feelings of suffocation, where I felt unable to escape the perpetual news-research cycle, and a sense of hypervigilance, in which I was constantly trying to assess what was important. Listening to my participants talk about economic and health worries, as well as isolation and loss further confirmed and extended my own fears for this time. Later, I became angry when people started dismissing risks that still felt real to me all while fretting about my powerlessness in the face of these challenges. In effect, my own experience of managing pandemic risk made it far more likely that participants' stresses and strains might start seeping into my life as I was unable to "retreat or detach" in a way that I might have been able to do had I not been living through the shared experience (cf. Strong, 2021, p. 212). The nature of the topic meant that I was also carrying out considerable emotional labour during the study, trying to be attentive to participants' "emotional signals" while dealing with the "emotive dissonance" between my role as a researcher and my own personal experience of the pandemic (cf. Bergman Blix & Wettergren, 2015). It is easy to see how carrying out prolonged research in this area could lead to "vicarious trauma, burnout, or compassion fatigue" (Strong, 2021, p. 212).

It's also important to acknowledge how carrying out risk-informed information practice research may (re)traumatise the researcher, who, just like participants, may be carrying "traumas, moral injuries and other deep sensitivities with [them] throughout life" (Strong, 2021, p. 199). Jessie Loyer (2018) has written poignantly about the ways in which trauma and scholarly research intersect for indigenous students, highlighting how engaging with information further exposes native people to intergenerational pain. Even when violence is not the subject matter of the research encounter, it is evident that it is not just participants who are triggered by research data collection processes. Confusion, guilt and exhaustion may also arise from needing to "suspend our personal beliefs, or even our dignity" or allowing the participant to think that we are somebody who we are not, even in the absence of an official trauma diagnosis (Strong, 2021, p. 200). Lastly, it is not just the researcher whose wellbeing may be at stake. Kiyimba and O'Reilly (2016) warn that transcribers, who may have to repeatedly listen to the voices of participants describing disturbing material, are also at risk of harm.

At the same time, it is important not to forget that "researchers' emotions are a natural part of inquiries" (Blakely, 2007, p. 61; Olson, 2021), and that they may also support or provide insight into qualitative experiences of risk-informed information practice research. From my own part, codes that I labelled as therapeutic detachment demonstrate how my emotions contributed to both the smooth running of my COVID research as well as the depth of my analysis. The sense of relief at being able to openly discuss risk management techniques and mental health, for example, helped to sustain data collection by normalising my stress at a time of acute uncertainty. Foregrounding and

verbalising concerns also provided me with a sense of absorption that helped me to travel alongside the participant or attune me to powerful stories. In effect, feelings became "sources of information and tools of interaction" (Bergman Blix & Wettergren, 2015, p. 701) that helped me to build a more complex picture of the emotional landscape of this time. Careful consideration of how my emotions intensified and lessened over this time also helped me to develop a richer understanding of how risk knowledge is constructed during "emotionally charged" periods and contexts (Blakely, 2007, p. 62), thereby also enabling me to maintain an understanding of the value of this research.

The key for risk-informed information practice research therefore seems to lie in giving space to the emotions and feelings that may arise when topics that threaten, danger or imperil subjectivity in some way emerge. If the impact of this research on the researcher is not recognised then data collection may start to resemble "abuse or exploitation rather than an ethical, if challenging" process (Strong, 2021, p. 200). At the same time, it is important not to pathologise 'negative' feelings and to recognise the generative role that they can play within the creation of rich yet ethically sound research encounters. Addressing these issues consequently requires considerable planning, including establishing how to communicate and manage the need for breaks or how to proceed if the topic becomes too difficult (cf. Strong, 2021, p. 209). It also requires "careful documentation and thoughtful reflection" (Blakely, 2007, p. 62) on the part of the researcher, which may also involve developing a physical awareness of what distress looks or feels like for them as well as what their personal boundaries may be (Strong, 2021, p. 209). Consideration must also be paid to both the formal and informal opportunities for researcher support, including through establishing how broader questions of participant confidentiality can be maintained or supported during this time (Moncur, 2013). In doing so, researcher wellbeing is established and claimed as a core "ethical tenet" (Strong, 2021, p. 198) of risk-informed information practice research.

To summarise, this chapter has explored risk-informed information practice through a methodological lens, throwing light on challenges related to accessing the field as well as under-explored ethical concerns, including related to the ethics of doing research and the impact on the researcher. Bringing together research from a variety of related fields, this chapter establishes baseline methodological considerations for the inclusive, safe and ethical conduct of risk-informed information practice research as well as its future development.

References

Adam, B., & van Loon, J. (2000). Introduction: Repositioning risk; the challenge for social theory. In B. Adam, U. Beck, & J. van Loon (Eds.), *The risk society and beyond* (pp. 1–32). SAGE Publications.

Adam, B. E. (2010). Future matters: Challenge for social theory and social inquiry. *Cultura e comunicazione*, *1*, 47–55.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, *22*(5), 453–474.

Akinlolu Shadare, G. A. (2021). Managing ethical tensions when conducting research in fragile and conflict-affected contexts. In H. Kara & S. Khoo (Eds.), *Qualitative and digital research in times of crisis: Methods, reflexivity, and ethics* (pp. 218–234). Policy Press.

Alaimo, S. (2016). *Exposed: Environmental politics and pleasures in posthuman times*. University of Minnesota Press.

Anderson, B. (2010). Preemption, precaution, preparedness: Anticipatory action and future geographies. *Progress in Human Geography*, *34*, 777–798.

Aven, T., & Renn, O. (2009). On risk defined as an event where the outcome is uncertain. *Journal of Risk Research*, *12*(1), 1–11.

Baczko, A., & Dorronsoro, G. (2020). The ethical, epistemological, and conceptual need to resume fieldwork. *SSRC reflection series "COVID-19 and the social sciences"*. Retrieved from https://items.ssrc.org/covid-19-and-the-social-sciences/social-research-and-insecurity/the-ethical-epistemological-and-conceptual-need-to-resume-fieldwork/

Bergman Blix, S., & Wettergren, Å. (2015). The emotional labour of gaining and maintaining access to the field. *Qualitative Research*, *15*(6), 688–704.

Blakely, K. (2007). Reflections on the role of emotion in feminist research. *International Journal of Qualitative Methods*, *6*(2), 59–68.

Bloor, M., Fincham, B., & Sampson, H. (2010). Unprepared for the worst: Risks of harm for qualitative researchers. *Methodological Innovations Online*, *5*(1), 45–55.

Bond, K. D., Lake, M., & Parkinson, S. E. (2020). Lessons from conflict studies on research during the Coronavirus pandemic. *SSRC reflection series "COVID-19 and the social sciences"*. Retrieved from https://items.ssrc.org/covid-19-and-the-social-sciences/social-research-and-insecurity/lessons-from-conflict-studies-on-research-during-the-coronavirus-pandemic/

Bonner, A., & Lloyd, A. (2011). What information counts at the moment of practice? Information practices of renal nurses. *Journal of Advanced Nursing*, *67*(6), 1213–1221.

Brown, P., & de Graaf, S. (2013). Considering a future which may not exist: The construction of time and expectations amidst advanced-stage cancer. *Health, Risk & Society*, *15*(6–7), 543–560.

Carmack, H. J., & Degroot, J. M. (2014). Exploiting loss?: Ethical considerations, boundaries, and opportunities for the study of death and grief online. *OMEGA-Journal of Death and Dying*, *68*(4), 315–335.

Catellier, J. R., & Yang, Z. J. (2012). Trust and affect: How do they impact risk information seeking in a health context?. *Journal of Risk Research*, *15*(8), 897–911.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.

Chatman, E. A. (1990). Alienation theory: Application of a conceptual framework to a study of information among janitors. *RQ*, *29*, 355–368.

Chatman, E. A. (1992). *The Information World of Retired Women*. Greenwood Press.

Chatman, E. A. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, *47*(3), 193–206.

Choo, C. W. (2017). Seeking and avoiding information in a risky world. *Information Research: An International Electronic Journal*, *22*(3).

Clay, S. (2024). Danger, desire, and disclosure: A postqualitative trauma-informed approach to the ethics of secrets and emotion in qualitative research. *Qualitative Inquiry*, 10778004241260640.

Coleman, R. (2017). A sensory sociology of the future: Affect, hope and inventive methodologies. *The Sociological Review*, *65*(3), 525–543.

Dalmer, N. K., & Huvila, I. (2020). Conceptualizing information work for health contexts in Library and Information Science. *Journal of Documentation*, *76*(1), 96–108.

Dervin, B., & Nilan, M. (1986). Information needs and uses. *Annual Review of Information Science and Technology*, *21*, 3–33.

Douglas, M., & Wildavsky, A. (1982). *Risk and culture: An essay on the selection of technological and environmental dangers*. University of California Press.

Ettarh, F. (2018). Vocational awe and librarianship: The lies we tell ourselves. *In the library with the lead pipe*. Retrieved from http://www.inthelibrarywiththeleadpipe.org/2018/vocational-awe/

Fitzgibbon, A. (2021). Just because you can, doesn't mean you should. In H. Kara & S. Khoo (Eds.), *Qualitative and digital research in times of crisis: Methods, reflexivity, and ethics* (pp. 17–29). Policy Press.

Frith, H. (2018). *Exploring the meaning of orgasmic absence using the story completion method*. Sage research methods cases. SAGE Publications.

Galvan, A. (2015). Soliciting performance, hiding bias: Whiteness and librarianship. *In the library with the lead pipe*. Retrieved from https://www.inthelibrarywiththeleadpipe.org/2015/soliciting-performance-hiding-bias-whiteness-and-librarianship/

Gibson, A. N. (2019). Civility and structural precarity for faculty of color in LIS. *Journal of Education for Library and Information Science*, *60*(3), 215–222.

Gibson, A. N., Hughes-Hassell, S., & Bowen, K. (2021). Navigating 'danger zones': Social geographies of risk and safety in teens and tweens of color information seeking. *Information, Communication & Society*, 1–18.

Griffin, R. J., Dunwoody, S., & Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. *Environmental Research*, *80*(2), S230–S245.

Guggenheim, M., Kräftner, B., & Kröll, J. (2017). Creating idiotic speculators: Disaster cosmopolitics in the sandbox. In A. Wilkie, M. Savransky, & M. Rosengarten (Eds.), *Speculative research: The lure of possible futures* (pp. 145–162). Taylor & Francis.

Gustafson, P. E. (1998). Gender differences in risk perception: Theoretical and methodological perspectives. *Risk Analysis*, *18*(6), 805–811.

Haider, J., & Sundin, O. (2021). Information literacy as a site for anticipation: Temporal tactics for infrastructural meaning-making and algo-rhythm awareness. *Journal of Documentation*, *78*(1), 129–143.

Hawkes, G., Houghton, J., & Rowe, G. (2009). Risk and worry in everyday life: Comparing diaries and interviews as tools in risk perception research. *Health, Risk & Society*, *11*(3), 209–230.

Hawkes, G., & Rowe, G. (2008). A characterisation of the methodology of qualitative research on the nature of perceived risk: Trends and omissions. *Journal of Risk Research*, *11*(5), 617–643.

Heidenstrøm, N. (2020). Informal household preparedness: Methodological approaches to everyday practices. *Journal of Risk Research*, *23*(3), 379–397.

Heinbach C., Mitola R. & Rinto E. (2021). *Dismantling deficit thinking in academic libraries: Theory, reflection and action*. Library Juice Press.

Henwood, K., Pidgeon, N., Parkhill, K., & Simmons, P. (2011). Researching risk: Narrative, biography, subjectivity. *Historical Social Research/Historische Sozialforschung*, *36*(4), 251–272.

Henwood, K., Pidgeon, N., Sarre, S., Simmons, P., & Smith, N. (2008). Risk, framing and everyday life: Epistemological and methodological reflections from three sociocultural projects. *Health, Risk & Society*, *10*(5), 421–438.

Hicks, A. (2018). Developing the methodological toolbox for information literacy research: Grounded theory and visual research methods. *Library & Information Science Research*, *40*(3–4), 194–200.

Hicks, A., & Lloyd, A. (2018). Seeing information: Visual methods as entry points to information practices. *Journal of Librarianship and Information Science*, *50*(3), 229–238.

Hopkins, R. (2020) *From what is to what if*. Chelsea Green Publishing.

Hunt, P. (1981). Settling accounts with the parasite people: A critique of "A Life Apart" by E.J. Miller and G. V. Gwynn. *Disability Challenge*, *1*, 37–50.

Huurne, E. T., & Gutteling, J. (2008). Information needs and risk perception as predictors of risk information seeking. *Journal of Risk Research*, *11*(7), 847–862.

Ivinson, G., & Renold, E. (2013). Subjectivity, affect and place: Thinking with Deleuze and Guattari's body without organs to explore a young girl's becomings in a post-industrial locale. *Subjectivity*, *6*, 369–390.

Jenkins, C. L., Sykes, S., & Wills, J. (2022). Public libraries as supportive environments for children's development of critical health literacy. *International Journal of Environmental Research and Public Health*, *19*(19).

Jessee, E. (2019). Managing danger in oral historical fieldwork. *The Oral History Review*, *44*(2), 322–347.

Jones, P., & Evans, J. (2012). Rescue geography: Place making, affect and regeneration. *Urban Studies*, *49*(11), 2315–2330.

Kahlor, L. (2010). PRISM: A planned risk information seeking model. *Health Communication*, *25*(4), 345–356.

Kiyimba, N., & O'Reilly, M. (2016). The risk of secondary traumatic stress in the qualitative transcription process: A research note. *Qualitative Research*, *16*(4), 468–476.

Kusenbach, M. (2003). Street phenomenology: The go-along as ethnographic research tool. *Ethnography*, *4*(3), 455–485.

Lather, P (2013) Methodology-21: What do we do in the afterward? *International Journal of Qualitative Studies in Education*, *26*(6): 634–645.

Lloyd, A. (2014). Following the red thread of information in information literacy research: Recovering local knowledge through interview to the double. *Library & Information Science Research*, *36*(2), 99–105.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: the unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation*, *77*(5), 1052–1072.

Loyer, J. (2018). Indigenous information literacy: Nêhiyaw kinship enabling self-care in research. In K. Nicholson & M. Seale (Eds.), *The politics of theory and the practice of critical Librarianship* (pp. 145–156). Library Juice Press.

Lumsden, K. (2013). Survival of the fastest: Ethical dilemmas in research with 'boy racers'. *Young*, *21*(3), 273–288.

Lupton, D. (1993). Risk as moral danger: The social and political functions of risk discourse in public health. *International Journal of Health Services*, *23*(3), 425–435.

Lupton, D. (2013). Risk and emotion: Towards an alternative theoretical perspective. *Health, Risk & Society*, *15*(8), 634–647.

Lupton, D. (2020). *The story completion method and more-than-human theory: Finding and using health information*. Sage research methods cases. SAGE.

Lury, C. & Wakeford, N. (2012). Introduction: A perpetual inventory. In C. Lury & N. Wakeford (Eds.), *Inventive methods*: *The happening of the social* (pp. 1–24). Routledge.

Lyon, D., & Carabelli, G. (2016). Researching young people's orientations to the future: The methodological challenges of using arts practice. *Qualitative Research*, *16*(4), 430–445.

Massanari, A. L. (2018). Rethinking research ethics, power, and the risk of visibility in the era of the "alt-right" gaze. *Social Media+ Society*, *4*(2).

McKenzie, P. J., & Dalmer, N. K. (2020). "This is really interesting. I never even thought about this." Methodological strategies for studying invisible information work. *Nordic Journal of Library and Information Studies*, *1*(2), 1–17.

Mitchell, C., Moletsane, R., & Daryanani, D. (2022). The ethics of risk research in the time of COVID-19: Ethnography at a distance in privileging the well-being of girls and young women in the context of gender-based violence in rural South Africa. In P. Brown & J. Zinn (Eds.), *Covid-19 and the sociology of risk and uncertainty: Studies of social phenomena and social theory across 6 continents* (pp. 295–321). Springer International Publishing.

Moncur, W. (2013, April). The emotional wellbeing of researchers: Considerations for practice. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1883–1890).

Nara, Y. (2007). Information literacy and everyday life risks. In *Knowledge-Based Intelligent Information and Engineering Systems: 11th International Conference, KES 2007, XVII Italian Workshop on Neural Networks, Vietri sul Mare, Italy, September 12–14, 2007. Proceedings, Part II 11* (pp. 942–949). Springer.

Nicolini, D. (2009). Articulating practice through the interview to the double. *Management Learning*, *40*(2), 195–212.

Olson, R. E. (2021). Emotions in human research ethics guidelines: Beyond risk, harm and pathology. *Qualitative Research*, *23*(3), 526–544.

Pilerot, O. (2014). Making design researchers' information sharing visible through material objects. *Journal of the Association for Information Science and Technology*, *65*(10), 2006–2016.

Rosenblatt, P. C. (1995). Ethics of qualitative interviewing with grieving families. *Death Studies*, *19*, 139–155.

Ross, J. (2022). *Digital futures for learning: Speculative methods and pedagogies*. Taylor & Francis.

Sabar, G., & Sabar Ben-Yehoshua, N. (2017). 'I'll sue you if you publish my wife's interview': Ethical dilemmas in qualitative research based on life stories. *Qualitative Research*, *17*(4), 408–423.

Saitta, P. (2012). History, space, and power: Theoretical and methodological problems in the research on areas at (industrial) risk. *Journal of Risk Research*, *15*(10), 1299–1317.

Schlesselman-Tarango, G. (2016). The legacy of Lady Bountiful: White women in the library. *Library Trends*, *64*(4), 667–686.

Smith, N., Cebulla, A., Cox, L., & Davis, A. (2006). Risk perception and the presentation of self: Reflections from fieldwork on risk. *Forum: Qualitative Social Research*, *7*(1).

Springgay, S., & Truman, S. E. (2017). *Walking methodologies in a more-than-human world: Walking lab*. Routledge.

Springgay, S., & Truman, S. E. (2019). Counterfuturisms and speculative temporalities: Walking research-creation in school. *International Journal of Qualitative Studies in Education*, *32*(6), 547–559.

Stallings, R. (1990). Media discourse and the social construction of risk. *Social Problems*, *37*(1), 80–95.

Strong, L. H. (2021). Shifting focus: Interviewers share advice on protecting themselves from harm. *The Oral History Review*, *48*(2), 196–215.

Suchman, L. (1995). Making work visible. *Communications of the ACM*, *38*(9), 56–64. doi:10.1145/223248.223263

Thompson, A. R., & Chambers, E. (2012). Ethical issues in qualitative mental health research. In D. Harper & A. Thompson (Eds.), *Qualitative research methods in mental health and psychotherapy* (pp. 23–37). John Wiley & Sons.

Wall, E. (2016). Visualizing risk: Using participatory photography to explore individuals' sense-making of risk. *Journal of Risk Research*, *19*(3), 347–363.

Wilkie, A., Savransky, M., & Rosengarten, M. (Eds.). (2017). *Speculative research: The lure of possible futures*. Taylor & Francis.

Wordsworth, R., Hall, C. M., Prayag, G., & Malinen, S. (2021). Critical perspectives on disaster and crisis research: Revealing and responding to vulnerability. In A. Hill, J. Lê, A. McKenny, P. O'Kane, S. Paroutis, & A. Smith (Eds.), *Research in times of crisis* (pp. 75–97). Emerald Publishing Limited.

Wynne, B. (1996). May the sheep safely graze? A reflexive view of the expert-lay knowledge divide. *Risk, Environment and Modernity: Towards a New Ecology*, *40*, 44–83.

Yang, Z. J., Aloe, A. M. & Feeley, T. H. (2014). Risk information seeking and processing model: A meta analysis. *Journal of Communication Mediated by Computers*, *64*(1), 120–141.

Zinn, J. O. (2008). Heading into the unknown: Everyday strategies for managing risk and uncertainty. *Health, Risk & Society*, *10*(5), 439–450.

Zinn, J. O., & Brown, P. R. (2022). COVID-19 risks: Dynamics of culture and inequality across six continents. In P. Brown & J. Zinn (Eds.), *Covid-19 and the Sociology of Risk and Uncertainty: Studies of Social Phenomena and Social Theory Across 6 Continents* (pp. 1–26). Springer International Publishing.

8

THE CONTRIBUTIONS AND FUTURE FOR RISK-INFORMED INFORMATION PRACTICE

The contributions and future of risk-informed information practice

In a world that is marked by uncertainty, risk-informed information practice forms a powerful concept that has the potential to unlock how we theorise, research and teach for an informed understanding of risk. Emerging from the premise that risk research has not paid enough attention to information literacy, or how people come to know, and that information research has not sufficiently engaged with the risks that underpin activity within a setting, risk-informed information practice provides a rich definition and conceptual framework for considering the relationship between risk and information. Repositioning risk as a disruption that calls for the reconstruction of knowledge, this definition and conceptual framework centres the information strategies that give access to a risk information environment as well as the sociocultural conditions that shape how these various forms of knowledge are known. In further framing risk responses as the reconfiguration of participation within a setting, the definition and conceptual framework also foregrounds transformative change or the shifts in identity that are precipitated through the development of situated expertise. Creating a dynamic conceptualisation of the interplay between people, risk and information, risk-informed information practice offers a novel theoretical, methodological and practical approach for considering risk responses. The contributions of this definition and conceptual framework as well as future research directions form the basis of this final concluding chapter. Starting by exploring the contributions that risk-informed information practice makes to risk and information literacy, the chapter ends by outlining directions for future areas of study as well as the implications of this work for practice.

DOI: 10.4324/9781032719627-8

The contributions of risk-informed information practice

Risk

One of the original premises of this book was to highlight and interrogate the rich informational thread that lies underneath the surface of risk research. Borne out of frustration with the field's continued reliance on well-known but limited risk information seeking models, risk-informed information practice was further influenced by sensitivity about the frequent relegation of information to the sidelines of risk research, despite the potential that topics such as experiential knowledge (Baillergeau & Duyvendak, 2016) have to fundamentally challenge preconceptions of how risk is informed. The growth of the sociocultural turn within risk research, coupled with the resurgence of problematic assumptions about risk information interactions during the COVID-19 pandemic (e.g., Dodsworth et al., 2024), provided additional motivation for this research. One of the first contributions of risk-informed information practice, therefore, is to demonstrate the importance of explicitly foregrounding the role that information literacy and related concepts such as knowledge and knowing play within risk responses. Creating the time and space to peel back widely accepted assumptions about how information shapes and plays out within risk interactions, this deep dive into what it means to be informed also draws attention to new concerns within risk research, including related to what counts as risk knowledge and how this knowledge frames our understanding of a risk situation. Opening research up to a more nuanced consideration of informed ways of knowing, the acknowledgement that these knowledge structures are shaped by social and cultural processes means that risk-informed information practice also supports the sociocultural turn within risk research.

Another important contribution that risk-informed information practice makes to risk research is the introduction of new core conceptual themes to considerations of how risk is informed. The establishment of transition as a framing device for risk responses, for example, foregrounds questions of adjustment within risk research, including by highlighting both the discontinuities that risk creates and how people reconstruct knowing when things of value are at stake. The emphasis that transition places on how human development happens also means that risk-informed information practice extends interest in subjectivity (e.g., Lupton, 2013) through spotlighting how changes in being unfold as well as the important role that material tools play in organising these endeavours. Importantly, the positioning of understanding as a key dimension of risk means that risk-informed information practice further institutes a more nuanced consideration of how people come to know within risk research. In framing risk responses as the negotiation of meaning rather than a quantitative increase in knowledge, risk-informed information practice signals the importance of continuing to explore the vital role that know-how

plays within the construction of risk knowledge, including the need for the body to become oriented to danger. The defining of risk-informed information practice as a knowing of risk further instigates the means to circumvent long-standing debates about the authority of knowledge by associating risk responses with the development of situated expertise rather than binary considerations of lay or expert judgement.

Risk-informed information practice also extends risk research methodologically through broadening the typical scope and design of risk research. More expressly, the emphasis that the case studies that have informed risk-informed information practice place on scenarios that are not typically patterned by best practices and professional advice, such as book-banning and language-learning, extends risk research by considering how information interactions unfold outside of lay-expert dynamics. The references to workplace and academic settings means that risk-informed information practice further supplements the potential scope of risk research through drawing attention to the important role that the stakes of action play within everyday enterprise as well as more typical health and disaster scenarios. Risk research is additionally augmented through the emphasis that risk-informed information practice places upon methodological concerns. Noting that traditional risk research methods may either obscure or inhibit access to how risk knowing unfolds, risk-informed information practice opens the risk methodological toolbox by offering a worked example of how non-traditional research methods such as photo-elicitation recover the complexity of tacit and situated activity. Suggestions of other qualitative methods that provide a way to follow how information is circulated, disseminated and shared within a specific setting offer further useful suggestions for how these important emic interpretations of practice can be accessed.

Information literacy

Beyond extending risk research, a second premise for this book was to contribute to a more robust conceptualisation of information literacy. Referencing the recent push to establish a theoretical basis for a field that continues to be positioned in terms of functional and instrumental attainment (e.g., Hicks et al., 2023), risk-informed information practice was also influenced by the relative timidity with which sociocultural ideas have been received by both researchers and practitioners to date. Along these lines, the creation of a definition and conceptual framework means that an important contribution of risk-informed information practice is to strengthen information literacy's analytical depth, including by articulating theoretical claims related to the scope, relevance and power of the phenomenon (cf. Charmaz, 2014, p. 231). Supporting work that aims to understand information literacy in abstract terms (e.g., Lloyd, 2017), the move beyond situated action extends understanding of why people develop ways of knowing as well as how they do it. In further locating

meaning and action within wider social structures, the advancement of theoretical sensitivity also continues to challenge entry points to information literacy that ignore the narratives of a social site in favour of generalised descriptions of practice (Lloyd, 2017, p. 100). As one of the first extended examinations of how information literacy unfolds, risk-informed information practice further opens the field by modelling the insights that a sociocultural lens provides, including how both research and practice need to be extricated from the dominance of teaching concerns.

Another way in which risk-informed information practice extends the field is by challenging the assumption that information literacy uniquely unfolds within the boundaries of carefully delimited communities of practice. Linked to information literacy's academic origins (and accentuated through the typical disciplinary orientation of library organisational models), the primacy that has been accorded to the information activities of distinctive disciplinary groups has been further underscored through the emphasis that workplace information literacy has put on exploring professional occupations. However, in describing what a constructivist grounded theory methodology refers to as the basic social processes that are happening within a specific situation (Charmaz, 2014, p. 34), risk-informed information practice develops both the scope and reach of information literacy by replacing the typical focus on activity within the confines of a specific professional or academic identity with a far more dynamic consideration of what constitutes a setting for practice. Drawing attention to the need to foreground emerging settings and situations within information literacy research as well as more bounded groupings, the emphasis on risk, which doesn't always fit a neat workplace, health or academic framing, opens the field up to less rigid understandings of the contextual and situated shape of information literacy. The assumption of process rather than continuity (cf. Charmaz, 2014, p. 266) means that a further contribution of this research is to underscore the use of transition as a useful framing device for understanding information interactions that straddle definitional limits and boundaries.

Risk-informed information practice additionally supports the ongoing theorisation of information literacy through examining how risk theory informs empirical work in the field. The somewhat slow adoption of social theory within information literacy research means that one way in which risk-informed information practice extends the field is through adding risk theory to the "palette" of theoretical approaches that have been employed to conceptualise the development of knowing to date (Hicks et al., 2023, p. xv). More specifically, the emphasis that risk theory places on cultural norms and values means that another contribution of risk-informed information practice is to develop understanding about the dialogic and relational shape of information literacy; in positioning risk knowledge as shaped in relation to considerations about the impact of an event on "mutual obligations and expectations" (Lupton, 2013,

p. 54), risk theory extends information literacy by shedding light on how and why specific forms of knowledge are legitimised within a setting. Reinforcing the situated shape of knowing through illustrating how risk responses are shaped in relation to shared experiences of loss and harm (Douglas, 1985, p. 69), the emphasis that risk theory places on the social stakes of action additionally supports information literacy's sociocultural turn by attributing differences in information use to cultural values rather than a "weakness of understanding" (Douglas, 1992, p. 103). The repositioning of risk in terms of threats to social integrity means that a further contribution that risk theory makes to risk-informed information practice is to connect the development of knowing with ethical and moral questions about how decisions about the acceptability of knowledge get made.

The future of risk-informed information practice

The emerging shape of risk-informed information practice gives rise to numerous avenues for future research. Each of the case study chapters has already made suggestions for how research into specific dimensions of risk could be extended, with recommendations ranging from the need to consider situations in which risk perception is linked to small-scale or contested forms of risk (Chapter 3), the importance of exploring missing voices and labour considerations in risk understanding research (Chapter 4), and the value of looking at responsibility as well as information-solutionism within considerations of risk management (Chapter 5). However, the identification of the critical features of risk-informed information practice within Chapter 6 as well as the creation of an emerging definition and conceptual framework point to the need to consider future research angles more broadly, too. The importance of future research is also implied by the constructivist grounded theory methods that underpin the empirical work upon which risk-informed information practice is based; as Charmaz (2014, p. 244) points out, theoretical sensitivity is shaped through making comparisons, building on ideas and looking at a phenomenon from multiple vantage points. Future research provides a way to both "transport" and "test" risk-informed information practice's emerging theoretical conceptualisation in other empirical contexts as well as to continue developing understanding about the conditions and structures that shape how it unfolds and is reproduced (cf. Charmaz, 2014, p. 255).

One important area of future research for risk-informed information practice relates to the concept of care, which refers to "everything that we do to maintain, continue, and repair our 'world' so that we can live it in as well as possible" (Fisher & Tronto, 1990, p. 40). While care has previously been linked to professional work, including the activities of librarians (e.g., Arellano Douglas, 2020; Eckerdal et al., 2024) and risk workers (e.g., Brown & Gale, 2018), the concept remains somewhat distanced from considerations of how

people develop knowing within everyday risk situations. However, the recognition that people actively refrained from sharing information about the COVID-19 pandemic out of concern for the wellbeing of loved ones hints at how the development of risk knowledge is tied up with what Tronto (2015, p. 107) refers to as "caring about" and "taking care of" others. And, while care may be defined as going beyond the self (Tronto, 2015, p. 102), the emphasis that language-learners placed on the creation of support networks as well as the need to temporarily distance themselves from new information environments provide a further indication of how risk-informed information practice is tied up with caring ends. Introducing a focus on the information resources needed to support others' needs, the lens of care also has the potential to develop more complex understandings about the relational shape of information literacy, including by further complicating how social modalities of information constrain and enable access to knowledge. The work that care does to challenge the "self-made" (cf. Tronto, 2015, p. 111) individual rationalism that continues to tinge both information literacy and risk raises additional questions about the impact that the labour of care has upon the development of risk knowing.

A second area of future research for risk-informed information practice emerges through the exploration of book banning and censorship in Chapter 5. As the introduction to that chapter points out, a focus on tangible and intangible assets means that cultural heritage work is often seen to be somewhat removed from the critical or time-sensitive dangers of risk. Yet, as moral panic related to gender and sexuality continues to infect the UK, amongst other nations (Amery & Mondon, 2024), the cultural heritage sector has found itself at the epicentre of risk work with previously routine aspects of professional roles becoming exposed to scrutiny and interrogation. Concern that cultural heritage workers are not adequately supported in these changes to working circumstances means that an important angle for future research is to interrogate both the positioning and the implications of categorising school library workers, amongst other cultural heritage professionals, as risk workers. Introducing practical questions related to the preparedness of these workers to deal with the ontological shift that is involved with "assessing, intervening, advising and/or communicating" (Brown & Gale, 2018, p. 2) risk to others, the reframing of these roles also raises concerns about the corresponding impact on agency and identity, particularly given the limitations of statutory regulation. A lack of engagement with questions of knowing within current risk work frameworks (e.g., Brown & Gale, 2018) means that a related area for future research is to examine the role that information plays in shaping how risk work "gets done" (Horlick-Jones, 2005).

A final area for future research concerns the more controversial side of risk and information research, which is a consideration of how information literacy supports the perception, understanding and management of risks that threaten to either challenge or disrupt established socio-democratic order. Information literacy research has only just started to grapple with the impact of

unorthodox or subversive information activity, including through proposals to double down on normative ideals (see Hicks, 2024). However, the recognition that the difference that information makes can be antagonistic as well as harmonious indicates the need for research that explores the role that information plays when the stakes of action, or what humans value, support anti-social aims. Contentious forms of risk have only played a small part within the case studies that have formed the basis for risk-informed information practice, but the recognition that *observing* helped one participant to bring what they perceived as the risks of 5G telephone masks into view, which formed a common COVID-19 conspiracy theory, provides a visible indication of the need to explore this line of research further. The emphasis that the risk understanding case study places on missing voices also suggests a need to examine the impact that conflicting conceptions of risk have upon risk-informed information practice, including, for example, how the information activities of organisations advocating for book-bans contribute to the creation of conditions that shape how school library workers develop risk knowledge, and vice versa.

Challenges for risk-informed information practice

Reflection on the conceptual contributions of risk-informed information practice as well as the future areas of research that are listed above provide a clear demonstration of the value of putting risk and information literacy in dialogue. While there are evident flaws and inconsistencies in both fields of study, risk-informed information practice plays an important role in advancing the sociocultural turn of each body of research as well as introducing a range of new themes and focal points of interest. In counterbalance, Chapter 5 reflected on the challenges of exploring risk through an information lens, which include the potential to reduce physical, material and emotional support for people in need, and Chapter 7 has further considered the impact that risk research might have upon the researcher. Along these lines, it is also important to consider what is gained and lost through a focus on risk- both for information research and the broader field of risk. One particular concern relates to what Mythen (2008, p. 314) refers to as "risk imperialism" in which "pressing" issues may be missed through a fixation on hazard. Disquiet is also raised about how risks become prioritised, particularly at policy level, and how risk might be invoked to justify and persuade controversial forms of decision-making. Providing a reminder of how a focus on risk might obscure other important themes within information research, including the creative and the pleasurable (e.g., Kari & Hartel, 2007), risk imperialism further warns that the employment of a risk lens may also inadvertently contribute to perpetuating models of governance that rely on restrictive or damaging risk rationalities.

Another challenge for risk-informed information practice relates to the forms of evidence on which risk decision-making is predicated. Gibson's (2023,

p. 257) research into the COVID-19 pandemic, which was explored in Chapter 3, has already drawn attention to the "homogenous, normative assumptions" that are uncritically embedded within public health risk messaging including related to housing, employment, disability and income. While risk research has started to push for a more detailed examination of what constitutes "useful" risk information within different cultural contexts (Zinn, 2016, p. 349), it is clear that there is an ongoing need to grapple with the ways in which "the evidence-making" of risk is done (cf. Lancaster & Rhodes, 2023, p. 4) or how risk information is produced as well as how it is brought to bear on a situation. Beyond concerns about how speed impacts the forms of risk advice that are made visible to people, which is explored in Chapter 6, care must also be paid to how a lens of risk may foreclose its "long-enduring temporalities", including how risk is shaped incrementally and in relation to endemic cycles rather than uniquely being immediate in time (Lancaster & Rhodes, 2023, p. 5). These considerations, which have implications for questions of preparedness as well as the spatiality of risk expertise, provide a reminder of the need to remain alert to the logic and assumptions of risk evidence-making.

Implications for practice

Given that the risk and information fields have strong practical or applied dimensions, it is also important to consider the implications of risk-informed information practice for practitioners who work in the risk and information professions. Engagement with theoretical ideas as well as the opportunity to reflect with scholars who are engaged in similar metatheoretical deliberation and research design has been vital for the development of risk-informed information practice. However, the impossibility of separating theory from practice provides a reminder that practical issues and challenges are also integral to the conceptualisation of risk-informed information practice. A consideration of the practical implications of risk-informed information practice are also vital given the key role that risk and information play within governmental, health and other forms of policy-making. In considering the impact that risk-informed information practice has on practice this section moves beyond the individual cases studied in Chapters 3–5 to make suggestions for how risk and information literacy practitioners might draw upon the overarching themes and ideas presented in this book (see Lloyd & Hicks, 2021, 2022; Hicks, 2018 for specific recommendations related to the COVID-19 pandemic and language learning respectively). At the same time, the recognition that practitioner expertise is borne of hands-on experience in a field means that these suggestions form jumping off points for further discussion.

Risk messaging forms one obvious area where risk-informed information practice contributes to practice. Considerable attention has been paid to how risk communication could be improved, from examining cognitive variables

that are perceived to impede the transmission of expert advice to how lay knowledge might be integrated into messaging. However, in repositioning risk responses as complex transitional periods in which people are forced to develop new ways of knowing, risk-informed information practice grants the possibility of creating even more responsive forms of risk communication, including through acknowledging how risk knowledge is shaped in relation to a loss of normality as well as the reconstruction of situated expertise. Introducing a focus on the spatio-temporal organisation of risk responses, the centring of learning means that risk-informed information practice also allows for a foregrounding of bodily and material interaction within the design of risk messaging rather than more rational forms of interaction. The establishment of a pedagogical focus to risk communication is particularly important given that the use of fear messaging during the COVID-19 pandemic was seen to cost engagement with relevant information (Dodsworth et al., 2024, p. 3). A reliance on 'nudges' that fail to recognise "rights to autonomy and self-determination" was seen to be equally counterproductive while further contravening ethical guidelines for interventions (Dodsworth et al., 2024, p. 3). In referencing how people come to know, risk-informed information practice supports efforts to challenge these risk communication strategies by reinforcing the need to recognise how people stay safe as well as the resources that they use to do so (cf. Reicher et al., 2023).

Information literacy instruction forms another area where risk-informed information practice contributes to practice, particularly regarding the concept of trust. The introduction of cognitive authority in Chapter 5, which provides a structure for thinking about how people ascribe credibility to information sources, forms one concrete approach that might be helpful for reconsidering the teaching of information evaluation. However, Chatman's (1996, p. 197) statement that risk information sharing is predicated on people who prove themselves to be "worthy of belief" provides a useful reminder that the onus for ascertaining trust does not just lie with personal responsibility. Instead, the recognition that institutions also evoke credibility illustrates that trust is also predicated upon the existence of structural features that reinforce the transparency of institutional information sources, such as date stamps or a clear indication of edits and updates. In other words, trust is earnt and not assumed. These considerations, which most memorably surfaced through concerns about a digitally enhanced royal photo (BBC, 2024), indicate that risk-informed information practice questions the shape of information literacy instruction, including whether continuing to drill learners in traditional assessment techniques imbues people with a false sense of confidence (Bulger & Davison, 2018) in their ability to manage opaque information structures. Concern that the flourishing of mis- and dis-information was linked to the decision to withhold official information during the UK's 2024 Southport riots (Gardham, 2024) poses a similar challenge for risk communication.

Support for risk work forms a final way in which risk-informed information practice contributes to and shapes professional endeavours. The long-standing emphasis that both risk and information research has placed on lay perspectives makes it easy to assume that there has been a corresponding acceptance of the many ways in which risk knowledge is built amongst risk workers. However, evidence that medical staff, alongside other professionals, routinely continue to ignore or disparage patient testimonials indicates that this is far from being the case (Dhairyawan, 2024). Research is replete, for example, with situations in which pain and other embodied forms of risk information are ignored by clinical teams, particularly for what are seen to form less "prestigious" diseases such as chronic illness and suspected self-inflicted injuries as well as issues that affect women, patients of colour or the elderly (Album et al., 2017). In turn, this silencing perpetuates knowledge gaps by ensuring the continued exclusion of said conditions from medical curricula as well as other forms of research, knowledge and practice (Dhairyawan, 2024). In highlighting the limitations of relying on epistemic forms of risk information, including by drawing attention to "differences" (Bateson, 1972, p. 459) that are only accessible through social relationships, material objects and the body, risk-informed information practice contributes to ongoing attempts to challenge these approaches to risk work by underscoring the physical and emotional impact of risk interaction. The broadening of evidence for what is 'at stake' means that risk-informed information practice further encourages a more reflexive consideration of the messiness of risk work or the need for humanity within considerations of objectivity.

Next steps for research and practice

This chapter has considered the contributions that risk-informed information practice makes to research and practice as well as indicating future research directions. As one of the first extended studies of information literacy, risk-informed information practice unpacks entrenched assumptions about how people come to know alongside introducing new considerations about the power and scope of risk evidence-making. The foregrounding of risk's informational thread further draws attention to the implications that this new definition and conceptual framework has for practical engagement with risk infrastructure and activity.

References

Album, D., Johannessen, L. E., & Rasmussen, E. B. (2017). Stability and change in disease prestige: A comparative analysis of three surveys spanning a quarter of a century. *Social Science & Medicine*, *180*, 45–51.

Amery, F., & Mondon, A. (2024). Othering, peaking, populism and moral panics: The reactionary strategies of organised transphobia. *The Sociological Review*, 003802 61241242283.

Arellano Douglas, V. (2020). Moving from critical assessment to assessment as care. *Communications in Information Literacy*, *14*(1), 46–65.

Baillergeau, E., & Duyvendak, J. W. (2016). Experiential knowledge as a resource for coping with uncertainty: evidence and examples from the Netherlands. *Health, Risk & Society*, *18*(7–8), 407–426.

Bateson, G. (1972). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. University of Chicago Press.

BBC. (2024, 11 March). Princess of Wales: How might have Kate's photo been altered? https://www.bbc.co.uk/news/uk-68534289

Brown, P., & Gale, N. (2018). Theorising risk work: Analysing professionals' lifeworlds and practices. *Professions and Professionalism*, *8*(1), e1988.

Bulger, M., & Davison, P. (2018). The promises, challenges, and futures of media literacy. *Journal of Media Literacy Education*, *10*(1), 1–21.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.

Chatman, E. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, *47*(3), 193–206.

Dhairyawan, R. (2024). *Unheard: The medical practice of silencing*. Trapeze.

Dodsworth, L., Ahearne, G., Dingwall, R., Easthope, L., Riordan, M., & Townsend, E. (2024). The three Rs of fear messaging in a global pandemic: Recommendations, ramifications and remediation. *Clinical Psychology & Psychotherapy*, *31*(2), e2972.

Douglas, M. (1985). *Risk acceptability according to the social sciences*. Routledge & Kegan Paul.

Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. Routledge.

Eckerdal, J. R., Engström, L., Färber, A., Hamm, M., Kofi, J., Landau-Donnelly, F., & Van Melik, R. (2024). Social infrastructuring in public libraries: Librarians' continuous care in everyday library practice. *Journal of Documentation*, *80*(7), 206–225.

Fisher, B., & Tronto, J. (1990). Toward a feminist theory of caring. In: K. Abel & M. K. Nelson (Eds.), *Circles of care: Work and identity in women's lives* (pp. 35–62). State University of New York Press.

Gardham, D. (2024, 9 September). Riots 'show why public must be told more about riot terror attacks'. *The Times*. https://www.thetimes.com/uk/crime/article/riots-show-why-public-must-be-told-more-about-mass-terror-attacks-jclxtcdjn

Gibson, A. N. (2023). The problem with "most people": Racism and ableism in US COVID-19 public health communication. *The Annals of the American Academy of Political and Social Science*, *707*(1), 256–265.

Hicks, A. (2018). *The theory of mitigating risk: Information literacy and language-learning in transition* (Doctoral dissertation, Högskolan i Borås, Sweden).

Hicks, A. (2024). The negative spaces of information literacy: An alternative research agenda. *Journal of Information Literacy*, *18*(1), 123–129.

Hicks, A., Lloyd, A., & Pilerot, O. (Eds.). (2023). *Information literacy through theory*. Facet.

Horlick-Jones, T. (2005). On "risk work": Professional discourse, accountability, and everyday action. *Health, Risk & Society*, *7*(3), 293–307.

Kari, J., & Hartel, J. (2007). Information and higher things in life: Addressing the pleasurable and the profound in information science. *Journal of the American Society for Information Science and Technology*, *58*(8), 1131–1147.

Lancaster, K., & Rhodes, T. (2023). Problematising the emergence of outbreak science in the governance of global health: Making time for slow dis-ease. *Critical Public Health*, *33*(5), 838–847.

Lloyd, A. (2017). Information literacy and literacies of information: A mid-range theory and model. *Journal of Information Literacy*, *11*(1), 91–105.

Lloyd, A., & Hicks, A. (2021). Contextualising risk: The unfolding information work and practices of people during the COVID-19 pandemic. *Journal of Documentation* 77(5), 1052–1072.

Lloyd, A., & Hicks, A. (2022). Saturation, acceleration and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19-environments. *Journal of Documentation*, *78*(5), 1008–1026.

Lupton, D. (2013). *Risk*. Routledge.

Mythen, G. (2008). Sociology and the art of risk. *Sociology Compass*, *2*(1), 299–316.

Reicher, S., Drury, J., Michie, S., & West, R. (2023). The UK government's attempt to frighten people into COVID protective behaviours was at odds with its scientific advice. *BMJ*, *380*(652). doi:10.1136/bmj.p652

Tronto, J. C. (2015). *Moral boundaries: A political argument for an ethic of care*. Routledge.

Zinn, J. (2016). 'In-between' and other reasonable ways to deal with risk and uncertainty: A review article. *Health, Risk & Society*, *18*(7–8), 348–366.

INDEX

Pages in *italics* refer to figures and in **bold** refer to tables.