

Absencing/presencing risk: Rethinking proximity and the experience of living with major technological hazards

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Rethinking proximity and the experience of risk: accounting for absence / presence

Abstract

There is now a substantial body of sociocultural research that has investigated the ways in which specific communities living in physical proximity with a variety of polluting or hazardous technological installations experience and respond to their exposure to the associated risk. Much of this research has sought to understand the apparent acceptance or acquiescence displayed by local populations towards established hazards of the kind that are typically resisted when the subject of siting proposals. However, recent theoretical contributions, produced largely outside the field of risk research, have problematised the objective distinction between proximity and distance. In this paper we explore the potential of some of these ideas for furthering our understanding of the relationship between place and the constitution of risk subjectivities. To do this we re-examine a number of existing sociocultural studies that are predicated on a localised approach and conceptualise the relationship of physically proximate sources of risk to everyday experience in terms of practices of 'presencing' and 'absencing'. We conclude with some thoughts on the methodological and substantive implications of this reworking of proximity for future research into risk subjectivities.

Keywords: risk, proximity, everyday experience, practices, presence, absence

Introduction

Risk has been identified as a defining characteristic of contemporary society, an assemblage of discourses and practices that in a variety of ways shape not only the world within which we live but also how we make sense of our experience. This raises many issues for research but the broad question that concerns us here is how people experience and deal with risk, and specifically with hazardous technological facilities and structures, as a feature of their everyday lives. A now substantial literature, focusing on a variety of hazards in particular local contexts, has attempted to answer this question, examining how individuals and groups within society make sense of and cope with risk. Related work has emerged in several disciplinary fields,

ranging from cognitive psychology to social anthropology, but each beginning from very different theoretical and epistemological assumptions.¹

This paper is concerned with one specific strand of research that applies what Lupton (1999a) describes as a sociocultural perspective – one centring on the everyday social worlds and contexts through which risks are experienced and negotiated - to the study of situated technological hazards. In particular, we focus on studies relating to industrial and nuclear facilities, examples where an established body of socio-cultural work exists. Influenced initially by the social anthropology of Mary Douglas (1966), this body of work has developed to address a wide range of cultural processes or factors that influence risk perceptions and responses, all sharing the view that cultural assumptions across social groups are critical to understanding risk and, importantly, how we deal with it (Taylor-Gooby and Zinn, 2006; Lash et al, 1996; Lupton, 1999a; Lupton, 1999b; Beck, 1992; Pidgeon et al, 1992, Petts et al 2001). Several commentators have, however, suggested that an analytical lens that sees people's experience of risk as shaped by general cultural dispositions may direct attention away from specific, often local cultures and understandings which inform risk responses (Lupton, 1999a; Wynne, 1996; Baxter and Greenlaw, 2005).

In response both to the methodological assumptions of cognitive approaches and to the social generalisations of deductive theoretical approaches such as Douglas's, as well as to the deficit model of public (mis)understanding of risk issues that has informed much official thinking, there has been a burgeoning of work on chronic and acute technological hazards as they affect, both materially and socially, specific communities (e.g. Irwin and Wynne, 1996; Couch and Kroll-Smith, 1991; Edelstein, 2003; Freudenburg, 1997). In broad terms these studies view risk as, at least partly, a cultural construct that is rooted in everyday experience and assessed by reference to that experience (Wakefield et al, 2001). One feature of this body of research is that, as a consequence of its community focus, it situates everyday experience of such

¹ One influential approach to risk that differs markedly from a sociocultural analysis in its epistemological and ontological commitments is that of cognitive science based in psychology (Lupton 1999a). Tversky and Kahneman (1974), for instance, offer an explanation of error in lay people's judgements in terms of cognitive bias arising from the use of heuristics. Other researchers have sought to identify patterns in the ways in which lay people assess and respond to risk by using psychometric measures of the perceived characteristics of hazards (for a review see Pidgeon et al, 1992; Slovic 2000).

technological hazards in specific places in a way that is informed by implicit - and sometimes explicit – constructions of space. For example, Fitchen et al (1987) explore the significance of community experience of chemical contamination for symbolic constructions of home, while Walker et al (1998, p13), in their account of the perceptions of communities living with major industrial accident hazards, draw upon Agnew's (1993) model of place as being constituted of locale, locality and sense of place. Embedded in many of these accounts, then, is a relationship between the physical proximity of a hazard and the experience of risk, and it is the nature of this relationship that, in this paper, we want to interrogate and reconceptualise. One important step towards doing so is to move from thinking of risk as something that is simply *experienced by* individuals and communities in specific spatial relations with a potential hazard and to follow a more recent development in sociocultural work on risk by viewing this relationship in terms of the production and reproduction of *risk subjectivities* (Lupton, 1999a; also Tulloch and Lupton, 2003; Beck, 1992). This work displays a concern with the multiple ways in which people construct risk in relation to the diverse social, institutional and spatial contexts of their everyday lives.

Risk, place and proximity: a reassessment

We can begin our argument from a number of empirical observations about the relationship between hazard proximity and risk perception. On the one hand, many researchers have documented the tendency for local populations to express concern about and resist the siting of potentially hazardous industry or other pollution sources in their communities (Boholm and Löfstedt, 2004; Lesbirel and Shaw, 2005), while people living further away often express less concern. This has in the past been explained in terms of a so-called NIMBY response, in which people reject facility siting for narrowly self-interested reasons. Latterly this notion has been subjected to critical scrutiny and the social, cultural and structural bases for the response taken more seriously – highlighting issues of trust, a lack of personal or collective agency and inequities in decision-making processes (e.g. Kemp, 1990; Burningham, 2000; Wolsink, 2006). Indeed a number of socio-cultural studies have highlighted the role of wider social relations of (dis)trust and powerlessness in accounting for (local) constructions of risk (Walker et al 1998; Petts et al 2001; Moffatt *et al*, 1999, Baxter and Greenlaw 2005, Bickerstaff 2004).

On the other hand, in an apparent inversion of this relationship, other research has found that populations living around established facilities often express less concern than people living further away (Baxter and Lee, 2004; Burningham and Thrush, 2004; Wakefield and Elliott, 2000). Although conflicts over siting have tended to receive more attention, this latter situation is equally important for what it can tell us about the facets of 'distance' that affect the apparent social acceptance of risk. For instance, Zonabend's study of the nuclear reprocessing plant at La Hague, France was motivated by the apparent indifference of the local community to the presence of the plant: "what struck me as remarkable and indeed as crying out for an explanation was the fact that people there refuse to believe in the reality of this colossal technological risk" (1993, p. 122). Several explanations have been offered to account for the phenomenon of localised acceptance. Many within industry point to familiarity and knowledge as a reason for acceptance of the presence of hazardous facilities (Walker et al, 1998, cf. Baxter and Lee 2004).² Linked to this is an explicitly economic reading of risk which views muted local concern about industrial hazards as premised on a rational cost-benefit trade-off (see Baxter and Lee 2004, also Dunlap *et al.*, 1993).

A number of studies (Bickerstaff 2004, Moffatt *et al*, 1999, Wakefield et al 2001, Baxter and Lee 2004) refer to reluctance on the part of residents to connect risks such as industrial air pollution with the local area (and sense of place), choosing instead to distance the problem geographically and socially. It has been argued that the apparent lack of concern to be found in such communities may mask anxieties that are not openly expressed for a variety of social, cultural, economic or political reasons (e.g. Giddens, 1991; Wakefield and Elliot, 2000; Wynne et al, 1993; Zonabend, 1993; Solecki, 1996; Simmons and Walker, 1999; Burningham and Thrush, 2004; Bush et al, 2001, Phillimore and Bell 2005). Whereas a lack of expressed complaint or opposition is often construed by risk managers as acceptance of the presence of a hazardous installation or activity, such 'silence' has for example been interpreted by a number of researchers as being a socio-cultural response borne of powerlessness and political-economic dependency, defending the subject's sense of ontological security and protecting them from unmanageable anxiety (Hollway and Jefferson, 1997; Wynne et al, 1993; see also Giddens, 1991).

² This would seem to be consonant with social psychological research that highlights the influence of the unknown and unfamiliar characteristics of hazards on risk perception (Slovic et al, 1980).

Although the accounts reviewed above often recognise the role of different spatial practices in everyday engagements with risk, these practices have not been brought to the fore in the research literature and their significance developed in a conceptually integrated way as a contribution to theorising the production of the subjectivities through which risk is experienced and lived. It is important to state here that we view risk experience as dynamic and fluctuating – a position that challenges a view of risk perceptions and concerns as relatively stable and fixed positions or categories. We seek to engage more directly with what authors such as Lash (1994) and Wynne (1996) refer to as the aesthetic, affective and hermeneutic dimensions of risk phenomena – in particular the role of unarticulated assumptions, moral values and practices in people's response to risk (Lash, 1994; 2000). Lash (2000: 47) refers to the indeterminate and non-institutional constitution of risk cultures (which he distinguishes from the more normative and institutional or rule-bound ordering implied by risk societies). For Lash risk cultures are defined by aesthetic rather than cognitive reflexivity - estimations and judgements based on feelings, which take place not through orderly cognitive understanding, but through disorderly practices of imagination and sensation (Ibid, p. 53).

It is here that we turn to alternative metaphors and ways of thinking about space and proximity and by extension of conceptualising risk subjectivities. Work by a range of authors (including Cooper, 1993; Mol and Law, 1994; Hinchliffe, 1996; Massey, 1993; Mort and Michael, 1998; Edensor, 2005a; 2005b; Hetherington, 1997; 2004; November, 2004) argues for a more topological reading of proximity, one that views time and space (or, rather, times and spaces) as contingent, open and as the effects of manifold possibilities of connection between the near and the far, the central metaphor for which is that of the 'fold' (Deleuze 1993). From this perspective places can be seen as the effect of the *folding* of spaces, times, things, people and events (Hetherington, 1997, p. 197) through the arrangement and synthesis of diverse representations, artefacts, identities, language, memories, sensations and emotions (Doel, 1996; Massey, 1993). It is a set of ideas that we believe offer considerable potential for re-examining existing literature on the 'local' experience of risk and through this rethinking how we approach, methodologically and conceptually, the geography of risk subjectivity. We are therefore concerned less with proximity as defined by objective measures of nearness or distance and more with understanding proximity as practice – that is, how things are made present and, in some situations, made absent. These practices of what we shall call *absencing*

and *presencing* of risk in everyday life form the main focus of this paper - ideas to which we shall now turn.

The practice(s) of absencing / presencing

Our goal in this paper is to present an alternative conceptualisation of spatialised risk subjectivities, as constituted through (primarily discursive) practices which fold together different times and spaces to bring risk close or keep it distant. It is important here to clarify our interpretation of practices as performative; that is, as the lived, routinized mental and bodily activities (encompassing skills and know-how, meaning and emotions) which create spaces, times, places and landscapes (Thrift, 1999; Cloke and Jones, 2001; Latham, 2003). The approach to social practices that we adopt here recognises the significance of what we shall term, following Zonabend (1993), *imaginative practices*: the everyday routines, turns of phrase, associations, habits and ways of doing things through which people make sense of and order the world around them and, in the process, making risks experientially and emotionally close (present) or distant (absent). Zonabend has stressed the performative function of linguistic practices and the need to attend to the ways in which oral expression – with its digressions, censorship, intonations, and metaphors - can expose other (defensive) strategies. These imaginative practices, we suggest, disclose the meanings and ideas that flow into / out of places (see also Cloke and Jones, 2001; Adam, 1998; Lupton, 1999a; Burgess and Harrison, 1993) and have the effect of stitching together and (re)organising – socially and spatially - diverse forms of experience (cf. Edensor, 2005b; Gregson et al, 2007; Latham, 2003; Rabinow, 1986). It follows that if we recognise practices and representations as constitutive of everyday life, we need also to sketch out what this more topological ordering of experience – which folds together objectively 'distant' places and times - might look like.

Here we interpret 'presence' as the extent to which a source of risk is experientially salient. Our point is that the immediacy of risk is not an intrinsic property of or physical expression of proximity but will vary across spatio-temporal contexts in which the hazard is more or less 'present' to individuals or groups (Harrison et al, 2006; Hinchliffe, 1997). Work by Petts et al (2001), for instance, focused on the role of the media in amplifying - and possibly attenuating - lay public risk responses (cf. Kasperson and Kasperson, 1996). This study, which addressed a number of 'situated' risks, specifically demonstrated how in the process of making

sense of risk people made links between a range of media arguments and direct local knowledge and experience. November (2004, p. 283), in an analysis of the practices performed amongst different parties involved in identifying and managing the risk of fire in Geneva, similarly argues that to understand the links between space and risk we need to think in terms of relations of 'connexity' rather than proximity; that is, to attend to the links between the various elements of risk networks, beyond the physical distance that separates them.

Two brief examples usefully capture the approach we are seeking to develop. First, in a study of accounts of the risks associated with living close to potential sources of pollution, Burningham and Thrush (2004) found that a local chemical plant in Wales was initially talked about by residents in the context of a strong sense of local community – based on a historical relationship between the place, social networks and industry. In this case local people focused on a representation of the site in terms of a long-established collective identity and the potential association with risk was seemingly kept absent. Indeed, when “the issue of pollution from the factory was raised participants developed a range of social explanations [for instance changing attitudes or the increased sophistication of pollution monitoring technology] to challenge the idea that conditions had worsened” (p. 221; and *cf.* Simmons (2003) on the way that changes in social context may weaken such collective representations and lead to risk reasserting itself). The second example is taken from ethnographic research in the town of Ludwigshafen, a chemical industry town in south-west Germany. In a recent account of this work Phillimore (2007) observes the ways in which the past is habitually recalled and imagined to affirm present day safety. For instance, Phillimore notes a comment from one retired employee of the local chemical plant who recalled the bright colours of industrial discharges entering the Rhine in the 1950s, a sight no longer witnessed, as evidence that gross environmental pollution was a thing of the past and, by implication, that the industry's presence was no longer a problem. It is a remark and observation which captures precisely the sorts of reflexive movements from past to present (or from far to near) that form the focus of this paper. Such findings indicate that the apparent 'acceptance' displayed by local people is constituted by a complex set of practices that absence / presence different space-time connections to place, the hazardous site and to risk (to which we return below).

We can also find support for a more topological conception of risk in the work of Risk Society theorists - advancing alternative ways of theorising the presence and absence of risk,

although remaining largely removed from empirical engagement or support (for an exception see Hinchliffe, 1997). The central argument of authors like Beck and Giddens is that increasingly we are being confronted with the phenomenon of 'modernisation risks'; socially produced threats to human life that cannot effectively be delimited spatially, temporally or socially. What we see in the writings of both authors then is the identification of emergent risks that are effectively 'glocal' - both local and global (also Lupton, 1999a). Giddens (1991), in particular, talks of the disembedding forces that make individuals confront and deal with mediated interaction on an equal basis to more conventional face-to-face encounters. His theory of time-space distanciation is concerned with how the absent Other interacts with the present locale (1991). In other words, what structures the locale and local experience is not simply that which is present (in space and time) but also distanced relations concealed by the 'visible form' of the local (Giddens, 1991, pp. 18-19; also Lupton, 1999a; Adam, 1998; Hinchliffe, 1996). Callon and Law (2004), in arguing that geographical propinquity cannot be separated from that which we would normally call absence (recollection of a past event, sensation or emotion, the drawing of analogies and so forth), speak to precisely this folding of experience that brings distant places, people and objects unexpectedly into contact or co-presence. Shields (1992) has, similarly, explored how the figure of 'the stranger' ruptures the (physical and social) boundaries between proximity and distance. Crucially, Shields points to the need to acknowledge the presence of the remote:

"The stranger figuratively represents what is absent, far-off and foreign [...] the doubtful existence and dubious threat of what is not spatially present, of what cannot be verified at first hand. Yet the stranger is nevertheless 'here', present, and thus throws the doubtful and flickering quality of absence and non-existence back into the faces of those insiders in the local community, throwing into question the sanctity of presence" (Shields 1992, p. 189).

Edensor (2005a, p. 836) captures this sense of experiential flickering in his description of the sensual involuntary memories of presence and absence borne of the 'ghosts' which haunt industrial ruins; a spatialising of memory that is characterised by the erratic and sudden presencing of the absent. This is a mental space where "the sudden force of the remembered

but inexplicable [...] rockets the past into the present” and as such challenges ordered forms of collective memory and the orderly location of experience in a particular place or time. This idea of ‘haunting’ captures the many ways in which temporally or spatially distant entities can return as a lingering presence – through emotional and sensual resonances (Edensor, 2005a; Gordon, 1997; Thrift, 1999).

Our proposition here is that people’s relationships to particular risky technologies are more open and transitory than references to ‘fear’, ‘dread’, ‘anxiety’ or ‘concern’ would imply (cf. Bondi, 2005). In this way, we believe that focusing on practices of absencing / presencing presents a productive (and challenging) tool for exploring the complex, contradictory and often fleeting nature of feelings that constitute experience. Rather than offering an explanatory framework, we foreground the mundane and routine ways in which hazardous facilities move in / out of proximity as part of everyday life. On this basis we highlight a number of directions for further work that extends our preliminary (and retrospective) analysis: that build more robust (if also messier) accounts of how and why risk is experienced as it is.

Risk experience: between absence and presence

Just as potentially hazardous technologies are not always and for everyone inherently threatening, so people are not always and in every context aware of a physically present technology in the same way. The technology and its risks may move in and out of personal and social awareness, ‘flickering’ between absence and presence (or between meanings – at one moment familiar and benign, providing needed materials or services or supporting the life of the community, at another alien, intrusive, threatening). In Macgill’s study of the health controversy that focused on the Sellafield nuclear facility, and of the language of risk employed by members of local communities in West Cumbria, we see evidence of this flickering between absence and presence, between a sense of security and one of danger. An appendix to the book contains numerous quotations that show present experience to be continuously mediated by distant events – such as the 1983 radioactive discharge incident which contaminated local beaches: “Didn’t really used to think about it as much until the leakage, since then I’ve started to wonder about it” (quoted in Macgill, 1997, p. 192) or events much further back in the past, in particular the 1957 Windscale reactor fire. Thus whilst such comments appear rooted in specific local contexts, we argue that they disclose temporary movements between the present and a

recalled event which had on some level threatened a sense of ontological security. Such spatial and temporal foldings are crucial to the subjective experience of risk and, we suggest, warrant fuller engagement and development in the theoretical treatment of risk and place.

This theme of conjoined absence and presence is central to Hetherington's (2004) conceptualisation of disposal, or what we might term here processes of absencing. He argues that absence is never fully eliminated, as implied by the notion of rubbish, retaining as it does a capacity for transformation into a presence. "When we dispose of something to hand – a material form of some kind – we do not necessarily get rid of its semiotic presence and the effects that are generated around that" (Hetherington, 2004, p. 159). Hetherington raises important questions about how we order or place absences as we do, about the role of the absent or absencing in managing social relations, and specifically about what happens when the management of absence doesn't work effectively. Crucially, where absencing is unfinished or unmanaged, Hetherington suggests, objects, entities, events or emotions can return as a 'ghostly' presence, their power to affect expressed in the idea of 'haunting' (*cf.* Gordon, 1997). In the following section we address precisely this issue of the haunting capacities of absence followed by a more speculative exploration of the affective potential of presence – two aspects of the spacing / timing of risk that have not been substantively developed in the literature and which we believe offer considerable scope to invigorate our approaches to understanding the geography of risk experience.

The haunting capacities of absence

As already noted, a growing body of research across a wide range of technological hazard contexts has found that those who might be expected, on the basis of their physical proximity to major technological hazards, to experience adverse psychosocial effects as a result of their exposure often do not express concern (Moffatt et al, 1999; Wakefield and McMullan, 2005; Burningham and Thrush, 2004; Wynne et al, 1993; Wakefield and Elliot, 2000). Research on the everyday experience of living near to nuclear facilities - in particular the Sellafield complex in the UK (Macgill, 1987; Wynne et al, 1993) and plants in Western France (Zonabend, 1993; Boceno, 1997) - builds up a picture of the practical work that goes into keeping at bay or absencing risks. The collective findings of this literature point to habitual silences which, it is argued, conceal an all too active ignorance or shutting out of the technological risk. The

following extracts from Macgill (1987) and Boceno (1997) do, however, capture individual reflections on these practices of absencing – both as an implicit sociocultural response to relations of political-economic dependency and as a conscious attempt to silence external reminders of risk (in the form of media reports).

I am surprised how many women are worried but don't admit it because their husbands are employed there (quoted in Macgill, 1987, p. 184)

In North-Cotentin, a young woman affirms that she only reads the newspaper hesitatingly because she dreads seeing an article with accompanying pictures about the Flamanville plant or the La Hague nuclear reprocessing plant. She does not read the local newspaper or watch the regional news on television because there, she would be more likely to be faced with the tragedy. She has behaved this way since the explosion of the Ukrainian plant (Boceno, 1997, para 21).³

Developing this picture of the active silencing of risk, Zonabend comments on the ways in which people avoided naming the La Hague reprocessing plant at all – referring instead to 'up there', 'the thing' or 'it' – a discursive practice which is linked to a desire to place the technological object at a certain social distance (1993, p. 28). Zonabend (1993, p. 29) also notes the ways in which local residents actively try not to see the plant - "You can't see the plant from my place... So we're all right" - which in some situations requires a rearranging (absencing and presencing) of the surrounding landscape. The author argues that what is clearly identifiable in communities like La Hague is a refusal to acknowledge (and see) the architectural embodiment of risk, a form of 'active blindness' which amounts to a denial of danger. The author also notes people's feelings of impotence in the face of risk, a situation in which the only realistic stance is one of silence. The following focus group extract from Wynne et al's (1993) study in the UK captures a similar defensive response to the encroachment of risk into everyday life. The risk is metaphorically too close for the individual to think about.

³ On the basis of this single quotation the avoidance of local newspaper coverage might be construed as the coping strategy of one particularly anxious individual. However, Wiegman *et al* (1991) report the same practice among residents living close to a hazardous chemical industry site, although they interpret the motivation as being the rejection of biased media reporting of events at the plant or in the industry.

It's like, putting your head in the sand but erm... it's too near home for me, I think, it's just too near home to even... I think you'd do your head in because we have to live here and... this is my way of handling it, it just, [I] don't tend to think about it (quoted in Wynne et al, 1993, p. 43)

These comments are indicative of routinized forms of (dis)engagement with risk – but risks that nonetheless retain a lingering (if fleeting) presence and a capacity to return. We see precisely these themes of haunting and return in the findings of other local studies of risk experience, which hint at the potential for exploring the ghostly remains and reminders of past presences – both places and times – which mediate personal and collective relations with risk.

Research focused on those places that surround nuclear installations reveals a series of imaginative practices (or performances) which serve the common purpose of trying to forget a habitual (and haunting) fear bound to this 'colossal technological risk' (Zonabend 1993): a social, material and fundamentally embodied threat that can never be entirely escaped or absented (*cf.* Simmons, 2003 on performing 'safety'). Boceno (1997) uses the example of an employee of COGEMA (the French Government-owned nuclear group), whose wife died from cancer. While continuing to work at the plant the man cannot help but wonder about having contaminated his spouse with radioactive dust that he might have brought home from the factory on his clothing and on his hands. In this way the past viscerally haunts the present. Other work similarly points to the haunting bodily reminders of risk (experienced or anticipated) which leave their imprint at the level of personal and collective experience. A typical comment from Macgill's work illustrates this folding of past and present day bodily sensations (of ill/health) – as one woman commented: "everytime I have an ache, the place comes to mind" (quoted in Macgill 1987, p. 185). Zonabend (1993, p. 119) notes the remark of one wife whose husband left the la Hague plant some years earlier: "it haunts me even now! He took some big doses... and cancers can take years to show... So it's still on my mind!" Following Mort and Michael (1998), the plant, the radionuclides – and thus risk associated with a working life some time in the past – retained an ongoing presence. Whilst temporally distant from the couple's present lives, the folding of past into present through imaginative and corporeal practices, produced an all too real and close sense of danger.

Related work highlights how past events and local judgements (for instance, of an industrial company) persist in collective local memory – and impinge on everyday life and sense-making practices - long after the events that occasioned them. Research focused on a community in Jarrow in the northeast of England living close to a chemical plant highlights the complex, yet also binding, social and cultural qualities of place (Irwin et al, 1999). Importantly, the authors comment that whilst the plant was viewed by safety regulators as a ‘quiet site’ with no recent accidents local people placed risk in a very different way, drawing together a complex set of social relations, practices and memories which stretched away from the plant in both space and time. These accounts revealed “noisy silences and seething absences” (Gordon, 1997, p. 206) - with the past literally pulled into the present in order to imagine and make sense of risk (Hamer 1994). These absent places and events continued to shape subjective experience of this outwardly quiet site. They embraced, for instance, major accidents in other localities which had been experienced vicariously through the media – such as Chernobyl or Bhopal. The following remark, taken from Macgill’s study, highlights the folding together of distant places in order to make sense of the present ‘nuclear’ reality: “This [the Sellafield discharges] can be seen much the same as the Indian incident [Bhopal], except this is slower” (quoted in Macgill, 1997, p. 182). Chernobyl, in particular, furnished a language and conceptual space for localising industrial disaster (see also Zonabend, 1993; Boholm, 1998; Walker et al 1998). As already noted above, one young woman’s active avoidance of the local news media in order to abscond the possible local risks was directly linked to the legacy of Chernobyl (Boceno, 1997). This underlines the constitutive role of the Chernobyl accident as a distant place (and an unmanaged absence) that is folded into present-day risk subjectivities, in relation not only to nuclear but also at times to non-nuclear hazards. In this way the presencing of these faraway places (Hinchliffe, 1997, p. 203) lent immediacy to conjectures about the often unknown (or even unknowable) hazards to which local people were exposed. It is a form of reasoning in the face of enigmatic blankness, so that in the absence of substance some individuals constructed their own (cf. Irwin *et al*, 1999).

Research also points to the ways in which imaginative practices that link to absent places evoke feelings of loss, neglect and decline – haunting capacities which can impinge on and complicate the experience of risk. For instance, some of the most intriguing issues developed by the Jarrow study (Irwin et al, 1999) centre on the performance of collective

memory and the multifaceted nature of risk discussed in relation to wider feelings about life in the town. So, against a backdrop of the decline of heavy industry and widespread redundancy in terms of both mechanical and human labour, the ambivalent relationship to risk was informed by longstanding memories from a previous industrial age based on the heavy industries of chemicals, coal and shipbuilding. It was a presence, now long absent, still woven into the fabric of everyday life in Jarrow that reasserted an association of pollution with economic vitality and well-being, rather than with social or ecological threats. Another example of past and present being folded together is offered in a study of processes of technological innovation and production centring on the decline of the 'core business' of the Vickers Shipbuilding and Engineering Limited firm at Barrow-in-Furness in Cumbria, in which Mort and Michael (1998) show how, having been rendered redundant, both absent workers and technologies continued to 'haunt' the place. Like the heavy industries of Jarrow, these redundant actors retained a lingering presence, in the form of what the authors term 'phantom intermediaries': entities which are physically absent but whose presence is felt (and articulated) through the memories, practices and skills of a range of actors (also Edensor, 2005b). In ethnographic research in the major chemical and petrochemical centre of Grangemouth (Scotland), at one time a prosperous town that had attracted a large skilled workforce, Phillimore et al (2007: 76) pick up on this theme of the sadness and disillusionment (about the present and future) that can haunt industrial places affected by sudden economic changes. The authors note the frequent references of local people to 'safety', 'distrust' and 'dumping ground' which, they suggest, can be read in terms of 'risk' even though that word has not been a staple of local public vocabulary. The sense of decline and of living in a place stigmatised by outsiders expressed by residents, was all the more profound for the haunting presence of what the town had once been. As the Jarrow example shows, the presence of such feelings of stigma and of loss is not only woven into the experience of place but is entangled with the production of risk subjectivities (see also Simmons and Walker, 2004).

The affective potential of presence

In relation to issues of architectural form it is instructive to consider not only how physical structures are actively absenced or silenced but also how they are materially and affectively presented. Work of humanistic geographers has demonstrated a concern with the

feelings (hate, fear, pleasure, pride etc) evoked by specific landscapes (Relph, 1976; Eyles, 1985; cf. discussion by Bondi, 2005). Tuan explored the human resonances of fearsome landscapes, referring to feelings not only of disorientation and chaos but also the agency of material (often 'natural') entities to affect and presence particular feelings and emotions; a sense of a personalised evil – “that the hostile force possesses will” (1980, p. 7). However, whilst Tuan’s work on fear associated with cities makes reference to physical form and layout, relatively little consideration is given to the ways in which different technological forms and materialities can stimulate sensations such as fear and awe (cf. Edensor, 2005a; 2005b on industrial ruins).

Affect has attracted much recent attention in the risk literature, primarily amongst social psychologists (Taylor-Gooby and Zinn, 2006), but, to date, there has been little engagement with an emerging field of geographical research concerned with the affective dimensions of experience – a form of thinking and conduct that is often indirect and firmly shaped by a set of embodied, lived practices (Thrift, 2004; Wylie, 2005; Whatmore, 2002; Dewsbury et al, 2002). We might then view the markers of a particular technology not only as representing a taken-for-granted socio-technical order(ing) but also as a source of material and symbolic disorder that can present itself not only in a perceptual response but also, crucially, as an affecting sensibility or presence. These discussions of the shifting affective qualities of places and things (for instance Cloke and Jones, 2001; Thrift, 2004; 2005; Wylie, 2005) productively link to the anthropological concept of an ‘affecting presence’ (Armstrong, 1971) – that is, the material embodiment of physical conditions which generate or are constitutive of a particular emotion (cf. Roscoe 1995). Importantly, this affective quality is not, we suggest, simply inherent in the object but refers to our capacity both to be affected by a material presence and also to affect how that presence or entity is understood and responded to (Massumi, 2002; Wylie, 2005).⁴

Zonabend’s account of community responses to risk in la Hague (1993) touches on the derogatory nickname for the plant – ‘The Dustbin’ - and the fears that the numerous buildings of the la Hague reprocessing plant inspire. Moffatt et al (1999, p. 85), in their account of public awareness of air quality in the North-east, make reference, in passing, to the affecting qualities of Teesside’s dramatic industrial landscape, quoting from one resident: “When you stand on

⁴ *Contra* the impression of a stable or fixed ‘hazard personality’ given by psychometric research on the characteristics of technological hazards (e.g. Slovic et al, 1980).

Eston Hills... and look down and you're seeing ICI and British Steel and it looks like something from Mad Max – post apocalyptic place" (Moffatt et al, 1999, p. 93). In contrast, it was the enigmatic lack of visual information offered by the physical structures of their local chemical plant that, for some residents of Jarrow, conjured up sinister associations with the science fiction TV series *The X Files* (Irwin et al 1999). It is not necessarily, therefore, only through what can be seen or through other sensory impressions (Abram, 2004; Simmons and Walker, 2004) that technological facilities may insinuate their presence into people's experience but also by the apparent absence of meaningful sensory 'evidence' (cf. Vyner 1988 on the destabilising impacts of invisible technological threats for those communities affected).

These observations resonate with Edensor's work on the layers of cultural memories that are physically inscribed in industrial spaces, conjured up through smells, textures, soundscapes, as well as visual objects, juxtapositions, and vistas (2005a, p. 837). Our point, and the corresponding insight gleaned from the literature, is necessarily provisional. We do not offer these practices of presencing and absencing as an explanation of variation in risk perceptions; rather our aim here is to draw attention to some of the more-than-rational, often seemingly inconsequential and ephemeral, aspects of everyday life that contribute to risk experience. Features of industrialised landscapes inevitably figure as presences that affect the lives of those living nearby. Whilst intuitively the sociocultural presencing of such infrastructures in terms of risk is more developed in the literature, work has primarily addressed presence (as physical proximity) at a cognitive and sometimes at a behavioural level. The empirical task remains, however, to understand better the constitutive role of presence in everyday life: how and in what ways do technological infrastructures impinge on or affect those living in physical proximity? What facets of these sites and of risk are made salient (and which are not)? And how are material presences and manifest absences infused with other (distant) spaces and times?

Conclusions

In the opening section of this paper we have argued that, with a small number of exceptions, work that has investigated and sought to account for the 'local' experience of sited technological hazards is inscribed with spatial ideas or metaphors – as expressed in realist notions of proximity – that embed a Euclidean construction of space, one that constrains our understanding of the relationship between space and risk experience. In contrast, drawing

upon recent theoretical work in cultural geography and in sociology, we have explored the potential of a topological approach to space, applying the metaphor of the fold, for understanding the production of risk subjectivities in such contexts. Whilst we acknowledge the constitutive role of immediate social and political-economic settings, relations of trust and power, and of collective memory, we have suggested that most existing accounts of the influence of local context on the experience of such hazards do not highlight sufficiently the ways in which other spaces and times impinge on everyday practice. We have therefore drawn together work that has begun to develop alternative ways of thinking about the spatial organisation of risk (Beck, 1992; Giddens, 1991; Hinchliffe, 1997; November, 2004). In connecting this literature with concepts in cultural geography we have offered a set of ideas which reconceives relations between place, proximity and risk subjectivities and views experience as constituted by continuous practices of presencing and absencing. In this concluding section we outline a provisional research agenda for extending this work, setting out three lines of future enquiry.

We have stressed the importance of studying spatial practices that work (actively or passively) to assemble proximity and distance, and the experience of threat and of security. Our account points to the significance of research that is sensitive to ways of working with risk 'proximity' as an ongoing spatial and temporal achievement. Here, we have highlighted how different imaginative practices have the effect of pushing away physically close hazards, but also how events or presences seemingly managed or absenced by such practices, or simply distant in time and space, can return as haunting reminders of what once was or might yet be, and which in turn therefore continue to mediate experience. Our analysis has, for instance, specifically highlighted the active production of silence as a recurring theme in the existing literature – that is, the apparent absence of anxiety, although often belied by a residual ambivalence towards the source of risk. Our account certainly does not proffer a generic framework to explain such silences but instead questions the premise that we can define, measure and account for risk experience as a stable (social, cultural or psychological) phenomenon. We have therefore sought to elucidate a number of ways in which silence is actively performed through simultaneous practices of absencing / presencing many facets of risk (Zonabend, 1993; Mort and Michael, 1998). More sustained attention to these practices of silence would not only furnish insights into the everyday experience of technological hazards

but would also expand our spatial conceptions of the constitution of risk subjectivities. Indeed, we suggest that, from an analytical perspective, existing explanatory frameworks might usefully be extended and developed through an engagement with the ideas about the spatial practice of proximity we have outlined here. Research might, for instance, explore the ways in which contrasting risk configurations (in terms of spatial, temporal, political-economic or material features) elicit different patternings of subjective proximity (i.e. practices of absencing and presencing). Such work might well provide more nuanced insights into how issues of trust relations, peripherality and dependency, place and identity impinge on the everyday experience of risk. Indeed, as discussed already, much research fails to directly acknowledge the role or implications of spatial practices or the contingency and even contradiction associated with them. In light of such transitory and fluid qualities, we therefore stress the need for further research directed less towards developing fixed categories, measures and typologies and more towards opening up this enlarged concept of risk proximity.

Second, approaching the topic of risk experience from the perspective of materiality, we have argued that further research into everyday encounters with risky technologies should take account of the bodily presencing and absencing of risk as well as the affective presences and absences associated with material things. Our reflections on this topic have focused specifically on the ways in which people (and groups) invest structural features with particular meanings and ideas and how the material presence itself - form, shape, texture, including relative normality or invisibility – may affect people and their sense of place, whether in positive or negative ways. In this regard further research is needed to better understand how collective and sometimes conflicting ideas, values, and emotions become bound up with these physical structures. We might also point to the potential for extending analyses beyond fixed material infrastructures, to include more mobile physical or symbolic absences and presences. To take the case of the UK 2001 foot and mouth (FMD) epidemic, we might, for instance, think of the affective potentialities of empty fields (and the absent livestock) or the scenes of animal culling and pyres (and the all too present deadstock). It is only from this position, we suggest, that research can move beyond the constraints to understanding and accounting for risk subjectivity imposed by a singular conception of experience (as fear, concern, anxiety etc) and of physical proximity.

Finally, and following on from this, our account has concerned itself with the experiential presencing and absencing of risks linked with site-based hazardous facilities or infrastructures. Here, then, we see scope for extending the analysis of imaginative practices to risks that have more fluid and open spatialities⁵. The spatial processes associated with risks such as the UK FMD epidemic, unprecedented flooding in the UK and elsewhere over recent years and the global outbreak of the respiratory illness Sars (Severe Acute Respiratory Syndrome) are best described as spaces of flow (Law 2006, Appadurai 1990) – that is they are characterised by a series of interactions between physically disjointed positions. To return to the case of FMD, the rapid spread of the disease through livestock, and controversy over the cause(s) of infection, literally and materially folded distant places together. In experiential terms, memory (the recall of previous crises and risk events, the 1967 outbreak in particular), the sensory and affective impacts of risk management practices such as the burning of culled animals on open pyres, as well as the invisible spread of the disease, which evoked an array of imaginative spaces (Nerlich et al 2001), bear witness to the significance of distant space-times in presencing / absencing risk. We suggest that these spatially diffuse events pose pertinent questions about the spatial constitution and performance of risk subjectivities.

These conclusions, but in particular this latter set of issues, have implications for the methods we utilise to engage with everyday riskscapes. Law and Urry (2004) argue that the social sciences need to re-imagine their methods if they are to work productively with 21st Century realities of increasingly complex, elusive, ephemeral and unpredictable social relations. Here we recognise that our analysis has centred largely on linguistic and representational practices. Whilst such material does offer access to crucial aspects of risk subjectivity it does not and cannot stand in for the subtleties of routine knowledges and the active practices of embodiment that constitute experience (Latham, 2003; Longhurst, 1997; McCormack, 2003).

Methodological experimentation and pluralism is important to supplement the sorts of accounts we have drawn on here – and to capture the fleeting (here today and gone tomorrow, only to reappear the day after tomorrow), distributed (that which slips and slides between places) multiple, sensory and emotional (Law and Urry, 2004) manifestations of risk experience. Here we recognise the difficulties and challenges that come with more mobile ways of studying the 'ordinary', ways that are sensitive to the complex, non-causal and chaotic and which seek to

⁵ Out thanks to Peter Phillimore for drawing our attention to this point and sharing ideas with us.

acknowledge and embrace the slipperiness of units like risk, anxiety and proximity. Following Latham (2003), Bondi (2005) and others we see the potential for multi-faceted approaches which embody 'a performative ethos' (Latham, 2003), and that can, at least in part, access the transient and ineffable ways in which everyday life and place are constituted. These disparate fragments and juxtapositions of experience will not necessarily add up to a regular whole or an eloquent explanatory narrative – but they will enable us to unpack the sorts of analytical ambiguities discussed in the opening sections of this paper. The topologically-informed understanding of spatial practice, and of absence and presence, proposed here can therefore extend sociocultural approaches to the everyday experience of hazardous technologies, and more broadly hazardous events, by *replacing* fixed notions of locale and proximity that contribute to *misplaced* readings of risk subjectivities.

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