# A culturally sensitive approach to risk? 'Natural' hazard perception in Egypt and the UK

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## Introduction

In recent years there has been an increase in the volume of literature exploring the concept of the 'risk society' (e.g. Giddens 1990, 1991; Douglas 1992; Beck 1992a, 1992b, 1996). A key aspect of this has been the consideration of ways in which the hierarchical relationship between experts and lay people is changing, from the primarily 'top down' to the 'bottom up'. Simultaneously, and as a function of the diminishing authority of 'the expert', there is recognition of imbalances of power between experts and lay-people and a need to redress this through more culturally-sensitive approaches towards the sharing of knowledge.

This paper attempts to reconcile some key points from this literature in relation to natural hazard perception. This will be achieved by firstly considering some of the theoretical discussions that have been taking place before highlighting the salience of some of these points through case study material from Egypt and the UK. Finally, the paper makes some suggestions as to the ways in which some of these points might be incorporated into 'natural' hazard mitigation.

## Theoretical considerations

### Social theory and hazards research

One of the main contemporary issues in hazards research has been to bridge what has been termed the 'risk archipelago' and to develop a reflexive approach towards environmental risk that is inclusive of other discourses (e.g. Cutter 1994; Hood and Jones 1996). Indeed, there have been a number of recent attempts to reconcile natural hazards research and social theory with a view to gaining a more holistic understanding of how individuals interact with the hazardous natural world (e.g. Wildavsky and Dake 1990; Blaikie et al. 1994; Hewitt 1997; Bolin 1998).

A particularly important aspect of this is that in recent years there has been recognition that the certainty and meta-narrative that has pervaded many aspects of social research has begun to lose tenacity in favour of more postmodern, eclectic understandings and interpretations of the world. One of the main outcomes of this has been to acknowledge that power relations are a significant part of both understanding people's marginalisation but, simultaneously, that they are also a part of the research process that seeks to reverse this situation of disempowerment. Therefore, it is important to look to wider discourses, as well as within hazards theory per se, to gain an understanding of some of the processes taking place with regard to the social staus of knowledge, as well as to the relative positions of the 'researcher' and the 'researched'.

### Power relations

Recent social theory has illustrated that the prevailing discourses within a society are loaded with meaning as opposed to being impartial. These meanings associated with discourse can have implications with regard to power relations. Indeed, Foucault argues that knowledge is power over others and that 'a discourse embodies knowledge (or, rather, what it defines as knowledge) and therefore embodies power' (Craib 1992 p.186).

Since the power to act in a certain way depends on the 'knowledge' that is current within the society at the time, discourses can be drawn upon to justify particular actions. This is because, certain discourses have tenability in particular societies, i.e. discourse is context-dependent. Such discourses may also be termed 'privileged knowledge' (Peet and Watts 1996) implicating more specifically the importance of access to particular knowledge in gaining status in society. Power may therefore be seen not as residing with individuals, but as a function of these prevailing discourses that exist within the society concerned. If the world can therefore be defined, through these discourses, thereby producing 'knowledge', in a way that is advantageous then this is to exercise power (Burr 1995). The means to empower people, then, is to enable them to have access to the privileged knowledge in society from which they are then able to take a critical stance against discourses of disempowerment and marginalisation.

### The changing role of the expert

Paralleled to the notion of power relations and privileged knowledge is the changing role of the expert; hazards theory needs to respond to the idea that people no longer automatically accept 'expert' interpretations of environmental phenomena. Instead, there is a cynicism with regard to the status of 'expertise' within many social situations. Thus, within the context of environmental interpretation it is important to characterise the expert as an interpreter, i.e. a facilitator, rather than a legislator, i.e. someone who provides authoritative comment (Bauman 1987, 1992); there are so many understandings with regard to the environment that to search for a definitive account is futile. As such, there can surely only be (mis)interpretations (Geertz 1973, 1983) of the natural world, even within science which is frequently portrayed as having the definitive answers to many problems/phenomena encountered. Indeed, literature pertaining to discourses of 'risk' and the 'risk society' is acknowledging this shift towards interpretation (e.g. Giddens 1991; Beck 1992a, 1992b, 1996).

In this situation, the expert is no longer the autonomous voice on matters of risk, lay-people have an important part to play as well and can force the direction of scientific, or other, enquiry through their concerns. It is not simple to make judgements and decisions about the environment therefore, as meaning is given to nature through social interaction. Instead, risk needs to be tackled in a more constructivist manner which recognises the contribution made by ordinary

people to the discourse. Indeed, Beck (1996 p. 20) recognises this argument by maintaining that, 'there are no expert solutions in risk discourse, because experts can only supply factual information and are never able to assess which solutions are culturally acceptable'.

The notion of the possibility of only making interpretations is even more germane if the numerous cultural and social differences are considered. A statement about the environment can thus be cast only as *an*, rather than *the*, interpretation and this is the situation that distinguishes interpreters from legislators. In addition, the relationship between interpreters and legislators will vary between cultural contexts and this could have a considerable bearing on the way that suggested interventions are received within a community. These idiosyncrasies and subtle differences should also be considered by hazards researchers.

### 'Who fears what and why?' Debates in risk perception

Many of these issues have been highlighted in the growing and specific literature on risk perception from a sociological, psychological and cultural perspective and it is pertinent to refer to this literature in order to further contextualise empirical observation. Within this context, Löfstedt and Frewer (1998) have noted the various paradigm shifts that have occurred within the discourse of risk perception. In particular, Slovic (1987) notes that 'Sociological and anthropological studies have shown that perception and acceptance of risk have their roots in social and cultural factors' (p. 32). This iterates the need to gain a wider understanding of the parameters that impinge on people's worldviews before pragmatic steps can be taken in order to reduce risk, in this case from 'natural' disasters.

Psychological, social, cultural and institutional parameters are also important because of the ways in which these can lead to a social amplification of risk when they interact with a hazard (Renn 1991). The social amplification of risk theory, developed by Kasperon et al (1988), is particularly pertinent in looking at the ways in which risk messages are disseminated throughout society and the reasons for which they are either amplified or attenuated. Such amplification or attenuation is linked to both wider discourses that affect how a particular society defines risk as well as context-specific characteristics present in society at a particular time that might affect response and/or perception. It is only by understanding such background factors that perception can be wholly understood.

From a pragmatic perspective, risk literacy, i.e. the way people understand and synthesise information on the topic of risk and then practically act upon it, is linked to many of these issues. Thus, in order to raise awareness of a particular risk within a community it is necessary to consider many of the specific social, cultural and psychological issues that are present within it.

### Empirical observations

Many of these theoretical aspects have principally been applied to risks and hazards that result from modernisation. However, there is much that has an application for 'natural' hazards. In particular, it is interesting to see how cultural context and social constructions of the environment affect the ways in which people perceive, and consequently respond to, environmental risk. This paper gives a brief overview of the ways in which this was done with regard to two cultural contexts, Egypt and the UK.

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The case studies explore contrasting scientific understandings of two different hazard events in the context of the changing social structure of Egypt and the UK. Egypt is a society where tensions exist with regard to modernity (and western forms of science), owing to discourses of religion. In terms of the science-religion interface it was thus considered an important area for research. These tensions were well exemplified by the Dahshûr earthquake in October, 1992. In addition, many of the people affected by the earthquake live in village environments and therefore build their own houses—understandings of people-nature relations are thus of great pragmatic significance in these circumstances.

In terms of the UK, claims to post-modernism; an increasing incredulity towards science and experts; and a romanticisation of the natural world were thought to be important issues to consider with regard to people's responses to environmental risk. The Mass-Observation Archive at the University of Sussex provided an excellent data source in order to study people's reactions to nature in general, and hazards in particular. This source was used to explore whether the claims to postmodernity and uncertainty could be substantiated within western society and the possible implications this might have for hazard mitigation.

In particular, the research sought to consider the different ways in which people respond to natural phenomena and how the ideas raised by people might be translated into a culturally appropriate means to increase risk literacy. The research questions thus focused on a means to understanding how and why hazards are perceived in particular ways; whether cultural context means that practical approaches have to originate with the particular communities concerned to be effective; and how current approaches might be more successful in terms of ensuring information is both accessible and meaningful to the affected communities.

### Examples from Egyptian fieldwork

The examples relating to hazard perception given here are in relation to the 12 October 1992 Dahshûr earthquake (M 5.6) (*Figure 1*). Although the earthquake was relatively small in magnitude it resulted in a considerable amount of damage, for example 551 people were killed; almost 10,000 were injured; and approximately 7,000 houses were either damaged or destroyed (Degg 1993).

The fieldwork was conducted in five communities—Gerza, Barnasht, El Gamaleyya, central Cairo and El Kattamia (*Figure 1*)—affected by the 1992 earthquake. Questions were asked to gain an understanding of the interpretations that people have of this particular event. People were asked to discuss their general experiences as well as more specific issues. For example:

- Why did the earthquake occur here?
- Why was the damage so bad?
- Do you think that scientists will ever be able to predict earthquakes?
- Can people build houses that won't fall down in earthquakes?

These questions sought to establish some of the material issues and concerns that people had regarding the event (e.g. housing) as well as the more abstract ideas (e.g. the role of the scientist and the 'reason' for the event). By doing this it was conjectured that it might be possible to find an approach to mitigating the effects of disasters that people would be able to simultaneously accept and find useful but that would also be culturally sensitive.

## Examples of responses

It is inevitable in a society where religious literalism can, at times, be strongly manifest that ideas regarding extremes of nature are often going to be centred around other-worldly interpretations. As the main religion in Egypt is Sunni Islam, the Qur'an is the single most important factor in many people's lives (Akhtar 1990). Real world events can be interpreted as a manifestation of what is written in it and, indeed, the Qur'an has a surah entitled 'The Earthquake', linking this extreme event to Judgement Day. However, the association of environment with cosmology is not straightforward and there are many convoluted processes operating within the society that do not preclude the suggestion of other issues, as long as they can be interpreted within the religious discourses. Thus, science is an important and dominant discourse within Egyptian society, for example,

> 'Everything comes from God, only He can save our souls, *but* you can also explain earthquakes scientifically. After the big earthquake (October 12, 1992), I read a lot of geology to try and understand it. There are scientific controls on the environment and earthquakes and so on are natural events, but they are ultimately controlled by God. You can have science, but this comes from God' — *respondent from Cairo.*

Other responses to questions regarding earthquake prediction generated similar ideas about reconciling occurrence with Qur'anic text and religious belief:

> 'Yes, scientists will be able to predict earthquakes because of what it says in the Qur'an. It says that human beings are able to find something new everyday and therefore prediction is possible' — *respondent from Gerza.*

These are two clear responses that indicate the ways in which people reconcile other-worldly and this-worldly phenomena in order to derive an holistic understanding of the issues involved in interpreting hazardous events. Many, however, are more sceptical of ideas that progress from science:

> 'The earthquake was related to God. I heard that it is in the nature of the ground to crack and lead to earthquakes in the Faiyûm region, but I don't believe this myself' — *respondent from El Kattamia.*

Since there are such a plethora of ideas regarding earthquake cause and prediction, it is fundamental to interpret, rather than attempt to ratify, people's actions. There may be significant reasons why people perceive things in certain ways, for example the possibility may be that people are reluctant to accept science and scientific explanations because they are denied access to them. This is a strong possibility in the case of gender divisions and access to educational structures within Egypt, for example, and it is argued here that as long as people are not given the opportunity to access what are, after all, amongst the dominant discourses within their society then they will remain disempowered. In this case, although one of these discourses is most certainly religion, others include science. Thus, it is the argument here that to deny people access to scientific knowledge, as has sometimes been the case with Third World mitigation projects, in the fear that it will violate local interpretations and ways of living is censoring at best and increasing marginalisation at worst. As such, it is suggested that science should be made available to people in a culturally sensitive way, i.e. couched in the terms of insiders as opposed to disguised in the context of outsider perspectives, in order that they at least have a choice. The possibility of raising risk literacy in this way is illustrated in the Egyptian Government's publication 'Earthquakes, Catastrophes and the Role of People in Facing Them' (Homan 1999).

## Fieldwork in the UK

The fieldwork in this case was conducted using autobiographical sources from the Mass-Observation Archive held at the University of Sussex, UK. This Archive was the culmination of work undertaken by a group of British surrealists, particularly Charles Madge and Humphrey Jennings, and by the 'self-styled' anthropologist Tom Harrison (MacClancy, 1995). It was begun in 1937 'to create, in their words, an 'anthropology of ourselves' — a study of everyday lives of ordinary people in Britain' (Mass-Observation Archive leaflet). The earliest material was collected in Bolton and London and involved work done by investigators who recorded people's behaviour; and also work done by volunteers who kept diaries and responded to monthly questionnaires.

Contemporaneously, the programme has 1000 volunteers who are sent 'directives', asking a number of questions identified as significant in contemporary British life, three to four times a year by the Archive to which they write a response[1]. The directives[2] are:

> 'quite long and discursive, often disclosing a great deal about the author, and are designed to give people both guidance in helping them to write, and also the freedom to explore the subject in the way that best suits them…The emphasis is…on self-expression, candour and a willingness to tell a good story and be a vivid and conscientious social commentator as well as an open and thoughtful autobiographer' (Sheridan 1994)[3].

Examples used here are drawn from two directives relating to nature and the environment more generally, and hazards and disasters in particular, in order to explore perceptions of the hazardous natural world. The first directive (autumn/winter 1987, Part II) is based on the 'hurricane' of 1987 that hit the south coast of England. The second directive used (summer 1992) was chosen because, although discussing nature more generally (as opposed to hazards and disasters), it raised many issues that were seen as pertinent such as the role of science and the supernatural in relation to the natural world.

## Examples of responses

The UK was used as a counter-example to that of Egypt as it is a society that is frequently held as having 'developed' and 'rational' approaches to hazards and disasters. The widespread, and perhaps sometimes indiscriminate, application of technology and science as means by which such events are mitigated is indicative of this. However, recent literature has suggested that the west now needs to be anthropologised, to 'show how exotic its construction of reality has been; empha-

### Notes

1. The written response means that the Mass-Observers are termed 'correspondents'.

2. The use of the Directive is only one method adopted by the Mass-Observation Archive but is referred to here as the predominant research tool as this was the sole way in which the information for this paper was derived.

3. This is from a double-sided information sheet produced on the 1/9/94 by Dorothy Sheridan, the Mass-Observation project Director.

sise those domains most taken for granted as universal;…make them seem as historically peculiar as possible; show how their claims to truth are linked to social practices and have hence become effective forces in the social world' (Rabinow 1986 p. 241). Thus, it is also not possible to make taken-for-granted assumptions about the ways in which hazards will be perceived by the population. Instead, it is likely that the eclectic and 'messy' construction of reality is also evident within the UK.

Many people responding to the various directives referred to scientific approaches to the environment more generally and hazards and disasters more specifically. Some did so unproblematically, for example:

> 'We can only take the predictions and proposals [of modern science] seriously, because what other discipline can have as much knowledge about the world? (C1878, female, summer directive, 1992)

However, there were few unconditional endorsements of science as the best approach to follow, instead many people included a number of caveats with regard to the way in which science should be used. Dickens (1992a) who has looked at the material from the summer 1992 directive, has calculated that of the 408 who responded to this directive, 61% fell into this latter category. One example of this type of response is:

> 'I think their [scientists'] "explanations, proposals and predictions" should be respectfully considered, but scrutinised/ analysed in detail and at length and subject to very searching questioning and very reflective evaluation. Such experts, like all experts, should be 'on tap', but not 'on top' ' (S2137, male, summer directive, 1992).

However, there were also many otherworldly accounts of disaster cause, particularly in the light of the 'hurricane' of 16 October 1987, whereby people who have experienced disaster clearly felt the need to attribute some higher cause to the event. Indeed, Dickens (1992b p.169) maintains that in the event of disaster 'there is a strong sense in which people actively want to feel that something or someone else is in control of their destiny'. This is illustrated in the following example:

> 'Weather forecasters are mere mortals. The creation of big winds and the direction in which they blow is still to a degree in the hands of THE ALMIGHTY…
>
> Perhaps when touching on the subject of weather…you would think that people would be reminded we are still mere specks of dust in relation to the events of the Universe' (G1951, male, autumn/ winter directive, 1987, Part II).

There are also those who have begun to tend towards more postmodern 'religious' understandings of the natural world, and disasters in particular. Many ascribe cause to nature per se as a spiritual entity or perhaps more 'New Age' type religions. This was illustrated by correspondents writing about associations with paganism, for example, or, in the case of the 1987 hurricane, by understanding hazards as a personified nature:

> 'Nature had gone mad, out of bounds—destructive, irresponsible, racing to its death, dragging everything with it. This was it. The end of the world was here—now, at this moment and nothing could stop it. Breaking glass, falling and breaking objects and the all-powerful noise that would not tolerate anything above it or mitigate it took over my brain…
>
> All reason and life had stopped as we know it' (C1922, female, autumn/ winter directive, 1987, Part II)

People in the UK thus explain the hazardous natural world with a range of responses that could be described as incongruous and, in some cases, incompatible from a theoretical perspective. However, by using them all they produce a range of responses that are 'practically adequate'/meaningful.

The notion of a 'bottom-up' approach should be key with regard to all communities facing disaster or that live with the threat of natural hazards.

## Conclusions for disaster preparedness

This brief exploration of hazard perception indicates that there is a range of responses to hazard and disaster which makes mitigation increasingly difficult. This is likely to be exacerbated in the future as forces of globalisation continually provide people with more diverse discourses with which to explain the natural world, for example the growing popularity of eastern religions in the west. As such it is important to take on board much of the literature pertaining to the changing role of the expert and begin to engage in a dialogue with people to find out the ways in which they understand the environment. That is, there needs to be a 'levelling' of the relationship between 'expert' and 'layperson' and the views of the latter need to be seen with a renewed validity. This has been developing as an approach within many projects in the Third World, for example through participatory appraisal techniques, but many of these ideas can also be extended to First World situations also. Indeed, it is only by doing this that risk literacy will increase and people will respond more effectively to hazard information.

The notion of a 'bottom-up' approach should be key with regard to all communities facing disaster or that live with the threat of natural hazards. It is essential that people are asked their perceptions and potential solutions to a situation in order that a mitigation project might be produced that is culturally sensitive, meaningful and workable in practice. It is increasingly the case that within disasters research these three issues are seen as inextricably linked as to neglect one aspect will potentially lead to failure of the project.

In addition to this, however, it is also important to use the cultural norms of the society in question to disseminate information regarding dominant discourses/ 'privileged knowledge'. As mentioned above, this was attempted by the Egyptian government following the 1992 earthquake through their publication of the book, 'Earthquakes, Catastrophes and the Role of People in Facing Them' which tried to reconcile scientific and religious discourses. This is clearly the central way in which people understand the environment and nature and so will have meaning/ practical adequacy for them. It thereby constitutes a mechanism whereby scientific explanations can be reconciled and made realistic for the people living in communities in Egypt. Furthermore, giving people access to dominant knowledge is to give them an opportunity to take a critical stance towards disaster 'propaganda' and hyperbolic accounts.

The situation in the UK is dictated by its own peculiar characteristics and thus requires a different approach. Here, for many, the scientific culture has lost tenacity and relevance and perhaps one of the approaches is to bolster *critical* science. One way to do this is for people to see science as a method, rather than a body of truth, and also as something which can be fallible, thereby avoiding the feeling of being let down that many people have when scientists do not manage to predict events with pinpoint accuracy.

However, the responses from the UK also indicate that perhaps other ways of looking at the world also need to be considered in order to effectively communicate the message about hazards and disaster. It is certainly important to accept that numerous explanations exist with regard to people's understandings of hazards, reiterating further the need for dialogic research processes.

The answer is thus to remain flexible to the ideas that are present within societies and to respond in such a way as to be mindful of the social constructions of nature and the environment that are present within them. The eclectic nature of society and the diversity that exists within any one tradition means that a broad-brush approach to hazards is erroneous and dangerous.

Instead, the subtleties of society must be taken on board and the community should be involved more in decision-making processes rather than less. In addition, mitigation strategies should be based on the notion of opportunity rather than enforcement. Projects need to be designed whereby people have access to meaningful knowledge, derived from negotiations through the more horizontal, 'level' relationship with 'experts'/'researchers'.

## References


Akhtar S. 1990, *A Faith for All Seasons: Islam and Western Modernity*, Bellew Publishing, London.

Bauman Z. 1987, *Legislators and Interpreters: on Modernity, Post-modernity and Intellectuals.* Polity Press, Cambridge.

Bauman Z. 1992, *Intimations of Postmodernity*, Routledge, London.

Beck U. 1992a, *Risk Society: Towards a New Modernity*, Sage, London.

Beck U. 1992b, 'From Industrial Society to the Risk Society: Questions of Survival, Social Structure and Ecological Enlightenment', *Theory, Culture and Society,* Vol 9, pp. 97–123.

Beck U. 1996, 'World Risk Society as Cosmopolitan Society? Ecological Questions in a Framework of Manufactured Uncertainties', *Theory, Culture and Society*, Vol. 13, No. 4, pp. 1–32.

Blaikie P., Cannon T., Davis I. and Wisner B. 1994, *At Risk: Natural Hazards, People's Vulnerability and Disasters*, Routledge, London.

Bolin R with L. Stanford 1998, *The Northridge Earthquake: Vulnerability and Disaster*, Routledge, London.

Burr V. 1995, *An Introduction to Social Constructionism*, Routledge, London.

Craib I. 1992, *Modern Social Theory: From Parsons to Habermas*, Harvester Wheatsheaf, New York and London.

Cutter S.L. (ed.) 1994, *Environmental Risk and Hazards*, Prentice Hall, Englewood Cliffs, N.J.

Degg M. 1993, 'The 1992 "Cairo earthquake": Cause, Effect and Response'. *Disasters* Volume 17, No. 3, pp. 226–238.

Dickens P. 1992a, *Who Would Know? Science, Environmental Risk and the Construction of Theory*, Centre for Urban and Regional Research, University of Sussex, Working Paper 89.

Dickens P. 1992b, *Society and Nature: Towards a Green Social Theory*, Temple University Press, Philadelphia.

Douglas M. 1992, *Risk and Blame: Essays in Cultural Theory*, Routledge, London.

Geertz C. 1973, *The Interpretation of Cultures*, Fontana Press, London.

Geertz C. 1983, *Local Knowledge*, Fontana Press, London.

Giddens A. 1990, *The Consequences of Modernity*, Polity Press, Cambridge.

Giddens A. 1991, *Modernity and Self-identity*, Polity Press, Cambridge.

Hewitt K. 1997, *Regions of Risk: A Geographical Introduction to Disasters*, Addison Wesley Longman Limited, Essex.

Homan J. 1999, 'Raising Awareness of Natural Disaster in Third World Communities: A Case Study From Egypt', in *Disaster Prevention for the 21st Century: Proceedings of the Australian Disaster Conference 1999*, pp. 361–366.

Hood C. and Jones D.K.C. (eds.) 1996, *Accident and Design: Contemporary Debates in Risk Management*, U.C.L. Press, London.

Kasperon R.E., Renn O., Slovic P., Brown H.S., Emel J., Goble R., Kasperon J.X. and Ratick S. 1988, 'The Social Amplification of Risk: a Conceptual Framework', in *Risk Analysis*, Vol. 8, No. 2, pp. 177–187.

Löfstedt R. and Frewer L. 1998, 'Introduction', in Lofstedt R. and Frewer L. (eds.) 1998, *The Earthscan Reader in Risk and Modern Society*, Earthscan Publications Ltd, London, Chapter 1, pp. 3–27.

MacClancy J. 1995, 'Brief Encounter: The Meeting, in Mass-Observation, of British Surrealism and Popular Anthropology', *Journal of the Royal Anthropological Institute*, Vol. 1, No. 3, pp. 495–512.

Peet R. and Watts M. 1996, 'Liberation Ecology: Development, Sustainability and Environment in an Age of Market Triumphalism', in Peet R. and Watts M. (eds.) *Liberation Ecologies: Environment, Development, Social Movements*, Routledge, London, pp. 1–45.

Rabinow P. 1986, 'Representations are Social Facts: Modernity and Post-Modernity in Anthropology', in Clifford J. and Marcus G.E. (eds.) *Writing Culture: The Poetics and Politics of Ethnography*, University of California Press, Berkeley, pp. 234–261.

Renn O. 1991, 'Risk Communication and the Social Amplification of Risk', in Kasperon R.E. and Stallen P.M. (eds), *Communicating Risks to the Public: International Perspectives*, Kluwer, Dordrecht.

*Qur'an, The Holy* 1993, translated with notes by N.J. Dawood, Penguin Books, London.

Sheridan D. 1994, *The Mass-Observation Project: Recording Everyday Life in Britain in the 1980s and 1990s*, Mass-Observation Information Leaflet (available from the Archive at the University of Sussex, UK).

Slovic P. 1987, 'Perception of risk', *Science*, 236, pp. 280–285.

Wildavsky A. and Dake K. 1990, 'Theories of Risk Perception: Who Fears What and Why?', in Cutter, S.L. (ed.) 1994, *Environmental Risk and Hazards*, Prentice Hall, Englewood Cliffs, N.J.


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