



Social amplification of risk: The media and the public

**CONTRACT RESEARCH REPORT
329/2001**



Social amplification of risk: The media and the public

Judith Petts

Centre for Environmental Research & Training
University of Birmingham
Birmingham B15 2TT

Tom Horlick-Jones

Centre for Environmental Strategy
University of Surrey (*now* Cardiff University School of Social Sciences
Cardiff CF10 3WT)
and
Department of Operational Research/
Centre for the Analysis of Risk & Regulation, LSE

Graham Murdock

Communications Research Centre
Department of Social Sciences, Loughborough University
Loughborough LE11 3TU

Other members of the research team:

Diane Hargreaves, University of Surrey
Shelly McLachlan, Loughborough University
Ragnar Löfstedt, University of Surrey

This report presents the findings of a project to examine the role of the media in the amplification of risk issues amongst the lay public. The project has generated a unique database and analysis of UK newspaper and television reporting of risk during the first half of 1999. It presents new findings in relation to how the lay public interpret risk issues and respond to the media.

The findings refute any suggestion that lay publics are passive recipients of expert risk knowledge. In rationalising risk they draw upon multiple information sources and understanding - personal experience, grounded knowledge and mediated information. Furthermore, risk issues possess specific 'signatures' in terms of their capacity to engender patterns of lay understanding. The analyses of media reporting show the media as dynamic interpreters and mediators of risk information. They seek to respond to, and reflect, social preferences and concerns. In turn the public are sophisticated users of the media.

The report concludes that the social amplification of risk framework presented by researchers in the late 1980s, while useful in raising research questions, fails to provide a coherent and full understanding of the impacts of the plural media and the symbolic information systems they represent and their relationship with their consumers. Drawing on evidence collected, the report presents recommendations for best practice risk communication by Government departments and agencies. These recommendations stress that the media must be seen as an opportunity rather than a problem.

This report and the work it describes are part of a set of research projects funded by the Cabinet Office, Civil Aviation Authority, Economic and Social Research Council, Environment Agency, Food Standards Agency, Department of Health, Health and Safety Executive, and the Health and Safety Executive for Northern Ireland. Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect the policies or views of sponsoring Departments.

© Crown copyright 2001

*Applications for reproduction should be made in writing to:
Copyright Unit, Her Majesty's Stationery Office,
St Clements House, 2-16 Colegate, Norwich NR3 1BQ*

First published 2001

ISBN 0 7176 1983 4

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the prior written permission of the copyright owner.

CONTENTS

EXECUTIVE SUMMARY	v
CHAPTER 1: SOCIAL AMPLIFICATION, THE MEDIA AND THE PUBLIC: BACKGROUND	1
1.1 SOCIAL AMPLIFICATION OF RISK FRAMEWORK	1
1.2 THE MEDIA AND RISK	2
1.3 SOCIAL TRUST AND INSTITUTIONAL CREDIBILITY	9
1.4 NEED TO TEST SARF IN UK CONTEXT	11
CHAPTER 2: RESEARCH APPROACH AND METHODS	13
2.1 OBJECTIVES	13
2.2 RESEARCH APPROACH	13
2.3 RISK ISSUES	16
2.4 RESEARCH COMPONENTS	17
CHAPTER 3: HOW LAY PUBLICS MAKE SENSE OF RISK ISSUES	27
3.1 INTRODUCTION	27
3.2 'WORRIES' ANALYSIS	27
3.3 PATTERNS OF TALK – ANALYSIS APPROACH	30
3.4 AIR POLLUTION	31
3.5 GENETICALLY MODIFIED FOOD	35
3.6 TRAIN ACCIDENTS	42
3.7 MILLENNIUM BUG	46
3.8 RADON	48
3.9 LAY ACCOUNTS OF RISK ISSUES	50
3.10 SUMMARY	54
CHAPTER 4: HOW THE MEDIA REPORT RISK	55
4.1 INTRODUCTION	55
4.2 ANALYSIS APPROACH	56
4.3 NEWS ATTENTION	58
4.4 NEWS MAKING	59
4.5 ACCESS TO VOICE	62
4.6 EXPLAINING AND BLAMING	64
4.7 VISUALISING	66
4.8 FRAMING	67
4.9 ANCHORING	68
4.10 SUMMARY	70

CHAPTER 5: HOW LAY PUBLICS TALK ABOUT THE MEDIA	71
5.1 LAY PUBLICS' MEDIA ASSESSMENT	71
5.2 NEGOTIATIONS	76
5.3 EVALUATIONS	80
5.4 TRUST	85
5.5 PARTICIPATION	88
5.6 INFLUENCE	89
5.7 SUMMARY	90
CHAPTER 6: IMPLICATIONS FOR RISK COMMUNICATION	91
6.1 MAKING SENSE OF RISK ISSUES	91
6.2 THE MEDIA AS DYNAMIC MEDIATORS	93
6.3 BEST PRACTICE RISK COMMUNICATION	96
6.4 WHAT WE STILL NEED TO KNOW	99
CHAPTER 7: CONCLUSIONS	101
ACKNOWLEDGEMENTS	105
REFERENCES	107

EXECUTIVE SUMMARY

THE PROJECT'S AIMS

This research project responded to the interests of Government departments and agencies (contributing to the Interdepartmental Liaison Group on Risk Assessment (ILGRA)), in the relevance to the UK of the 'social amplification of risk framework' (SARF) (Kasperson *et al*, 1988). This framework described the various processes that might lead some hazards and events experts regard as presenting a relatively low statistical risk to become a focus of social and political concern and activity (i.e. amplification), while other, potentially more serious events, receive comparatively little public attention (i.e. attenuation). The interest was particularly in the role of the media in this process. The aim was to draw out implications for best practice risk communication.

QUESTIONING THE CONCEPT OF AMPLIFICATION OF RISK AND THE MEDIA

There is a belief amongst sections of the risk community that the media are important sources of risk perceptions. The media are nearly always regarded as negative influences in this regard, allegedly prone to dramatisation, distortion, sensationalism, misrepresentation, and error. That the public appear concerned about a risk that risk managers and decision-makers are not concerned about is often viewed as the fault of the media. However, a large body of media research would refute this interpretation.

Numerous studies over a long time period, of both newspapers and televisions, have failed to identify any link between media consumption and public perceptions of risk. Recent work on the media has stressed the active and social nature of people's interpretation of the media.

The media are active mediators of information which is generated by a large number of communicators – political institutions, scientific experts, corporations, campaigning groups. The media compete for control, legitimacy, trust and command of the agenda alongside these other communicators. Much research into the routine practices and professional news values of journalists provides evidence on how they do this.

The news system is not a single system, but two parallel systems, which can be mapped roughly onto the divide between the broadsheets and the tabloids. This sets it apart from the US context in which the social amplification of risk theory was developed. It suggested the need for a detailed understanding of the multiple news media's reporting of risk in the UK.

The media system has been growing with cable and satellite services and the additional terrestrial channel – Channel 5. The main channels have responded to the new competition by giving a greater share of transmission time to programmes featuring ordinary people and everyday lives. In addition, all of the 'vertical' media are now competing with the massive growth of the 'horizontal' networks based on the world-wide web.

In addition to this existing understanding of the media we were aware of the considerable questions about SARF raised by social researchers. An international workshop held at Cumberland Lodge, Windsor in September 1999 reviewed its perceived weaknesses. Overall there was agreement that the social processes which affect risk interpretation, beliefs and required policy responses are more complex than any framework can hope to portray. The Workshop participants agreed that there was a need to understand the role of the media further as well as the active way in which people make sense of their worlds and the means they use to accomplish this task.

RESEARCH COMPONENTS

The project integrated two elements. Firstly, a study of how the lay public receive, filter and compare information about risks from different sources, including the media. Second, an analysis of how the media report risk issues.

The study focused on five risk issues, all of which the Government departments and agencies may have to communicate upon. We selected issues having different characteristics in terms of their potential effects or harm, public experience and known public concerns. We believed that media reporting and public filtering and evaluation of information would vary according to different risk characteristics and that different risk information and communication strategies might be necessary depending on the topic. The risk issues selected were:

- air pollution;
- genetically-modified (GM) food;
- train accidents;
- the Millennium Bug;
- Radon

In addition we included one 'live' event, which was the Ladbroke Grove train crash in October 1999.

The study comprised focus group discussions with members of the public and a survey of media reporting of risk issues during the first half of 1999. In addition two novel research elements were included to explore directly how people respond to media reporting of risks. The first was a series of directed viewing, small group discussions involving people watching television news, documentaries and chat shows. The second was accompanied reading interviews with individuals, using newspapers they read regularly. Over 170 members of the public participated in the project and it has generated the largest database of media reporting of risk issues produced to-date in the UK.

MAKING SENSE OF RISK ISSUES

Talking About Risk

The focus of our study of lay public perception was upon how people reconcile different sources of information about risks, and make sense of them in terms of their everyday lives. We used 18 focus groups to do this, involving 145 people, recruited on the basis that they might reflect different interests and views about our risk issues.

In the groups we examined the types of issue about which people expressed concern, the shared patterns of understanding displayed in their collective talk about risks, and the relative importance to them of direct and mediated experiences.

A 'worries' analysis indicated that the risk issues people were concerned about tended to be those that were either directly affecting their everyday lives, or appeared to present a real threat of doing so. Of our five risk issues, GM food was raised most frequently but still less than other personal and social concerns relating to jobs, financial matters and family. Indeed the media were raised as a concern more frequently than GM foods. Air pollution was embedded as an issue relative to pollution in general and traffic. Train accidents and Radon were not mentioned as a concern by anyone, and the Millennium Bug an insignificant number of times.

There were some apparent differences between male and female 'talk' and sense-making which warrant further attention. For example, women with children were more likely to express concern about issues relating to family or children, the elderly and health compared to women without children and men.

Furthermore, there were differences in concerns expressed by those in the Muslim groups, particularly in the women's group which focused on Asian society and family issues. As we hypothesised many of the worries were not simply a function of 'objective' assessment of potential physical harm, but related to societal and personal adverse effects.

In practice, sense-making about risk issues was embedded in processes of interrogation of direct and mediated experiences. People contributed evidence typically in the form of narrative. The processes of interrogation utilised shared sense-making devices or 'lay logics'. Such devices, like "if it is going to happen it will" provided the means to examine different accounts of risk and to explore the relative merits of contradictory accounts. People preferred to draw on local resources – particularly direct personal experiences – to make their accounts of risks plausible to themselves and to others. When presented with information on a risk they knew nothing about – Radon – they displayed strong rationalisation tendencies, trying to understand why they had not heard about it, seeking explanations in the lack of evident (acute) deaths and even the possibility that it was a contrived issue designed to "get money out of people".

People used 'lay epidemiology', actively searching for explanations of different but potentially related phenomena which they observed in relation to the health of themselves and their families, such as increased rates of asthma, increased traffic and air pollution. Where direct evidence was lacking (as in relation to GM food) people tried to make sense of diverse mediated knowledge. Sometimes this was just too difficult for them, and they relied upon the inherent trust which they had in different sources of information and their developed responses to existing risks which appeared to them to have similar characteristics (such as BSE and vCJD being seen as a similar issue to GM foods).

Trust, characterised primarily in terms of perceived independence and lack of vested interest, was an important means for people to differentiate between different information sources, whether Government officials, scientists or media reporters. The growth in public relations 'spin' by corporations, Government departments and also some NGOs evidently had a detrimental impact on people's responses to particularly sources.

For some risk issues people relied relatively little on mediated information as they had direct personal experience and the issue was one discussed in their social networks – e.g. air pollution. For others mediated information was important. For example, it underpinned 100% of the lay accounts of the Millennium Bug, 72% of accounts of train accidents and 56% of accounts of GM food. However, this reliance on mediated information did not result in any amplification of risk concerns. We found no evidence of amplification in relation to GM foods despite repeated reporting of the issue in some sections of the media. Indeed, many people reported little concern.

Our evidence leads us to refute any suggestion that lay publics are passive recipients of expert risk knowledge. People want to feel that the risks that are meaningful to them are being attended to, and this may mean taking personal control. This necessitates that they rationalise information in a way meaningful to them to enhance their coping mechanisms. It is inevitable that this process of rationalisation requires them to draw upon multiple information sources and understandings, not just mediated information. It was evident that this rationalisation was not assisted by the use of statistical risk comparisons, very few examples being offered in people's discussion.

Risk Signatures

From our analyses we conclude that risks issues possess specific 'signatures'. In other words, different risk issues have different 'images' in terms of their capacity to engender certain patterns of understanding by lay publics. There is not a simple relationship between scientific accounts of risk issues and the meaning that lay audiences find in these accounts.

We found that air pollution, an issue firmly grounded in everyday experience, was, on the whole, regarded as most credible and threatening. GM food was sufficiently grounded in direct experience to

present a possible threat, however insufficiently so for a consensus to emerge over the competing 'expert' mediated accounts. Neither the Millennium Bug nor rail accidents, although very different in nature, were truly credible as tangible threats because, it seems, both were poorly grounded in personal experiences. Rail travel itself presented far greater 'risks' to people (of late and dirty trains and threatening situations involving other travellers) than crashes resulting in death or serious injury. Radon presented a risk issue about which there was considerable ignorance. When people tried to come to terms with finding out about this 'new' potential hazard, they had difficulty relating the mediated knowledge provided by the researchers to their everyday lives.

A comparative analysis of lay public's accounts of risk issues about which we collected most data, namely air pollution and GM foods, allowed us to identify key factors that served to generate specific risk signatures. These were the specificity of adverse effects; concern about potential effects on others, particularly family; concern about perceived secrecy or cover-ups by risk management institutions; distrust in these institutions because of perceived vested interests, and whether the issue presented moral questions and considerations. The identification of the different risk 'signatures' depending on the relevance and strength of these factors in specific cases is important. The existence of these risk signatures means that communication about risks requires issue-specific attention. There can be no single risk communication 'recipe'.

MEDIA REPORTING OF RISK

The research has tried to respond to the heterogeneous but also still largely stratified nature of the UK media. To achieve this we built up a comprehensive archive of major news media over the period February-July 1999. The reporting of risk and our risk issues has been examined routinely in 10 daily and 9 Sunday newspapers together with the main terrestrial evening news broadcasts on national and local (Midlands) TV. In addition we recorded a number of additional television current affairs, documentary programmes and dramas and collected a range of fugitive printed material and selected material from the Internet. All of this material now provides a permanent and unique project archive available to other researchers.

We combined a quantitative content analysis of the reporting of risk and qualitative analyses of the language and imagery used. The latter focused on two major aspects of reporting: (i) how the media frames risk events and issues by linking them to prior events and other contemporary issues, and (ii) how these preferred frames of events are enforced through the use of linguistic tags and visual images which resonate with popular fears and anxieties.

Our results show:

- Media organisations shifting to address people as consumers with certain rights to personal safety and well being.
- The 'popular' orientation of certain segments of both the press (particularly the tabloids) and the television news which emphasise lay experiences and initiatives and give precedence to lay voices.
- The importance of local news, circulating local knowledge and responding to people's grounded experience. Indeed, 89% of our participants reported reading a local newspaper (including 'free' papers) whereas 25% did not read a daily paper and the largest percentage reading a single daily was 24% reading the Daily Mail.
- The dearth of news presented or written by specialist reporters in either science or the environment in large sections of the media
- The tendency to personalisation of explanations of risk events, looking for individuals as the cause.
- The frequent assignment of responsibility to risk managers.
- The powerful use of visual images, which in the tabloids tend to focus on the consequences of risks for individuals and groups, as opposed to the questioning of causation more common in the broadsheets.

- A preference for reporting of risk issues which are already familiar and the anchoring of them in the deep-seated fears and anxieties which are part of popular expression and images.

The media are not transmitters of official information on risk as suggested by the linear SARF framework, but dynamic interpreters and mediators, who seek to respond to and reflect social preferences and concerns and in so doing stake and maintain their position. The media are highly effective interpreters of public concerns, arguably far more so than Government departments and agencies.

This report has only been able, in the space available, to present some of the analyses arising from our data. In particular we have not been able to present all of the quantitative data arising from the coded news items, including non-UK stories, nor to present the full qualitative analysis of the range of television programmes (particularly documentaries) which addressed our risk issues. These analyses will be presented in future publications. Our aim here was to select the key findings relevant to our remit to draw-out lessons for best practice risk communication.

THE LAY PUBLIC AND THE MEDIA

To address SARF's proposition that the media are important in amplifying (and possibly attenuating) lay public risk responses we examined what happens when people read newspapers or watch television news. Most importantly what happens when they try to make sense of events and issues by integrating the media's diverse and divergent arguments with their own interpretations based on direct and local knowledge, experience and formal education.

Our results lead us to the following conclusions:

- (i) the media are not a 'single black box' as suggested by SARF;
- (ii) the media can only amplify or attenuate risk if they capture or resonate with an existing public mood, and even then the media are not alone in this function;
- (iii) we are not dealing with a message system, but a symbolic information system which is responsive to public framings and interpretation of issues;
- (iv) visual communication has a central role to play;
- (v) the media are not negative influences on risk perceptions, although elements of the media are viewed negatively by the lay public;
- (vi) the lay public are not passive recipients of media messages but sophisticated and 'media-savvy' users; they understand hype and sensationalism when they see it, many while personally reading a tabloid being well-aware of this style of reporting in their paper and feeling able to 'manage' their interpretation of the reports; they recognise the 'badges' and styles of the media which they consume and the impact of these on the information being presented to them; they turn to specific media when they want information on important and serious issues or to verify facts, the BBC News being one such important source perceived as being more accurate and trustworthy than other media, and specific individual reporters also score highly in this regard;
- (vii) the lay public are plural media consumers and they extend their range of consumption when stories interest them; the Internet was reported as an important source of diverse information which people could collate to enable them to 'make up their own minds' and also a mechanism by which they felt able to ask questions and join in debates;
- (viii) lay public's responses to the media are continually negotiated and refined through everyday conversation and argument;
- (ix) where lay publics have little direct experience or grounded information then the media are more important in this process of interpretation and refinement;
- (x) the media do set agendas for public concerns, but this selective attention is most important in relation to risks where people do not have first-hand experience (such as GM foods), and
- (xi) when fragmented media coverage corresponds with no experiential knowledge then this can reinforce lay publics' uncertainty.

The lay public displayed a number of characteristics which the media are inherently aware of and respond to. Firstly, for many people their media consumption was fragmented, snatched and continually squeezed into a busy day. Images, pictures and headlines became important. Second, for many in the lower socio-economic groups, the ‘suits’ – i.e. the risk managers (politicians, government ministers, corporate managers) – were not perceived to be working in their interests nor to be in tune with their worlds. Third, they had an inherent belief that television is a regulated media (unlike the newspapers) and therefore is more likely to be presenting factual and correct information (particularly on the news). Fourth, individual presenters and reporters attracted considerable allegiance as trusted communicators in tune with lay concerns. Finally, the public were not passive absorbers of media information, but collectors of information to inform their desire to ‘make up their own minds’.

We conclude that SARF at best provides a highly simplistic understanding of the role and influence of the media in the amplification and attenuation of risk. At worst it could serve merely to aggravate tensions between risk experts and managers and lay publics through its failure to provide a coherent and full understanding of the impact and operations of these plural and symbolic information systems and their relationships with their consumers. We understand that it is not helpful to merely say that the argument is more complex than SARF suggests. SARF has been useful in raising important research questions. However, considering the media-lay public relationship we need to move beyond SARF to execute more effective risk communication.

BEST PRACTICE RISK COMMUNICATION

We present (Chapter 6 of the Report) detailed recommendations for best practice in risk communication aimed at risk communicators in the Government departments and agencies. These are summarised in terms of the need for:

- A design-based and user-centred approach to communication – i.e. communication which is based on an understanding of existing lay knowledge and beliefs as a result of asking the question ‘do we know what lay publics know and want to know rather than what we want to tell them?’.
- A sound understanding of how different lay publics talk about and respond to specific risk issues.
- Ongoing mapping and monitoring of lay public’s concerns and knowledge and their media preferences and how these change over time.
- Appreciation in this mapping of the multiple audiences, including specific or traditionally excluded groups in society – e.g. the ethnic minorities and the young.
- Acceptance of the rationality of lay publics’ responses to risk.
- Use of the popularist tools of the media, particularly when communicating with the tabloid media.
- Use of the language of the user, which is not only ‘plain English’, but requires proactive steps to understand how people interpret key phrases and concepts and what they know of science.
- Simple, lay descriptions to be backed by more detailed information – perhaps on a web-site or made available to the scientific media.
- Proactive use of the images and symbols which are important to, and resonate with, lay publics.
- Mobilisation of the full range of available visual resources to express key points.
- Understanding of how lay publics get involved with the media system.
- Examination of strategies for talking with, and providing material to, the local media.
- The use of the Internet to provide more detailed information on a particular issue and to make links to other sources of information.
- Adoption of media-specific (e.g. tabloid versus broadsheet) communications plans as opposed to a media communications plan
- Proactive use of television, based on understanding of the programmes which resonate with people when they require particular information.
- Engagement in programme formats which allow for lay testimonies and opinions to be aired alongside those of officials and experts.

- Science in action to be shown.
- A relationship with the media which is ongoing, diverse, responsive to lay interests and engaging.
- Engagement at the start of a story when lay public's major frameworks of interpretation will be established
- Proactive consideration of opportunities to engage and work with key presenters known to be viewed as trustworthy by the public.
- Training of communicators to understand the complexity, diversity and role of the media in society.

Most importantly we conclude that the media must be seen as an opportunity rather than a problem.

The research identified the potential for Government departments subject to direct ministerial influence to have less flexibility to undertake user-centered communication. If correct this must be viewed as a significant communication problem.

WHAT WE STILL NEED TO KNOW

The gaps in this project combined with the questions raised by its findings point to a number of key research needs:

- A need for ongoing monitoring and mapping of lay publics' responses to risk and use of the media through a dynamic, real time, analysis.
- Further work on interpretative practices across all class, gender and ethnic dimensions.
- Extension of media analysis to consider the role and influence of radio, popular drama, and also consumer and popular magazines.
- Application of the research methods used here to understanding of the risk signatures related to natural hazards (e.g. floods, earthquakes).
- Understanding of how other key players relate to and use the media and how they negotiate risk issues - particularly the pressure groups.
- 'Action' research with Government department and agencies' press officers to understand how they respond to, use and negotiate with the media. This requires research which engages with real, 'live' situations where press officers are having to design and implement their responses to, and engagement with, the media.
- A properly catalogued and continuous national archive of all national news bulletins which would serve as a practical resource for communicators and scholars wishing to examine the way that risk-related issues are covered.

Reference

Kasperson, R.E., Renn, O. & Slovic P *et al* (1988) Social amplification of risk: a conceptual framework. *Risk Analysis*, 8, 177-187

1. SOCIAL AMPLIFICATION, THE MEDIA AND THE PUBLIC: BACKGROUND

1.1 THE SOCIAL AMPLIFICATION OF RISK FRAMEWORK

We live in rapidly changing times (economically and globally), with a massive expansion of media and communication technologies and significant social and cultural fragmentation which has led to new 'moral panics' (Thompson, 1998), the politicisation of risk issues (Beck, 1992; Yearley, 1994) and the emergence of the active consumer (Lash & Urry, 1994). Technological, health and environmental issues straddle the divide between science and politics, involve subtle and uncertain risks, variable time and spatial dimensions and a myriad of conflicting interests and values (Renn, 1992). Risk debates display tensions between scientific/expert assessments of risk and resulting risk reduction measures, and public perceptions and risk management priorities. Research which has sought to understand these tensions has at least a twenty-five year pedigree, focusing particularly on psychological studies of risk perception, but also on socio-cultural analysis of responses, and analyses of risk communication activities (reviewed in Pidgeon *et al.*, 1992).

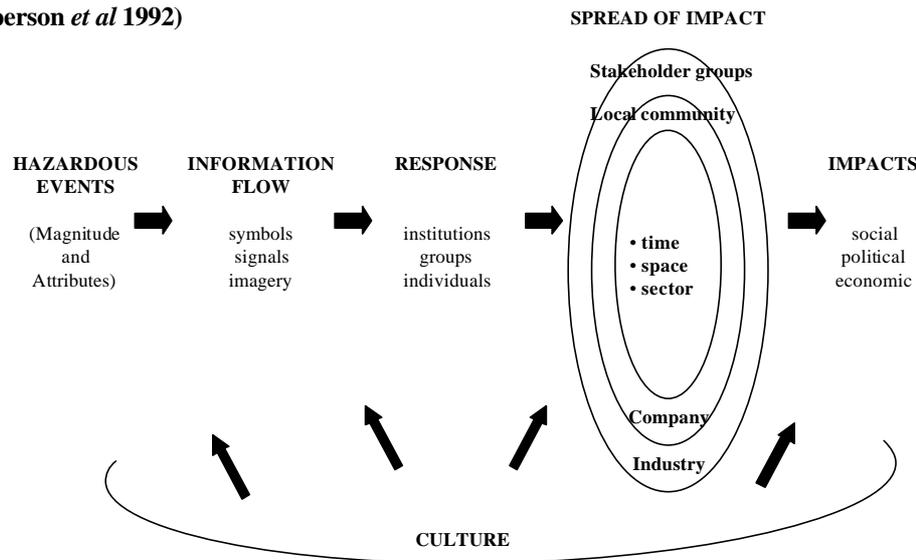
Risk communication research has identified the apparent 'failure' of traditional, expert-generated, primarily top-down communication activities. It now seeks to understand and analyse risk-related decisions and behaviour in society so as to mediate at the public-expert interface (e.g. Fischhoff, 1995; Leiss, 1996; Petts, 1997; Löfstedt & Renn, 1997). Risk communication has attempted to move from trying to understand what people think to an appreciation of how information and knowledge is exchanged within and between individuals and groups.

In the late 1980s, the concept of the social amplification of risk was proposed (Kasperson *et al.*, 1998; Renn, 1991). This attempted to provide a conceptual framework rather than a theoretical model, as originally interpreted by some of its critics (e.g. Rayner, 1988), to select, order and classify social phenomena to provide a perspective on risk communication (Renn, 1991). It attempted to integrate findings from both psychometric and cultural studies to describe the various processes that lead some hazards and events, which often experts see as presenting relatively low statistical risks (such as vCJD linked to BSE), to become a focus of social-political concern and activity (i.e. risk amplification), while other, potentially more serious events (such as exposure to Radon gas) receive comparatively little attention (i.e. risk attenuation).

The *social amplification of risk framework* (SARF) starts from the concept of a risk-related 'event'. The representation of the characteristics of the 'event' and interaction with a wide range of psychological, institutional, social and cultural processes is presented as a process which results in risk interpretations and resulting behaviours. Social amplification describes why some events seem to create ripple effects with secondary and tertiary impacts which spread beyond the initial effects of the hazard or event and impact upon previously unrelated technologies or institutions. Such impacts include demands for regulatory action, loss of trust in decision authorities or industry, and stigmatisation of a community or product or facility. The analogy of dropping a stone in a pond is used to describe the ripple effects. Figure 1.1 depicts SARF.

SARF adopts the metaphor of amplification from original communications theory (Lasswell, 1948; Shannon & Weaver, 1949), using this to describe how risk signals are received, interpreted and passed on by a variety of social agents. These signals are subject to predictable changes as they are filtered through the various 'amplification' stations. The latter can include individuals or social groups or organisations: for example, individual scientists, politicians, government agencies and departments, activist groups. The media are presented as primary amplifiers.

Figure 1.1 SARF
(from Kasperson *et al* 1992)



Some of the signal transformations serve to increase or decrease the amount of information about an event or hazard, to heighten the salience of the message or to reinterpret or elaborate the available symbols and images leading to a specific interpretation and response by the receivers of the messages. Thus, the experience of risk is not only one of direct, physical harm to those immediately affected, but the result of processes by which people and groups learn to acquire and create interpretations of the risks. It is important to note that although the concept of ‘an event’ suggests an accident or incident with immediate effects, the term was applied more widely by SARF’s originators to include potential events not as yet realised as well as non-physical ‘events’ such as policy statements and regulatory actions.

There have been a number of attempts to test SARF empirically. These tests suggest that some of the underlying causes and factors influencing social responses can be explained by it (Machlis & Rosa, 1989; Freudenburg, 1993; Renn *et al*, 1992, Kasperson, 1992; Burns *et al*, 1993; Kasperson & Kasperson, 1996). However, the secondary ripple effects which are suggested have proved more difficult to examine and there are questions over the permanence of effects, and the factors which lead to an issue either remaining controversial or receding (Metz, 1996; Pidgeon, 1999).

Some academics insist that SARF provides a comprehensive multi-disciplinary framework to analyse societal responses to risk. However, in policy circles social amplification is often alluded to in traditional technocentric language – i.e. it is seen as giving credence to the perceived irrationality of lay public responses to risk issues, providing a means of explaining behaviour and identifying what communication is required, as opposed to a means of understanding the reasons for responses and perceptions.

At a time when risk debates are perceived by experts as displaying significant tensions between scientific assessments of risk and preferred risk reduction measures, and public risk management priorities, SARF appears to provide an attractive explanatory tool, not least for structuring research on risk communication. This is no less so when political and institutional concerns about the risk tensions result in the view that the media are significant risk amplifiers.

1.2 THE MEDIA AND RISK

1.2.1 The Media’s Role & Operation

There is a widespread belief amongst sections of the risk community and some experts in government agencies, departments and industry that the media are important sources of risk perceptions (e.g. Bastide *et al*, 1989; ILGRA, 1998a). The media are nearly always perceived as negative influences in this regard, allegedly prone to dramatisation, distortion, sensationalism, misrepresentation, attention seeking and error – in general ‘blowing risks out of proportion’ and being anti-science and technology

(e.g. Cohen, 1983). That the public appear concerned about a risk that experts are not concerned about is often viewed as more the fault of the media than reflecting any failure of the expert or institution to communicate effectively.

Such views seem to be ignorant of (or to deliberately ignore) the numerous studies over a long time period, of both newspapers and television, which have failed to identify any strong link between media consumption and public perceptions of risk (e.g. Gunter & Wober, 1983; Freudenburg *et al*, 1996; Wahlberg & Sjoberg, 2000).

In fact, media reporting has been shown to avoid emphasising risk in favour of offering reassurance, although some studies have argued that it is only in relation to crisis situations that this operates (Sandman, 1997). SARF's originators have themselves pointed to the inconclusive evidence on the media as amplifiers. The 128-hazards event study (Kasperson *et al*, 1992; Renn *et al*, 1992) measured volume of media coverage for a range of events from biocidal hazards to natural hazards and compared this to expert and student panel judgements of the events. Once the extent of damage was controlled for, no perception variable – except dread – was found to be correlated with the extent of media coverage. The general pattern which emerged was for full news articles to de-emphasize the severity of the risks and to offer reassurance. However, the study was primarily quantitative, and focused on hypothetical rather than actual outcomes. It did not address the factors influencing people's responses to real-life hazards.

In a qualitative study of six risk events, five of which involved some form of nuclear hazard (Kasperson 1992), physical impacts, information flows, social mobilisation as well as secondary consequences were examined. Again it was found that even sustained and heavy media coverage did not of itself ensure risk amplification or significant secondary effects. In a secondary analysis of the original 128-hazard dataset (Freudenburg *et al*, 1996) it was concluded that if anything the media downplayed the risks. A large number of studies of both Chernobyl and the Three Mile Island Accident have failed to provide evidence of biased or sensational reporting (Schane & Meier, 1992).

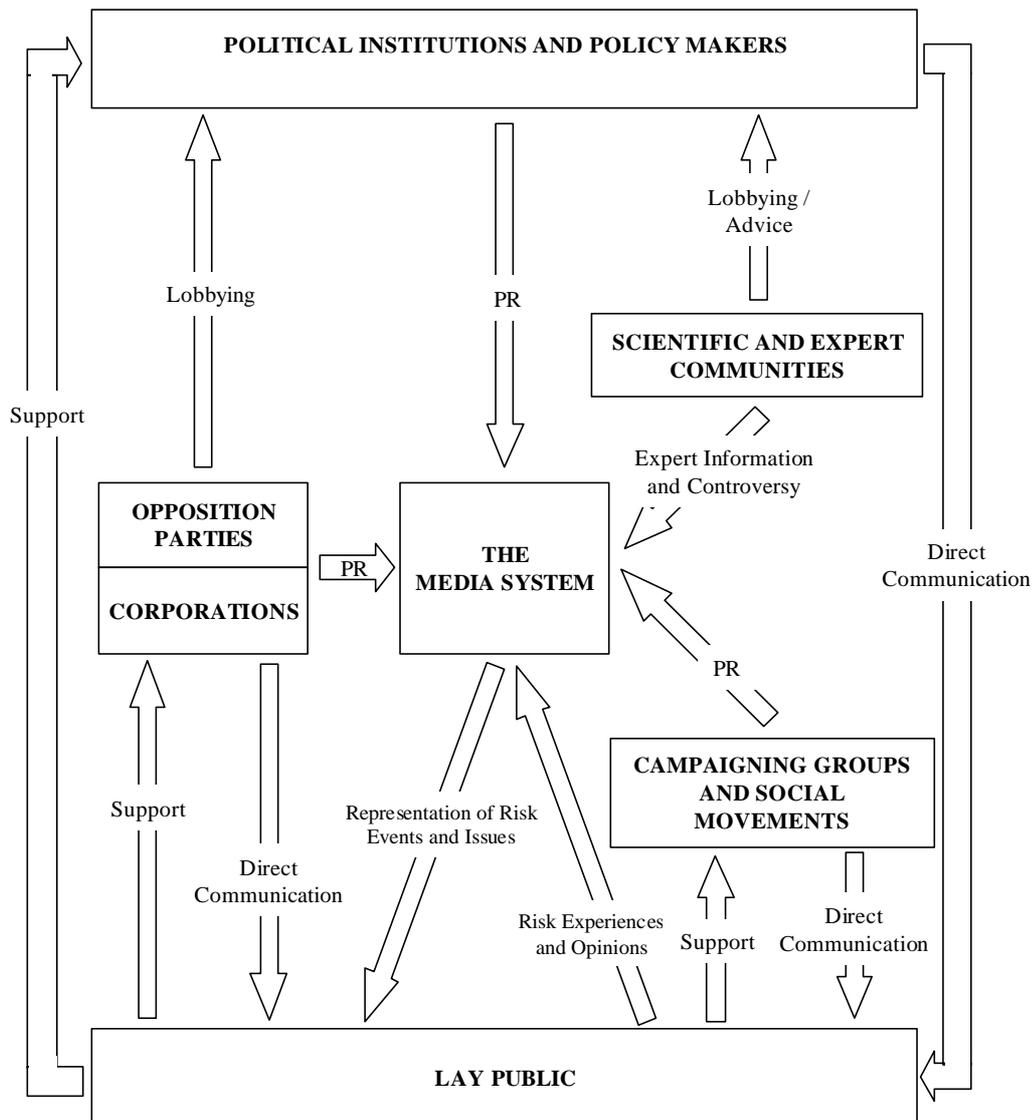
The continuing separation of the risk literature from developments in the study of media has tended to produce over-simplified accounts of risk communication (Peltu 1985; Friedman *et al*, 1986; Wilkins and Paterson, 1987). Recent work on media suggests that it may be more useful to employ the model of risk communication shown in Figure 1.2

This model is based on the metaphor of public communication as a field of play and competition (Bourdieu, 1998), in which the political institutions and policy agencies concerned with risk are caught up in a continual contest with other major teams of players – opposition parties, corporations, pressure groups and campaigning organisations, and expert communities – to advance their preferred view of events and issues and to mobilise support at the level of both public opinion and concrete everyday actions. In place of SARF's linear model of ripples spreading out from a stone dropped into water it proposes an interactive model in which key players continually launch initiatives and respond to each others' moves. They may communicate with the lay public directly by developing Internet sites or through poster campaigns and mail shots (as the Government Agency 'Action 2000' did in the summer of 1999 when it sought to allay public fears by distributing a leaflet, *The Millennium Bug: Facts Not Fiction*, to every household in the country). But at present, for most general purposes and to reach a general audience they have to enter into exchange relations with journalists, bargaining information, images or announcements against publicity. As a consequence, the media remain pivotal to the political process and operate as the central space in which battles over the identification, definition and management of risk are fought out (Eldridge, 1999).

Media institutions actively *mediate* public communications in two main ways. Institutionally they are the key switch-men, routing selected traffic onto the main lines (as front page stories or lead television news items), consigning less favoured loads to branch lines (on the inside pages or the edges of the schedules) or shunting them into sidings out of public view. This process of vocalising and thereby legitimating some points of view and ignoring others plays a key role in structuring public debates around risk

(Hornig, 1993). At the same time, the media also act as entrepreneurs of meaning, launching campaigns and investigations and converting the raw materials of images, events and press releases into artefacts that bear their particular stamp and style and can compete effectively for audience attention in a crowded marketplace. These processes, of origination, selection and recasting have been researched extensively by media scholars.

Figure 1.2
Model of Risk Communication



Competition in the field of risk communication revolves around four main issues:

- (i) *control* over the timing of visibility (and the conditions of concealment);
- (ii) *legitimacy* - having one's position treated as credible and authoritative;
- (iii) *trust* - maintaining and if possible enhancing public trust (see below), and
- (iv) *precedence* - establishing the dominant definition of the situation and commanding the agenda and terms of debate.

As many actors have found, attracting news attention may initiate a new run of play, but "the real battle is over whose interpretation, whose framing of reality" commands the field (Ryan 1991:53).

There is considerable research detailing how the routine practices and professional news values of journalists structure the way competition around these four dimensions of publicity is organised. Most British studies have examined the news system in general (see McNair, 1994 & Harrison, 2000, for overviews). However, there is also a growing body of work looking specifically at the reporting of risk and environmental issues (e.g. Hansen, 1993; Anderson, 1997; Campbell, 1998; Allan *et al*, 2000) These studies have identified consistent criteria of news selection. These include:

- (i) *An orientation to events.* News focuses on interruptions to the normal flow of activity (an accident, a protest, a political speech, a new piece of research) not on underlying processes or continually unfolding conditions. As a consequence, the media may fail to report on risks until some dramatic event occurs, leaving accidents and illnesses that kill people every day of the year unreported (e.g. Singer & Endreny, 1993).
- (ii) *Novelty.* There is a preference for material that introduces new issues or moves an existing story on. This produces relatively compressed issue-attention cycles. Stories die quickly and reappear only if another newsworthy event breaks, producing a pattern of peaks and troughs.
- (iii) *Scale.* Events are more newsworthy if they involve or affect large numbers of people or have wide ranging implications for the way people conduct their everyday lives.
- (iv) *Conflict and drama.* News trades in material that involves controversy and /or dramatises the seriousness of actual or potential risks (Schanne & Meier, 1992). Journalists themselves talk about the attractions of scientific controversy (e.g. Friedman *et al*, 1986). As media coverage of controversy increases so does public opposition (Mazur, 1984; Mazur & Lee, 1993). However, as media reporting tails off so do public risk perceptions, regardless of whether the reporting is positive or negative (Mazur, 1981) Research also suggests that by drawing attention to disagreements amongst experts and providing space for different accounts, media may convey the impression that there is no agreed view on a particular risk, leading the public to ‘err on the side of safety’ (Mazur, 1984).
- (v) *Resonance.* News taps into existing public anxieties and frames stories in terms of already familiar events and scenarios. The coverage of GM foods, for example, consistently drew on pre-existing templates and public concern over BSE (Miller & Reilly, 1995; Eldridge *et al*, 1998).
- (vi) *Personalisation.* News seeks to invest public issues with human faces by focussing on key actors or presenting ideal typical consumers or victims.
- (vii) *Domestication.* News often looks into the immediate consequences for everyday life in households and families. A study of the BBC looking at news bulletins and what provides an item’s appeal and what prevents it being effective, found that stories on genetics, medicine, and the environment that established their relevance to individual lives roused particular interest - ‘pure science’ did not (Bennett, 1999).
- (viii) *Visualisation.* News organisations are continually searching for images that crystallise their interpretation of an event or issue. The Daily Mirror’s front page, published at the peak of the initial controversy over GM foods early in 1999, showing the Prime Minister as Frankenstein’s monster is a particularly vivid example.

Although versions of this list can be found in studies conducted decades ago, suggesting that the basic repertoire of news values has remained remarkably consistent, recent research has also highlighted how the field of risk communication is changing in important ways. Three shifts are particularly relevant here.

Firstly, recent years have seen a rapid increase in the number of non-governmental organisations (NGO’s) (particularly consumer and environmental groups) active in the field of risk and growing levels of professionalism in their strategies for securing publicity. During the dispute over the disposal of the Brent Spar oil platform in the North Sea, for example, Greenpeace secured substantial publicity for their views by occupying the platform and issuing photographs of the subsequent ‘battle’ in the sea around it. However, their efforts to convert visibility into legitimacy were only partly successful with several newspapers expressing strong antagonism (Hansen, 2000).

Secondly, over the last decade there has been a marked growth in the scale of public relations activity, in both the corporate and governmental sectors (Miller & Dinan, 2000), coupled with a growing public suspicion that marketing and 'spin' has eclipsed sincerity and directness. This has major implications for the maintenance of public trust.

Thirdly, the rapid rise of the Internet has provided all the main actors in the risk field with new ways of reaching the public directly without negotiating with media organisations. At the same time, their growing use by media organisations themselves has extended their own reach, particularly among educated and professional sectors where access (via a PC) is currently concentrated, though this may change if digital television and mobile telephony become the modal means of access.

These developments offer new opportunities and challenges for risk communication in the future. For the moment, however, most people are dependent for most of their news on the established media, particularly the national press and prime-time television news. In thinking about this 'news system', however, it is more useful to think of it not as a single system but as two parallel systems

This separation dates back to the origins of the modern mass press in the nineteenth century. Some publications addressed their readers as citizens in an emerging mass democracy and set out to provide objective information and evidence on issues of common concern, access to the full range of arguments relevant to policy decisions, and a check on abuses of power. Others saw their readers more as actors in the emerging mass markets for consumer goods, entertainment and leisure and set out to provide drama, storytelling, spectacle and advice on life styles as well as brokering information and chairing public debates.

These contrasting strategies generated two kinds of news: (i) 'official' stories dealing with the activities of major institutional power holders (state agencies, governments, corporations, and legitimated experts), and (ii) what John Langer (1998) usefully calls, the 'other news' dealing with disasters, accidents, twists of fate, heroic acts, and innocent victims. Whereas the first translate "the opinions of the powerful down", the second depicts "the world of 'everyday people' with all their trials, tribulations and triumphs" (Langer 1998:30). It grounds its accounts in common-sense understandings and works with the full resources of vernacular language (including puns, nick-names and slang expressions) and popular visual style. Its stock in trade is the human interest story, recounting events and tabling demands from the position of those at the receiving end of change and disruption. Its politics is populist, rooted firmly in the "centre ground politics of common sense", underpinned by a permanent distrust of the 'special interests' who are seen to have captured and corrupted the political process elevating private advantage over the common good. It claims to speak both to and for the 'ordinary' person (Taggart, 2000:91-98). It lays particular emphasis on personalisation and visualisation elevating storytelling and witnessing above information (Ekstrom, 2000).

In the British context, this dual system has been mapped onto the division between the 'serious' news outlets identified with the broadsheet press and the traditional mission of public service broadcasting, and the 'trivial' and 'sensational' coverage associated with the tabloid press and the aggressively ratings-oriented television programmes. These terms carry strong moral overtones which have led a number of commentators to dismiss tabloid news as flawed communication, a departure from the idealised norm, rather than thinking of it as a parallel system, with its own well-established forms of representation and relations to its audiences, which require thorough investigation in their own right. This gap is beginning to be filled (e.g. Sparks & Tulloch 2000). However, as the present research confirms, if we are to design more effective systems of risk communication, we need to know much more. The organisation of tabloid news, particularly its use of colloquial language and its emphasis on visual images, presents particular challenges to research aimed at investigating the meanings that news offers its audiences (see further discussion in 2.2.1).

1.2.2 Are the Media Amplifiers?

SARF works with a variant of the strong effects model that suggests the media exercise a powerful and direct impact on individual knowledge, beliefs and behaviour. This view identifies the meaning of media ‘messages’ with their manifest signs and indicators, and views audience members as sovereign and separated individuals. In recent years it has been challenged powerfully by a substantial body of research stressing the active and social nature of people’s interpretations of media materials (e.g. Morley 1992; Moores 1993; Nightingale, 1996), paying particular attention to what communication implies: i.e. the meanings associated with particular images or linguistic phrases. This work advances two basic arguments.

Firstly, that media activity is an integral part of people’s general attempts to make sense of the world and their situation by slicing together mediated knowledge, institutionally approved knowledge (acquired via education and employment), and the informative and evaluative resources provided by personal experience and local knowledge. Because all of these resources are unequally distributed there are likely to be substantial variations in both interpretation and reaction. In depth interviews have been widely used to explore this shifting interplay between official, grounded and mediated knowledge.

Second, active audience models see interpretation and reaction as social processes stressing that people’s understandings of, and responses to, media are continually negotiated and refined through everyday conversation and argument. Unlike questionnaire responses, focus groups open up these dynamics for examination, which is why they have often been used in recent studies. They allow us “to get at the interactive processes whereby consumers receive information from each other, from official sources, from the media” and then respond by drawing on their own experiences and cultural stocks of knowledge (Hargreaves & Ferguson, 2000: Chapter 1: 15).

Some proponents of this perspective have tended to replace the strong media/susceptible audience model of effects research with a model of powerful audiences/limited impacts. There are several problems with this. Firstly, the resources provided by personal experience and local knowledge can constrain and limit as well as facilitate and enable understanding and knowledge gain (Murdock, 1989). “Audiences may misunderstand [an] ‘accurate’ message in ways which preserve prejudice and endanger themselves or others” (Kitzinger, 1999: 19). Secondly, acknowledging that interpretation is an active process does not mean that the media have no influence. Rather, it suggests that influence is not direct but mediated through people’s everyday social interactions and the cultural resources they possess. Pursuing these arguments, reviews of recent work in this area (e.g. Kitzinger, 1999; Wahlberg & Sjoberg 2000) point to several processes that are particularly relevant to the present discussion:

- The media’s most fundamental way of altering people’s perceptions is possibly by the number and vividness of articles and features.
- It has been suggested, but not proven, that extended media reporting over time is required to change beliefs and perceptions whereas high intensity reporting over a short period may increase concerns but not change beliefs (Rowe et al, 2000)
- The way stories ‘break’ initially is crucial to establishing dominant frameworks of meaning. These may prove difficult to counter or dislodge since people tend to pay less attention to subsequent developments.
- The media play a key role in framing and anchoring the meaning of particular events and issues through the headline language and visual images they employ.
- Because media, particularly ‘tabloid’ media, draw extensively on personal testimony in constructing stories, self-reinforcing ‘circuits’ may be established between lay public representations, everyday experience and social conversation (see Boden, 1992).

The logical conclusion is that any attempt to improve risk communication should address not only media performance, but also the role of the other information sources that shape audience understandings, and the relations between them.

1.2.3 Media Ecology

National media systems have unique histories, operate in particular market conditions, and are shaped by political cultures. The organisation of the contemporary British system exhibits characteristics that distinguish it sharply from the American context where SARF originated. It has a strong national daily press compared to the mostly regional or city-based press of the United States. The national press is divided into three well-established market segments - broadsheet, mid-market, and tabloid, each of which is dominated by a major title - the Daily Telegraph, the Daily Mail, and The Sun respectively (see Table 1.1).

Table 1.1
English national daily newspapers: market shares and readers' profiles

		% Share within Market Segment	Readers' Voting Choice in 1997 Gen. Election (%)			
			Labour	Conser Vative	Lib Democrat	Didn't Vote
Broadsheet Circulation 2,786,521	Daily Telegraph	37.4	20	61	10	9
	Times	26.7	29	37	22	12
	Guardian	14.3	69	0	25	6
	Financial Times	13.6	24	24	13	39
	Independent	7.9	39	12	35	15
Mid Market Circulation 3,428,392	Daily Mail	68.2	29	45	15	11
	Daily Express	31.8	22	53	11	14
Tabloid Circulation 6,616,206	Sun	55.9	38	23	9	31
	Daily Mirror	34.7	71	6	8	16
	Daily Star	9.4	58	11	9	22

Although the national titles express clear political preferences they do not map neatly onto readers' allegiances. The Sun supported Labour in the 1997 General Election, but 21% of its readers voted Conservative and 31% did not vote at all, suggesting a substantial disinterest in institutional politics. Interestingly 39% of Financial Times readers did not vote (Table 1.1).

Finally, in contrast to America which has an overwhelmingly commercial television system with a small and financially precarious public television system, Britain has a strong public service tradition in broadcasting, with the publicly-funded BBC having two major national free-to-air channels, with the advertising-supported terrestrial channels being subject to certain public service requirements. However, this hitherto relatively stable media ecology is undergoing important changes.

Firstly, newspaper reading is in decline with most people now reading only one national title (where before they might have read several), forcing publishers to devise new competitive strategies to hold on to their market position. The increase in specialised sections dealing with personal finance, health, and life style, together with more coverage of consumer affairs, is one response to a readership that is perceived to be "more concerned with the values associated with the products they buy", and "more female as women's economic and social interests become more diverse and editors search harder for female readers" (Hargreaves & Ferguson 2000: Chapter 4:10-11).

Broadcasters are also having to respond to increased competition. The last decade have seen a rapid growth of cable and satellite services and the launch of an additional terrestrial channel - Channel 5 - which have made substantial inroads into the audience share of the major established channels. Between 1991 and 2000, BBC 1's share has fallen from 38% to 28% and ITV's from 43% to 30%. In contrast the shares of both BBC 2 and Channel 4 have marginally increased by 1%. The main channels have responded to the intensified battle for audiences by giving a greater share of transmission time to programmes featuring ordinary people and everyday lives - talk shows, game shows, soap operas, docusoaps, and life style programmes (Arlidge, 2000). As Table 1.2 shows, news has also shifted in a more populist direction, with all the major evening bulletins giving more space to human interest stories

Table 1.2
National television news bulletins:
Percentage of running time devoted to human interest stories 1993-1996

News Bulletin	1993	1996
ITV 5.40pm News	8.9	15.6
ITV News at Ten	6.3	13.2
BBC 1 6pm News	1.7	8.9
BBC 1 9pm News	1.6	4.6

Source: Harrison (2000), pp182-183

In addition, all these 'vertical' circuits of communication now find themselves competing for audience attention with the new 'horizontal' networks based on the World Wide Web. These allow all participants to contribute to, as well as to receive, communication and open up the possibility of initiating continuing dialogue between institutions and their constituencies which is relatively independent of news attention cycles.

These simultaneous shifts in media ecology are changing the field of risk communication and posing new challenges for both researchers and practitioners. This is happening at a time of evident decline in institutional credibility, which is influencing responses to, and demands upon, risk communicators and managers.

1.3 SOCIAL TRUST AND INSTITUTIONAL CREDIBILITY

We deliberately duplicate the title of a theme presented in the report of a previous HSE research project on major accident hazards (Walker *et al*, 1998) so as to stress trust as a recognised underpinning influence on perceptions of risk and responses to communication and information. We know that distrust heightens lay public concerns and responses to risk messages; contributes to the unacceptability of proposals for activities perceived as risky; stimulates social and political actions to reduce or avoid risks; leads to questioning of the work and decisions of risk regulators and authorities, and promotes the selective use of information sources (Kasperson *et al*, 1992; Petts, 1992; 1995; 1998; Flynn *et al*, 1993; Löfstedt & Horlick-Jones, 1999). Media research suggests that people base many of their impressions on the source and its perceived credibility rather than on the information conveyed (Kaufman *et al*, 1999). It was impossible to conceive at the commencement of this project that trust would not arise as a significant influence on lay public responses to both the risk issues explored and the media as sources of information.

There has been significant theoretical debate about the nature of trust, about the conditions necessary for it to exist, and about its role in social organisation (reviewed, for example, in Clarke & Short, 1993; Earle & Cvetkovich, 1995; Misztal, 1996; Cvetkovich & Löfstedt, 1999). The identified problem of institutional failures (Freudenberg, 1993) has served to reorient risk perception work to

address the organisational context within which individuals construct understanding and form their views (Clarke & Short, 1993).

Social trust is defined as the process by which individuals assign to other persons, groups, agencies and institutions the responsibility to work on certain tasks. It allows us to interact with other parties despite uncertainty and a lack of full understanding of others. Perceived similarity in basic values (i.e. 'that person thinks like me') is presented as more important than issues of competence (Earle & Cvetkovich, 1995).

The psychometric perspective (reviewed in Renn & Levine, 1991; Kasperson *et al*, 1992; Peters *et al*, 1997) provides a broader view identifying five main cognitive components of trust related to perceptions of risk management institutions:

- (i) perceived competence to do the task allocated – including scientific competence;
- (ii) perceived objectivity - i.e. independence – in carrying out the task and taking decisions;
- (iii) procedural fairness in decision-making – acknowledging different views and including the involvement of interested parties in the decision;
- (iv) consistency of approach to the task which allows for some predictability in the way that responsibilities will be met and about the likely outcome;
- (v) perceived empathy – i.e. the extent to which it is thought the interests and concerns of the potentially affected parties are understood and taken into account (the social trust dimension).

There have been a large number of surveys which attempt to identify who the lay public trusts (and distrusts), particularly to communicate risk information (e.g. Worcester, 1995; Marris *et al*, 1996; Hunt *et al*, 1999; MORI, 1999). Indeed, the issue of trust is probably one of the most repeated survey questions. Common results across the surveys are achieved – i.e. doctors, academics and independent scientists are trusted, environmental and interest groups often achieve a middle ranking while government ministers and scientists and industry achieve the lowest rankings. Quality newspapers are more trusted than the tabloid press.

Some psychometric surveys have tended to give people a list of parties and institutions and specifically ask them which ones they trust. The approach makes assumptions about lay public perceptions and the important cognitive components. The approach sometimes offers people rather false comparisons – e.g. do you trust your family more than a politician? What psychometric studies, have often failed to do is to identify how individuals talk about trust and why some institutions are more trusted than others. The five theoretical cognitive components (above) still require more detailed understanding of which are the most important in perhaps initiating distrust; whether individual components are more important in relation to certain institutions and communicators; whether the components differ in importance or other components become important amongst different social groups. These questions present methodological challenges for researchers relating to situational specificity and the ability to generalise about trust dimensions where there are different social, cultural and political characteristics (Horlick-Jones *et al*, in press).

Traditional risk communication focused on risk estimate communication and risk evaluation justification fails to provide for public testing of expert knowledge and assumptions so as to provide for direct accountability and evidence of objectivity, competence and empathy (Petts, 1997). It also fails to acknowledge that risk management requires the locus of control to extend beyond the institutional and political to the personal. People want to make up their own minds and to take personal control decisions about risks that affect them. This desire directly affects their search for information, including their use of media sources. Risk tensions reflect conceptual differences and the associated allocations of responsibility and control, and raise significant questions about whose rationality (expert or public) should be accepted. What is known about the conditions which foster distrust leads to an emphasis on dialogue and deliberation in risk decision processes, as opposed to traditional one-way communication activities (Slovic *et al*, 1991; Flynn *et al*, 1993; Renn *et al*, 1995; Petts, 1995; Stern & Fineberg, 1996; ILGRA, 1998a & b; RCEP, 1998; House of Lords, 2000).

1.4 NEED TO TEST SARF IN THE UK CONTEXT

SARF was conceived and has been subject to empirical testing in the North American context. There are pronounced political and cultural differences between the UK and USA. It is essential that empirical enquiry examines whether research primarily conducted in other cultures has relevance for the UK.

However, more extensive questions than this must be raised about the relevance of SARF: (i) in the UK risk context, (ii) the UK media context (as identified above), (iii) in the current risk decision context where arguments for opening up processes to lay public involvement and the building of public values into assessment approaches contrast significantly with the expert/analytic basis of risk communication discussions in the 1980s when SARF was conceived, and (iv) set against recent developments in social and media theory and research.

The current emphasis on deliberative processes and the opening up of expert decisions to direct lay public influence, combined with the dramatic expansion of information media, creates an environment in which information and expertise are no longer protected, unchallenged, revered. When people take part in the types of deliberative process now being applied (e.g. the national radioactive waste consensus conference – UKCEED, 1999, and the local community advisory groups and citizens juries in local authority waste management planning - Petts, 1997, 2000) they place demands upon access to divergent views on particular issues so that they can make up their own minds about the relative merits of proposals and about the likely impacts. While deliberative processes increasingly provide direct access to experts, background information, either direct from experts or mediated, always underpins the discussion. Against the background of declining institutional credibility, the lay public see a need to empower themselves to be able to test expertise and decision-makers.

The ‘public understanding of science’ (PUS) has been the traditional phrase used by scientists/experts to describe the need to improve lay public responses to science. The contemporary revival in interest in PUS began with the Royal Society’s report (1985) and has been evident in a burgeoning literature, including the journal *Public Understanding of Science*. The Royal Society report justified a need for wider public understanding of science for economic, cultural and political reasons. It focused not only on everyday scientific issues but also on the need for people to be able to engage with ideas of risk and uncertainty. However, it was based in the ‘deficit model’ (Wynne, 1991) which viewed the lay public as starting from a position of ignorance. Today the discussion of public understanding stresses knowledge and expertise as only one component of ‘specialised knowledge’ (McKechnie, 1996). The public are not passive interpreters of knowledge (e.g. Naylor & Keogh, 1999) and science is believed to be facing a crisis of public confidence (Dunbar, 1995). ‘Science and society’ (Irwin, 1995; Irwin & Wynne, 1996; House of Lords, 2000) has been presented as more a meaningful description of the new relationship between science, the lay public and the media.

The international workshop organised as part of the programme of research of which this project is one component¹, explored SARF in the current risk decision and communication context (Kasperson *et al*, 1999), and reviewed its perceived weaknesses, i.e:

- its primary linear process conception (although iteration is recognised);
- the way in which it separates risk events from the underlying and pre-existing interpretations of issues – it reifies risk;
- the focus on the individual at the expense of social and group processes;
- its potential to simplify the complex interplay between grounded and mediated knowledge which is known to occur when people respond to risks;

¹ In 1998, the UK Interdepartmental Liaison Group on Risk Assessment let three research contracts to explore the impact of the social amplification of risk on risk communication in the UK, and a separate contract for an international workshop on the subject. The project discussed in this report was one. The other two projects were at the University of Surrey (Professor Glynis Breakwell) and Queens University, Belfast (Professor Noel Sheehy). The international workshop was organised by Professor Nick Pidgeon of University of East Anglia

- its focus on amplification of risk and on this as a negative process, and its failure to account for the power of (and use of power by) institutions, corporations and governments.

Marris (1999) argued that SARF had served to aggravate rather than alleviate the gap between the social sciences and ‘technical approaches’ to analysis of risk and that it had failed to explore the way in which expert evaluations are constructed including the subjective dimensions. SARF’s originators were quick to defend the framework and to correct what they perceived as incorrect interpretations of it. For example, they contended that the conceptualisation of the process in terms of the construction and transformation of sign, symbols and images by any array of ‘stations’ is compatible with, not contrary to, the view that knowledge about risk entails some elements of social construction and judgement. They stressed that the concept of the ‘initiating event’ was not meant to imply that a single baseline of risk exists. In responses to the allegation that SARF is too general to actually test, they stressed that it does as a minimum help to clarify phenomena, such the key role of the media.

Overall, however, there was some agreement that the social processes which affect risk interpretation beliefs and required policy responses are more complex than any framework can hope to portray. We were concerned that SARF embodies a tacit psychological approach that tends to treat sense-making by receivers of messages as a mechanistic, passive process. SARF says nothing about the power of the media, suggesting instead that they are neutral information conduits, when in practice media interests ensure that certain accounts receive selective presentation (Molotch & Lester, 1974). The Workshop participants agreed that significant outstanding research requirements existed, not least the need to understand the role of the media, but at the same time to understand the active way in which people make sense of their worlds and the means they use to accomplish that task (Horlick-Jones *et al*, 1999). SARF is based on a series of metaphors which seem largely untenable when set against recent developments in social theory and research.

In the Second Report of the Interdepartmental Liaison Group on Risk Assessment (ILGRA, 1998a) there was continuing evidence of the expert view that people’s perceptions of risk can be influenced by “the extent of media coverage and the biases it introduces”. However, there was concern that there is a need to build trust in regulators and decision-makers and for the:

“development of structures or frameworks for integrating risk estimates or risk judgements, public perceptions, the need for trade-offs and other factors in the decision making process”

The social amplification of risk research programme had already been commissioned when the report was published. It was stressed that this had the intention of not only providing more information on the role of the media, an area seen as having been neglected in previous (risk – implied in the statement) research, but would also give ‘practical insights’ into how Government departments should shape risk communication policies and practices. This project addresses this latter question, but in the context of the key questions about people’s everyday interpretative practices and use of the media, and a new and extensive understanding of how the UK media deal with risk issues.

2. RESEARCH APPROACH AND METHOD

2.1 OBJECTIVES

The sponsors' objectives provided the framework for this research, i.e.:

- (i) to test the relevance or applicability to the UK of SARF;
- (ii) to identify and analyse those factors most likely to lead to amplification or attenuation of perceptions of risks to health and safety, to include the influence of the UK media institutions;
- (iii) to draw out any lessons or implications for best practice, and as a result, generate firm proposals on how the research findings can be incorporated into the benchmark principles for good risk communication (HSE, 1998).

The media, in the UK context were evidently relatively under-researched in terms of their impact upon, and interrelationship with, the lay public in relation to risk issues. Therefore, the media were our focus of attention. However, in the light of the existing literature and understanding discussed in the previous chapter, we started from the basis that lay public responses to risk are not driven by media coverage *per se*, but are based upon:

- prevailing patterns of trust in institutions and decision makers;
- apparent and perceived linkages between risk, and non-risk, issues and events;
- grounded experience and knowledge, including local knowledge and experience derived from neighbourhood and locality;
- baseline mediated knowledge derived from existing patterns of media consumption, and
- group and individual interpretative practices.

We wished to develop an understanding of not only how the media report risks, but also how the lay public view the media and the impact of the media on their responses to risk. Therefore, our specific objectives were to:

- (i) track media reporting of events having risky outcomes;
- (ii) understand how the lay public receive, filter, evaluate and compare information from different sources;
- (iii) understand overlaps between (i) and (ii);
- (iv) understand news and information strategies adopted by government departments;
- (v) analyse the outcome of (iv) in terms of media reporting, and
- (vi) identify requirements for improved information and communication strategies.

2.2 RESEARCH APPROACH

2.2.1 Understanding the Media and Risk

There are two basic approaches to analysing media output. Content analysis constructs systematic samples of news and records key aspects of each item, such as: the topics and themes they deal with; their relative prominence; whose actions are reported; who is quoted, and whether they offer explanations or attribute responsibility. It is a counting exercise designed to produce summary statistical data. Most past studies of the coverage of risk-related issues, particularly those that have been used to support the SARF model, have employed variants of this basic technique. As a method it has several important strengths.

Firstly, by producing a comprehensive map of basic structures of news attention it allows us to chart the distribution of ‘spotlights and shadows’ and identify which areas of risk are covered frequently and which are relatively neglected or ignored. These basic patterns have important consequences for public knowledge since they provide potential templates for people’s mental maps.

Second, because the same information is recorded for all items in the sample, content analysis allows us to make systematic comparisons between different media sources such as broadsheet and tabloid newspapers, or contrasting television channels. This, in turn, allows us to explore possible connections between people’s understandings of risk and their patterns of media consumption.

At the same time, content analysis has important limitations. Firstly, it is immensely time consuming to conduct, particularly for television news where a single news item may have to be viewed many times in order to accurately log all the aspects listed on the coding sheet. This has led many studies to focus solely on the press or to sample television news very selectively. John Durant’s work on the GM food debate, for example, excludes independent television news (Durant & Lindsey, 1999). In the British context where television is most people’s major news source and also the most trusted, a comprehensive sample of the main channels’ output is essential. A research approach led by the resourcing issue will fail to address a significant source of mediated knowledge. Television, for example, is probably the largest source of knowledge on contemporary science (Bennett, 1999). However, it is not only the news, but the full range of television reporting – documentaries, chat shows, quizzes and game shows, drama, ‘soaps’, - which may convey science. This project has tried to improve the research approach to television, but has not had the resources to cover all of its elements.

Second, while content analysis provides an indispensable map of news attention, because it records disaggregated features of coverage, it has little to say about how meanings are produced through language and imagery. For this we need qualitative studies that draw on the resources of linguistics and visual analysis to tease out the implied meanings carried by particular phrases and images. Developing a more adequate account of media representations of risk requires “not only content analysis sufficiently resourced to appraise the television and radio as well as print media, [and now the Internet] but techniques of textual, visual and symbolic analysis” (Hargreaves and Ferguson 2000:Chapter 6:2).

Even when done well content analysis does not provide the full answer to the problem of understanding how media coverage influences lay public perceptions of risks (Lichtenberg & Maclean, 1988). The primary problem lies in being able to draw firm conclusions as to whether it is the media and not something else which is impacting on perceptions and responses. If the media selected are limited, understanding the impact of different media will be impossible. Scientists are known to use such diverse sources of mediated knowledge (peer-reviewed papers, technical reports, grant proposals, laboratory reports, e-mails, mass media, internet) that they find it difficult to disentangle how or even why they ‘know’ something (Lewenstein, 1995). In the 21st century this must be equally true of the lay public.

Media research has usually focused on the traditional media. However, the Internet is becoming a significant source of mediated information. While currently only accessed by a minority of the public, this is a significant minority and an increasing one – approximately 20% currently have home access, and 35% have access either through home or work. We have not been able to tackle an analysis of this massive mediated resource, although we have referred to relevant information on our risk issues. Also resource limits have prevented us from addressing radio or popular magazines.

Content analysis and qualitative analyses illuminate different aspects of the complex relationships between media representations and public understandings. Consequently, wherever feasible it is desirable to combine them (see Deacon *et al*, 1999), as in our study. Recent developments in thinking about media impact add further weight to this solution.

2.2.2 Lay Public Perceptions of Risks

The recent report on science and society (House of Lords, 2000) examined the communication of risk, and chose to highlight the potential policy-relevance of research into how lay publics receive and make sense of risk information. This topic has been an important focus of this project. Here we examine some theoretical perspectives that proved important in developing the research approach, before discussing the methodological detail.

Pierre Bourdieu's ideas (e.g. 1990) were of particular relevance. His notion of the *habitus* provides a useful concept describing the awareness arising from practice and experience and exposure to formal sources of knowledge. This has clear similarities with a number of notions that have provided useful explanatory resources in risk-related work: e.g. the "local-global dialectic" of knowledges (Horlick-Jones *et al*, in press; see also Thrift, 1985), the developments of interpretive "schemas" (Wilkins and Patterson, 1990), and the "mechanisms of relevance" entailed in determining action in risky situations (e.g. Bloor, 1995).

The key issue is the relationship between direct and mediated experiences. Mediated experiences draw on formal knowledge, but also accounts (direct and indirect) of the experience of others. In order to understand the reinforcement (amplification) or negation (attenuation) of the relevance of risk issues, we needed to examine the interpretive work which is entailed in reconciling the consistencies and contrasts between different types of experience. The move to qualitative research methodologies in media studies has come from recognition of the need to 'naturalise' audiences in their everyday settings (Morley, 1991). The media are an integral part of everyday life, contributing to collective processes of 'making sense' of the world in different social contexts, localities and social and cultural groups (Burgess, 1990).

John Thompson's (1990; 1995) work on the sociology of the media recognises that getting to grips with "the everyday appropriation of mass-mediated products" necessitates an understanding of everyday interpretive practices used by lay audiences. This work also draws upon Bourdieu, and like ours is explicit in recognising the active ways in which people interpret and use symbolic resources at their disposal (see also Horlick-Jones *et al*, in press).

Thompson (1990) developed a methodological framework which emphasised techniques such as narrative and "argumentative" analysis (see also Lascoumes *et al*, 1978). In our research the role of arguments proved to be analytically important in investigating contrasting 'sense-making' practices corresponding to different risk issues. Our perspective on investigating risk perception by lay publics has been strongly influenced by previous "interpretive" research (e.g. Zonabend, 1993; Irwin *et al*, 1996), and in particular by two recent studies: the HSE-sponsored work by Walker *et al* (1998) on the perception of major accident hazard sites, and the EU-supported cross-cultural PRISP project (Horlick-Jones, *et al*, 1998; Horlick-Jones, *et al*, in press) on the perception of environmental hazards posed by mixed industrial zones.

In contrast to much work in the risk perception area, which is psychological in nature, interpretive research is more closely related to ethnographic traditions of parts of sociology and anthropology (see Hammersley & Atkinson, 1995). This work is largely qualitative in nature: although the two major studies cited above both utilised a mixed-method approach, combining qualitative and quantitative tools. An ethnographic approach also stresses the need to access, wherever possible, 'naturally occurring' lay accounts by means of *in situ* studies, rather than 'laboratory' investigations. In this way the work seeks to understand how lay groups find meaning in risk issues, and how such issues become embedded in the everyday life of people and communities. We hypothesised that media reporting, and public filtering and evaluation of different information, and responses would vary according to different risk characteristics: i.e. that it is not possible to generalise across different risk issues, and that different risk information and communication strategies might be necessary depending on the topic.

2.3 RISK ISSUES

We selected five risk issues for study: air pollution; genetically modified (GM) foods; Radon; train accidents; the Millennium Bug, and also one "live" event which turned out to be the Ladbroke Grove (Paddington) train crash (October 1999). Testing of SARF and also much risk perceptions and media work has tended to focus on single or closely related risk issues. We were concerned to respond to the very different nature of hazards and risks, in terms of: exposure; outcomes/harms; expert knowledge; lay public experience and known lay public concerns. We were concerned that if practical lessons were to be drawn from the research it was important that issue-specific communication, as opposed to generic 'good practice', risk communication recommendations were derived.

The risk issues were selected using the following typology:

<i>Spatial Exposure:</i>	Local or national
<i>Spatial Effects:</i>	Local or national
<i>Exposure/risk:</i>	Voluntary or involuntary
<i>Nature of Effects:</i>	Acute or chronic
<i>Source:</i>	Natural or man-made
<i>Reversibility of Effects:</i>	Irreversible or reversible
<i>Trust in Institutions:</i>	Low or high
<i>Equity in Risk Distribution:</i>	Equitable or inequitable

Thus, Radon is a natural hazard which would be conceived as having local exposure and effects, represent an involuntary risk, present chronic effects which may irreversible, but may not lead to undue mistrust in the responsible institutions (primarily local government). By contrast train accidents could have national exposure (in that they could happen anywhere), be arguably a voluntary risk (in that people may have a choice of travel mode), present potentially acute effects, be man-made hazards, and be subject to declining trust in responsible institutions (i.e. the train operators).

The risk issues were selected in discussion with the Government departments/agencies represented on the project steering group. All of the issues selected were considered of interest by the Departments.

The Millennium Bug had particular temporal relevance and represented an opportunity to consider an issue of international importance but of limited potential timescale. In developed economies much effort was being expended by governments and industry to ensure that critical computer systems had been 'debugged'. However, press reporting appeared to be leaving the impression that some systems were inadequately prepared. There was beginning to be evident divergence in public responses to the issue between the US and UK. In the former, responses appeared to be vocal, urgent, concerned and with self-protection activities apparent. MacGregor (1999) reported that anecdotal evidence suggested that concerns about 'Y2K' in the US may translate into behaviours that not only had a significant impact on society, but may in and of themselves exacerbate or bring about conditions beyond those predictable solely from computer-failure events. In the UK, although a major government information campaign was commencing at the time of this project (including the booklet provided to every household – *What Every One Should Know about the Millennium Bug*) and there was evidence of public interest there was relatively little public urgency or paranoia.

GM foods became an issue of high political, social and media attention during the period of the research, to an extent that could not have been foreseen at the start. Indeed, the extent of reporting on GM foods required additional resources to be devoted to the media analysis. All observers agree that during 1998 and particularly the first six months of 1999 (the period of media content analysis of this project), the UK witnessed an extraordinary high level of public concern and media reporting about GM foods and crops in particular. The potential for GM foods to attract such attention had been predicted (Grove-White *et al*, 1997). In particular it was forecast that public lack of familiarity with GM technology, latent anxieties about its implications and about the current limitations of regulatory arrangements for addressing such

implications would drive lay public concern. The BSE crisis had already provided a basis for concerns about developments in food production and farming practices.

In the first six months of 1999 we saw the destruction of field trials of GM crops by activist groups; the arrest of groups of activists charged with criminal damage; lobbying of supermarkets and agro-food companies by consumer-groups; pledges by major food retailers to remove GM ingredients from their own-brand products; requirements for restaurants etc to indicate on menus whether foods contained GM ingredients, and Government announcement of a series of field trials with the locations to be made public. Media presentations of the GM issue during this period have also been studied by Durant and Lindsey (1999), although their study did not address all of the relevant TV sources and in limiting their newspaper analysis to CD-Rom based records they inevitably restricted the nature of the content analysis undertaken.

The Ladbroke Grove (Paddington) rail crash on Tuesday 5th October 1999 in which 31 people died and 414 were injured formed the 'live' case study. It had been expected that during the research period such a live event would involve transport with multiple, acute effects. Train accidents in general were selected as one of the risk issues on the basis of acute effects which could affect anyone who was a train traveller. Whilst an element of voluntary risk was involved, this was not to underestimate public expectations of safe operating practice. Earlier accidents (e.g. Clapham, 1988 – 35 dead; Purley 1989 – 5 dead; Maidenhead 1995 – 1 dead; Watford, 1996 – 1 dead; Southall 1997 – 7 dead) had already raised train safety as an issue of concern, not least since privatisation of the industry.

Radon was selected not only as a natural hazard (the only in the set) but as one which it was hypothesised might be attenuated in perception and response terms, including some literature evidence to this effect (see e.g. Michael, 1992). As a natural risk we were interested in exploring how people made sense of risk issues for which human responsibility was perhaps more difficult to identify. Moreover, Radon seemed to contradict widespread notions about "natural" things being wholesome, unspoiled, etc. (e.g Williams, Raymond, 1976).

High levels of Radon occur in domestic dwellings and workplaces in some areas (e.g. of Cornwall, Devon and Derbyshire) which have been designated Radon Affected Areas. Raised Radon levels have been implicated in an increased risk of lung cancer even at the moderately elevated levels found in some domestic properties (Lubon & Boice, 1997). The National Radiological Protection Board (NRPB) estimates that people living in high Radon areas may have a 1 in 30 risk of contracting lung cancer if exposed to levels about the action level (200 bequerels per cubic metre) for their lifetime. Free Radon measurement tests are offered to householders in affected areas. However, when this service was first offered in South-West England (1998) only 27% of householders took up the service. We considered that concerns about property blight and also unfamiliarity with the issue even in high risk Radon areas may lead to not only low media coverage (including in local newspapers) but also relatively low expressed concern.

Air pollution was selected as it is known to be an issue of general public concern (DETR, 1998). The apparent increase in childhood asthma and air pollution in urban areas from traffic is known to be of concern, with the effects of air pollution experienced directly by a significant proportion of the population. However, it was also expected that the topic might attract relatively low media attention except in relation to peak pollution episodes.

2.4 RESEARCH COMPONENTS

The research comprised the following:

- A media survey for 6 months to track how the language of risk is used - based on 21 risk-related headline words;
- A survey of media reporting related to the case study risk issues;

- 18 focus groups (145 people) with members of the public to understand what people worry about, where they get information and their perceptions of the relative merits of different sources;
- 9 TV groups (36 people) - to explore how people respond to TV reporting (news; documentaries; popular chat shows) of particular risks;
- 17 interviews - to explore how individuals use newspapers and respond to reporting on risk in papers which they read regularly;
- 7 interviews with senior press officers in government departments to ascertain their relationship with the media and attitudes to media reporting of risk.

The following sections explain the logic to these components and detail their conduct.

2.4.1 Media Analysis

The project has tried to respond to the heterogeneous but also still largely stratified nature of the UK media – 10 daily and 9 Sunday newspapers have been examined routinely together with the main terrestrial evening news broadcasts (see Table 2.1). In addition current affairs programmes and documentaries (e.g. Panorama, Despatches, Horizon) have comprised components of the TV survey when it has been known in advance (by examination of weekly TV listings) that any of the key risk topics would be covered. As discussed earlier the research has not been able to include (because of resource constraints) other important information media – e.g. TV drama, radio, popular magazines, the internet.

Table 2.1 Media analysed routinely

Daily Newspapers	Sunday Newspapers	TV News
The Express	The Mail on Sunday	BBC 1 early evening news
Daily Mail	News of the World	ITN early evening news
The Mirror	Sunday People	Channel 4 news
The Sun	The Express on Sunday	Channel 5 news
Daily Star	Sunday Mirror	Central News
The Daily Telegraph	The Sunday Times	East Midlands Today
Financial Times	Independent on Sunday	
The Guardian	The Sunday Telegraph	
The Independent	The Observer	
The Times		

The research has combined a quantitative content analysis of the reporting of risk and qualitative analyses of the language and imagery used. In order to develop a systematic account of the overall distribution and emphases of risk coverage in the major news media, all relevant stories appearing in the national and local television bulletins listed in Table 2.1 and in selected national newspaper titles were sampled over a six month period in 1999 and their principle features recorded using the coding categories in Box 2.1.

The analysis covered news pages, and women’s and lifestyle supplements, media and entertainment pages and educational and financial supplement. Main and up to two secondary images have been recorded whether photographs, data (e.g. tables or charts), cartoons or logos including whether they relate to the site of the risk event or the risk actors (e.g. observers, victims, rescuers, member of pressure groups etc). Under ‘reason for the story’ or the ‘prompts and pegs’ some 34 elements have been coded including legal issues, government or political announcements, initiatives by corporations, research initiatives or initiatives by other actors such the police, emergency services, or members of the public.

Box 2.1
General coding headings (no of sub elements)

Date (1)	Impact scale (6)
Day (7)	Direction of impact (4)
Medium (19)	Who or what is affected (17)
Page (10)	Victim's gender (4)
Format (6)	Victim's age (6)
Image included (2)	Victim's social status (10)
Image type (7)	Victim's ethnicity (3)
Image topic (16)	Who is quoted (14)
Prompts for story (34)	What the speaker is doing (7)
Location in time (3)	What explanations are offered (16)
Atlas location (15)	Who is held responsible (28)
Social location (3)	Response stage (5)
Risk topics (38)	Response mode (13)

The risk issues coded (78) included the case study topics together with a range of natural, man-made and social hazards known to be of concern to the public, i.e. natural hazards (floods, earthquakes, hurricanes etc); environmental depletion; diseases and medical conditions; famine; climate risks (e.g. global warming and El Nino); risks to the body and health; transportation risks; technological risks arising from power generation and the utilities; occupational hazards; accidents in the home; environmental risks particularly air pollution and pesticides; space, military and defence technologies; personal money matters, and crime. The risk issue not covered was financial risks to corporations because it was felt to be of less interest to the general public. It is, however, worthy of study in its own right.

The types of impact reported included impacts on people, animals, corporations, government and environment. The explanation of why the impact was occurring included natural phenomena, neglect, misinformation, conflict, accidents, mis-management, failure of government or of regulation, malicious and deliberate acts. Responsibility has been considered in terms of individuals, governments, corporations and other collectives.

Alongside the quantitative content analysis, qualitative studies of the language and imagery deployed in the coverage of the case study topics was undertaken. This work focused on two major aspects of reporting:

- (i) *framing* – how the meanings given to risk events and issues are defined by linking them both to prior events and to other salient contemporary issues, and
- (ii) *anchorage* – how these preferred definitions of events are secured through the use of resonant linguistic tags and visual images that connect them to underlying popular fears and anxieties.

Both the quantitative and qualitative studies are described further in Chapter 4.2.

2.4.2 Focus Groups

In common with a number of recent studies (see also for example, Golding *et al*, 1992; Wynne, *et al*, 1993; Grove-White *et al*, 1997; Walker *et al*, 1998; Horlick-Jones *et al*, 1998), we utilised focus groups as a means to elicit and observe lay talk about risk issues. Focus groups are informal, facilitated, discussion groups, involving lay participants. They were initially used in commercial market research, but are now regarded as an important tool in academic research (eg Krueger, 1994; Morgan, 1996; 1997; Barbour & Kitzinger, 1999).

A focus group methodology allowed the generation of relatively unstructured conversations among small groups of people, hitherto unknown to each other, and specially recruited as participants. In this way, we used the device of staging 'social microcosms' in order to produce talk about risk issues which drew on patterns of everyday understanding. This resulted in large volumes of data which arguably reproduce patterns of 'ordinary conversation' about risk issues and which were collected in a manageable and cost-effective way.

We support the view (e.g. Kitzinger, 1994), which has sometimes been contested (e.g. Myers, 1998), that focus group data do reproduce fragments of dynamic, natural conversation. Moreover, we suggest that this approach provides a valuable means to identify and study patterns of interpretative behaviour shared by societal groups: i.e. how people make sense of risk-related issues and how they formulate and articulate their views (e.g. Morgan, 1996; Barbour & Kitzinger, 1999).

Focus groups are not group interviews. The facilitator steers the group conversation in such a way as to ensure that certain topics are addressed. An equally important role for the facilitator, however, is to encourage participants to air their views, to explore ideas and, where appropriate, to express disagreement. The resulting data can feature long runs of group conversation, structurally similar to ordinary conversation (see Sacks *et al*, 1974), often apparently rambling and featuring anecdotes and jokes.

It is important to note that the findings of focus group research are not 'representative' in the manner of quantitative survey research. Focus groups provide a powerful means to explore certain group norms and shared ways of conceptualising and talking about things: arguably part of the very resources that allow intelligible conversation and meaningful social interaction to exist. Focus groups establish a more dynamic and in certain ways more revealing research output than a one-to-one interview or a survey.

We ran 18 focus groups, with 145 participants, between April-December 1999, employing a market research recruitment agency to identify and recruit participants. Each participant received a modest (£15) remuneration for taking part (if run now this amount may need to be increased to £25-30). All the groups were held in the recruiters' homes apart from the two Muslim groups which were held in a local Muslim community centre. The use of recruiters' homes meant that people often had little distance to travel, discussion was in a relaxed environment, the location was cost effective and the recruiter acted as a hostess, welcoming people, serving refreshments, etc leaving time for the researchers to focus on setting up, and particularly minimising the 'turn round' period between groups.

The recruitment agency was given a socio-demographic profile for each group to be recruited, which was largely achieved (see Table 2.2). Excluded were people who worked in the media and those with specific financial interests or work experience in occupations related to the risk issues. For example, anyone who worked in farming, growing food commercially, or food retailing and manufacturing was excluded from the GM food groups, anyone who worked for the NRPB from the Radon groups and environmental health officers, nurses and doctors were excluded from the air pollution groups.

The objective was not to select a representative set of participants in terms of either the national or local population but to run different groups which might reflect different interests and views. For example, the use of locations where rail commuting to London is evident and the specific choice of Farnham in relation to the Ladbroke Grove rail accident as it is not on the affected route to London (and therefore was less likely to create recruitment sensitivities) but is on the route of a previous major accident (Clapham Junction – 1988). The Radon groups in Mansfield were in a high Radon affected area, whereas Swansea has a low Radon risk. In relation to air pollution a distinction between urban (Swansea) and rural (Somerset) areas sought to identify different experience of pollution affects. In relation to the Millennium Bug one group (Portsmouth) was run with small business owners/managers who might have direct need to take action to protect business services and one group with young males who could be considered to be supportive and possibly trusting of computer technology. We specifically included two ethnic minority

groups conscious of the failure of much research to address the risks concerns of minorities and socially excluded groups.

Table 2.2
Details of the focus groups

Risk Issue	Location	No. in group	Characteristics
Millennium Bug	Farnham, Surrey	8	Male, A-E (20-35)
	Portsmouth, Hampshire	6	Mixed, BC1, business people (20-52)
	Chapel Allerton Somerset	9	Female, BC1, non working (40-60)
GM Foods	Swansea, South Wales	9	Female, CBC2, with children (27-43)
	Leicester, Leicestershire	8	Female, C2, with children (27-61)
	Nuneaton, Warwickshire	9	Male, BC, Muslim, without children (22-35)
	Nuneaton, Warwickshire	7	Female, C-D, Muslim, without children (22-37)
Rail accidents	Swansea, South Wales	9	Mixed, C1, car owners (27-62)
	Watford, Hertfordshire	8	Mixed, C2D, non-car owners (30-69)
	Crowthorne, Berkshire	6	Mixed, commuters, B, (24-60)
Ladbroke Grove rail accident	Farnham, Surrey	8	Mixed, non-commuters, AB (30-52)
	Farnham, Surrey	6	Mixed, commuters, BC1 (29-60)
Air pollution	Swansea, South Wales	10	Female, C2DE, with children (23-39)
	Leicester	9	Mixed, C1C2, no children (25-35)
	Chapel Allerton Somerset	9	Male, BC1, with children (35-60)
Radon	Swansea, South Wales	8	Mixed, A-C2, home owners (33-51)
	Mansfield, Derbyshire	9	Mixed, B-C2, home owners (30-51)
	Mansfield, Derbyshire	7	Mixed, DE, non-home owners (37-50)

Key: Mixed – male and female

A-E Gradings on Occupation (The Market Research Society): A – professional people, very senior managers; B – middle management in large organisations or top management in small organisations; C1 – junior management, owners of small establishments and all other non-manual positions; C2 – all skilled manual workers & manual workers with some responsibility; D – all semi-skilled and unskilled manual workers; E – all those dependent on benefit, casual workers and those without a regular income

Common to recruitment for focus groups it proved slightly easier to recruit people from socio-economic groups C2-D (representing 44% of the population) and non- or part-time workers (despite the fact that all but one group (a rail group for non-car owners) was run in the evenings. It is possible that offering a larger cash incentive may have made it easier to recruit people in the A-B groups (17% of the population).

In relation to the two Muslim groups we recruited younger people to avoid language problems. We did not mix genders or faiths. Chapter 6 includes further discussion on the involvement of people from ethnic minorities. At this point it is relevant to note the additional resources (including translation) that may be required, but our belief that this type of inclusion in risk research is important, indeed essential in a multi-cultural country like Britain, particularly in some cities where about 20-30% of the population (>90% in specific areas) may be from other ethnic/cultural backgrounds.

Box 2.2

Focus group discussion guide

1. Introductions

Facilitator and colleague(s) introduce themselves.

This meeting forms part of independent university research, conducted on behalf of a number of Government Departments.

Looking at attitudes toward certain things in Britain today; in particular things about which there is "cause for concern".

Mention taping/confidentiality

2. Go around the room

First name

Say something about yourself

3. Preamble

This is not an interview, nor a quiz - there are no "right" or "wrong" answers.

Say what you think and why.

Don't worry about disagreeing with other people.

Occasionally we'll make suggestions about topics that might be included in the discussion, but essentially we're here to listen to what you have to say.

4. General discussion about concerns

Use of flip chart to list issues (mainly presented in list style but with some discussion where clarification of a point required)

5. Discussion of risk issues

Use of flip chart list as a resource in identifying issues for further discussion, taking key issues in turn

Taking each issue ask people what is the nature of their concern, where they get information from about the issue, and their view of the information which they receive or access

6. Closure

Identify the risk issue which has been focus of the group (if not already apparent)

Gather any concluding comments

Explain reason for research further

Each focus group lasted for approximately 90 minutes and was facilitated by a member of the project team, usually with at least one other member of the team present in a support role. The discussions were audio taped and fully transcribed, yielding the equivalent of 27 hours of data. The second researcher took notes during the sessions so that the transcribed material could be checked (particularly where the tape was not clear) and specific statements ascribed to individuals (although none of the analysis identifies individuals).

The groups (except for the two relating to the Ladbroke Grove rail crash) ran according to a shared protocol, but in a flexible way which allowed ideas to be explored, and the specific features of each group to emerge (see Box 2.2). The research team did not want to bias or orientate the discussion through specific prompts. For example, the issue of trust in information sources was not raised by the researchers but was generated entirely by members of the groups.

During subsequent stages of the group conversations, the facilitator gently encouraged exploratory discussion, and guided the group towards considering those hazard issues that did not emerge naturally. None of the participants were told in advance which risk issue would be the topic for their group. In most discussions the topic was raised by the participants unprompted – particularly in relation to GM foods, the Millennium Bug and air pollution. Given the topicality of the first two this was not surprising and evidence from other research is that air pollution is raised as an environmental issue of concern by most

focus group discussions. Radon was not raised unprompted by any group, even in the high Radon affected areas. Indeed such was the level of ignorance of Radon that when introduced by the researchers people responded with some concern and shock and the groups started to ask questions of the researchers about Radon, safe levels, the responsible bodies etc.

Box 2.3
Focus group schedule for Ladbroke Grove accident

1-3 As in Box 2.3

4. Positive/Negative things about rail travel

Your personal experience/views about rail travel

Source of these views – experience, friends/colleagues, relatives etc; media; other sources

6. Preliminary discussion of media

Your consumption patterns

Coverage of railways

7. The Ladbroke Grove crash

General discussion (to get ideas on the table)

Media consumption after crash

What did the event mean for you personally?

How do you relate your own experiences to what you read in the papers/saw on the TV etc.

Media stories – including use of the ‘prompts’ - who’s right/wrong, good/bad sources and why, intrusive?

Pick up on other ideas as appropriate.

8. Send a "postcard to Prescott"

Around the room. Invite participants to sum up by encapsulating their thoughts on the railways for the relevant government secretary of state.

9. Closure

Gather any concluding comments

Explain reason for research further

The two groups run in relation to the Ladbroke Grove rail accident took place within two weeks of the accident when the media reporting while declining in volume was still evident and the accident And Its ramifications were still fresh in people’s minds. Because of the immediacy of the press reporting and of the incident a selection of headlines and reports from the newspapers about the accident were used as prompts for the discussion (see Box 2.3).

As indicated by Boxes 2.3-2.4 there were no predefined questions and no direct questions aimed at pinpointing evidence of amplification or attenuation

A post-group questionnaire provided information on participants’ media habits. These were particularly useful in allowing the focus group data to be analysed in relation to the media to which members of a particular group were exposed. The questionnaire contained a section on employment so that any specialist knowledge about a risk area was revealed. Information on gender and children was included as this has been shown to affect attitudes to risk (Slovic 1987), for example people with children are more likely to be concerned about risks which may affect the health of future generations. Information on household income was included as this factor could affect food shopping decisions and exposure to air pollution (for example, residence in inner urban areas close to industrial activities).

2.4.3 Media and the Lay public

The focus groups, while valuable in helping exploration of interpretative practices, proved more limited in terms of understanding the basis of people's perceptions of, and concerns about, the media. While people in the groups were happy to refer to the media in generic terms they were less willing to explore specific media – particularly the tabloid press – and to discuss the presentation of specific risk issues. Even in the Ladbroke Grove focus groups, where headlines and newspaper reports were used as prompts, people seemed uncomfortable about expressing views in the group, and there was some evidence that analysing the media in this way was not something people were able (or willing) to do naturally.

Therefore the decision was taken to run two different discussion-based components which more accurately reflect how individuals engage with and interpret the media. Firstly, a series (9) of small group (4 people per group) TV discussions were held with people who knew one another – as friends or family. Apart from the two young people's groups some people in these had participated in the earlier focus groups. The group organisation was felt to more accurately reflect how people might watch and reflect upon television programmes. The characteristics of the participants are shown in Table 2.3.

Table 2.3
Characteristics of TV group participants

	Characteristics
Farnham, Surrey	(i) 2 male, 2 female, C2-D (aged 35-51) (ii) 3 male, C2 – aged 19-27
Somerset	(i) 2 male, 2 female, B-C2 (aged 49-54) (ii) Female, C2-D (aged 38-88)
Swansea, South Wales	3 male, 1 female – B-C1, (aged 28-41)
Leicester, Leicestershire	4 Female, C2-D (aged 23-32)
Hampshire	(i) 4 female, students, (aged 15-17) (ii) 4 male, students (aged 17-18)
Birmingham	Female, B-C2, (aged 19-44)

Key: A-E – as in Table 2.2

The small groups were asked to watch a series of short (3-5 minute) clips from different programmes relating to GM foods and the Ladbroke Grove train accident (selected as divergent risk issues which had received large amounts of media coverage). The programmes included the BBC 6pm news on the day of the train accident (an example of general news coverage), a GMTV item on the day after the crash which could have been viewed as intrusive, and a ITV studio debate one week after the accident discussing issues of blame. The GM foods reports included the 6pm BBC News item from February 1999 which stressed the political differences which were emerging, a populist studio discussion (Thursday Night Live), and a Channel 4 news item from August 1999 which provided scientific evidence.

After each clip discussion was initiated using a set of prompt words (see Box 2.4) as a means of engaging people. Each person identified the words that they felt summarised their own feelings about what they had watched. They were asked to explain the characteristics of what they had watched which had led them to select a particular prompt word. This discussion was then allowed to develop out people often providing examples of similar or divergent media and stories which illustrated their point. Interspersed with the discussion were observations on the risk issue *per se*.

Box 2.4
Prompt phrases/words for TV groups

Interesting	Objective	Easy to follow
Exciting	Balanced	Relevant to me
Superficial	Moving	Complex
Boring	Informative	Dramatic
Entertaining	Condescending	Confusing
Intrusive	Trustworthy	Sensationalist
Biased	Professionally put together	

In addition 17 face-to-face ‘interviews’ were held with people who had taken part in the original focus groups selected because of their identified newspaper readership. People were given a copy of the newspaper which they normally read and asked to go through each page identifying which stories/features/articles/adverts they would be likely to read, how much of each they would read and why it would be likely to attract their attention or interest them. Each newspaper issue was selected because of its inclusion of either a GM food story/feature or Ladbroke Grove accident item. In addition issues which covered a natural hazard event in another country – such as the Taiwan earthquake – were selected with the specific objective of identifying whether natural disasters and particularly those in countries far away attracted a similar level of attention as stories related to the UK. Following the general discussion the person was asked to read one of the selected stories (selected as front page stories, editorials, and column articles), to identify prompt words which related to their feelings about the story (as in Box 2.4) and to discuss what it was about the nature of the issue and of the reporting that either attracted their attention or meant that they would not be likely to read it. The interviews lasted an average of 45 minutes.

At the beginning of the TV groups people completed a questionnaire about their press consumption in terms of frequency of watching BBC, ITN, Channel 4 & 5 news; Newsnight, Panorama, Breakfast News, local news, two daytime ‘chat’ programme (‘Kilroy’ and ‘This Morning’) and the weekly consumer affairs programme ‘Watchdog’. The questionnaire included a Likert-type scaling relating to strength of agreement with a number of statements taken from the focus groups about the character of the programmes and presenters. At the end of the groups each person completed a similar questionnaire about frequency of buying or reading 12 newspapers (including local and Sunday papers) with the same questions about strength agreement with a number of characteristics statements. The newspaper interviewees commenced their session with the latter and completed it with the television questionnaire.

Both the TV groups and the newspaper interviews proved popular with participants, with people quickly falling into discussion and able to focus on the media reporting as opposed to the issue itself.

2.4.4 Press Officers

The final element of the project was a small number (7) of telephone interviews with senior press officers in the government departments/agencies which had supported the project – i.e. the Department of the Environment, the Health and Safety Executive, the Department of Health, the Food Standards Agency, the Environment Agency, and the Civil Aviation Authority.

These interviews explored the structure and operation of the press offices, the risk issues which they communicated about, the nature of their relationship with the media, their views of media reporting.

3. HOW LAY PUBLICS MAKE SENSE OF RISK ISSUES

3.1 INTRODUCTION

This Chapter considers the ways in which lay publics make sense of risk issues. It draws upon the data collected in the focus groups, the rationale for, and structure of, which were discussed in 2.4.2. Three analysis approaches are presented. Firstly, an analysis of the ‘worries’ or concerns which members of the groups raised during the opening few minutes of each group. Second, an analysis of the ‘patterns of talk’ within each group which reflected shared ways of talking about and understanding risk issues. Third, an analysis of how the accounts of risk issues were constructed – i.e. what sources of information and knowledge people were using.

Within each of these three sets of analyses, there is a marked difference between the attention given to the individual risk issues by the participants. Thus, GM foods and air pollution were readily explored by nearly every group. The Millennium Bug and train accidents prompted much less interest and attention, even in the two groups that met soon after the Ladbroke Grove accident. Radon was not discussed ‘voluntarily’ by any group. Even in the high Radon areas the topic had to be introduced by the facilitator. We explore the reasons for this in the following sections, the main discussion on patterns of talk being arranged by risk issue.

3.2 ‘WORRIES’ ANALYSIS

The flipchart sessions at the beginning of 16 of the focus groups (the flipchart sessions were not used in the two Ladbroke Grove accident groups) provide us with an overview of what issues concern people. The sessions worked well as a mechanism for ‘breaking the ice’ amongst a group of people who in the main had not met one another before. This was an important function. However, they also provide an indication of the distribution of different areas of concern across different groupings.

It is important to stress that these were entirely group/individual generated – the researchers provided no prompts. This is important because it means that they are genuine public concerns.

In the sessions each topic was listed on the flipchart just once regardless of the number of people in the group who agreed or disagreed. Our purpose was to identify the range of issues not the strength of agreement within groups *per se*. Effort was made to ensure that the particular feature of the concern identified was captured.

In the 16 groups the average number of concerns identified was 24 with a maximum of 33 and a minimum of 16. Table 3.1 provides a ‘ranking’ of overall concerns in terms of the frequency of their mention, and how often they were mentioned within the first 10 listed concerns of any group: i.e. an indication of those which came to mind most readily. The concerns are grouped into generic categories such as ‘environment’ and ‘society’ so as to cancel out purely local effects or issues and to indicate the general strength of concerns across the groups. Because people were identifying their own concerns, not responding to researcher-generated issues, the descriptors which they used often varied significantly necessitating these more generic categories to be identified.

Despite saying that we did not want people to necessarily identify personal issues and worries, in fact personal concerns were mentioned most frequently. The most important of these were to do with pressures of time, problems with relationships and family worries. Crime and crime prevention, in second place equal with money with 30 mentions, had the highest percentage of mentions in the first 10 at 66% while food and technology/science each had only one mention in the first 10 listed. Concerns about young people and children came in sixth place with 59 % of mentions in the first 10, but if education

were added to this category it would be in first place overall. People worried about those things that either adversely affected their everyday lives at the time or were perceived as presenting a tangible threat

Table 3.1
General topics of concern expressed by focus groups

Rank	Topic	Total citations	% in 1 st 10	No. In 1 st 10
1	Personal	39	54	20
2=	Crime/crime prevention	30	66	20
2=	Money	30	37	11
4=	Transport	28	50	14
4=	Society	28	25	7
6	Young people/children	27	59	16
7	Environment/ pollution	22	45	10
8	Work	21	52	11
9=	Policy	17	18	3
9=	Drugs/alcohol	17	47	8
11=	Consumer issues	15	40	6
11=	Education	15	47	7
13	Media	14	29	4
14	Food	13	8	1
15=	Healthcare	11	45	5
15=	War (Kosovo)	11	27	3
17	Other	13	15.4	2
18	Millennium/Millennium Bug	6	0	0
19	Technology/Science	7	14	1

‘Society’ which was fourth equal with 28 mentions included moral concerns such as the distribution of wealth in the UK and the world, racism, personal liberties and the decline of morals. Lack of care for the elderly was mentioned four times, twice in the first 10, as well as lack of respect for the elderly amongst young people.

‘Policy’ is a rather nebulous category, but it does relate to other topics such as food and healthcare. Here it is identified separately because of the perceived changes for the worse in society caused by government policies (local and national) – e.g. too little affordable housing; homelessness; loss of local amenities; development on greenbelt areas; deregulation of utilities and loss of local services.

The issues which were dominating the media at the time of the groups were the war in Kosovo and GM food. The war was mentioned 11 times, three mentions in the first 10. Genetically modified food was mentioned eight times, but only once in the first 10 topics. However, it was the most frequently raised of the project’s risk issues. It was not always identified as a personal worry with as many people saying that they were not worried about GM food as those who expressed personal concerns. The latter were expressed in broad terms to do with unknown science; the need for people to be able to choose what they eat; people making money from GM crops; analogy with chemicals in food, and not knowing what you are eating. In many respects GM food was presented as an indicator of general problems with science, industry and lack of information to make personal choice, rather than as a specific problem in its own right.

GM food was sometimes raised by one person but failed to prompt others to also identify the issue as a concern. This was in noticeable contrast to transport/traffic/road issues where a raised concern by one person often generated a general discussion with others adding stories from personal experience

and agreeing with the stated concern. Traffic and transport had direct personal salience to people and most could offer a view upon the issue. GM food had less personal salience and therefore, especially in these opening minutes of the groups when people were unfamiliar with the activity and with each other, it was not such an easy topic for people to engage in discussion about.

There does not seem to be strong correlation with media consumption habits and the identification of GM as a concern. The Daily Mail, for example, ran a concerted and extensive anti-GM campaign during the period. While the Mail was read by the highest number of people across the groups which identified GM food as a concern (15 people compared to 10 reading the Sun, 8 reading the Daily Telegraph and The Times), this analysis is skewed by one group where 6 of the 9 participants read the Mail. The Daily Mail was in fact the most significant of the national daily papers across all of the groups (but still only 24% readership – see Table 3.2 for further detail). If its GM campaign had had significant amplification effects it might be expected that the issue would have been raised more readily as a worry than it was.

With reference to the project's other risk issues these were not high on the groups' lists of concerns. In relation to transport only three mentions were of trains and these were to do with fares, the service and dirty trains. Train accidents were not raised as a concern by any group, despite us selecting two locations in London commuting areas where accidents had occurred. Most transport issues were related to too much traffic on the roads, poor public transport services, roadworks and traffic delays. Air pollution from traffic was mentioned specifically four times and pollution in general four times. The Millennium Bug was mentioned only three times (in 26th, 22nd and 20th places) and Radon was not mentioned at all. The latter was not surprising as even in Derbyshire, the area of high Radon levels, we did not expect members of the groups to be familiar with the issue. We also expected that if they were this would either have been dealt with as a result of house monitoring or individuals would have chosen to ignore it.

The media themselves were mentioned as a concern 15 times, only four of which were in the first 10. However, this still means that the media were a greater concern than GM food. 'Standards' on television were mentioned four times and the treatment of individuals by the press twice. Other identified concerns related to inappropriate television (violent cartoons, too much sex, bad language), the perceived influence of the media, lack of value from the TV licence, and 'rubbish' in newspapers. The media were discussed as both a reflection of, and a contribution to, the decline of social and moral standards.

Most of the concerns raised were ongoing issues, often in the media as individual stories, but not significantly highlighted in the press over the period: e.g. crime, road rage, burglaries, drugs, student loans. It is interesting to compare Table 3.1 with the Cabinet Office's survey of public attitudes to risk and trust in different sources of information (MORI, 1999). There is similarity in terms of social (e.g. crime, poor health, drugs, poverty) and personal (divorce, family breakdown) issues and also pollution and food safety. However, the Millennium Bug has a higher rating in the Cabinet Office's survey, presumably because it was proactively included in the interviews conducted by MORI. Transport accidents also had a higher rating (13% of respondents saying they were concerned) than was evident in our groups. However, GM food (compared to food safety) came low on the list – just 6% of respondents worried, similar to our groups. What is common is the focus on social and personal risks.

As the research did not seek representative groups an analysis of the concerns by socio-demographic group is not appropriate. However, analysis of the responses of female versus male groups and even mixed groups does reveal a greater tendency to identify issues relating to the family or children, the elderly and health. In the five female groups these topics represented on average 25% of all concerns, whereas in the 8 mixed groups the average was just 9% and in the 3 male groups 15%. The mixed groups were more characteristic of male groups with issues relating to the cost of transport, job security and money more important than in the female groups. This is not because more men than women recorded concerns: i.e. the men were not more vocal than women. Perhaps women were less comfortable discussing issues such as childcare and children's education in a male group aware that there may not be

so strong a source of concern amongst men as women. It is important to note that children were not mentioned by any women who did not have children themselves.

Significantly, the topics listed by the one ethnic group were markedly different from those listed by the other groups. In the group which consisted of six young, mainly professional, childless Muslim women, their concerns reflected the pressures of living within the Asian community in Britain. They spoke of peer pressure, family responsibilities, the views of other people, weddings, appearances, freedom for women and worries about parents and parents-in-law. On the Muslim men's list 13 of the 27 concerns related directly to areas of difference between Muslims and the rest of society, such as time off work for prayers and Islamic holidays, lack of prayer facilities, the representation of Muslim people in Parliament. The issues which did not relate to their faith were delays on train journeys, traffic congestion, traffic pollution, global warming and education. The two Muslim groups suggested strong gender differences not so apparent in the other single sex groups.

3.3 PATTERNS OF TALK – ANALYSIS APPROACH

The textual data resulting from transcription of the focus group audio tapes were analysed using a standard method for qualitative data: namely *analytic induction* (e.g. Silverman, 1993). We systematically explored the data for patterns which reflected people's shared ways of talking about, and understanding, risk issues. This procedure entailed a partly inductive process of searching and hypothesis-testing, and progressive fine-tuning of definitions in the light of 'deviant cases' – i.e. items which appeared to contradict our emerging concepts. The analysis was supported by the use of the NVivo software.

Here we present an examination of the patterns of talk about risks². The discussion is organised according to our five risk topics: air pollution, GM food, train crashes, the Millennium Bug and Radon. The fact that the first two generated significantly more data than the other three reflects, to some extent, the methodological approach. We wished to avoid framing the focus group discussion according to our own categories, and to allow the participants as much freedom as possible to make sense of the issues in the ways that occurred naturally in their talk. This ensures that our findings are firmly grounded in the everyday experiences of lay people.

The presentation is focused on group responses and talk, as opposed to the views of individuals. We have selected typical sequences of talk, which illustrate how people formulated an issue, applied logic and rationalised their experience, and grounded and mediated knowledge. It is not the views of the groups *per se* that are important, and hence why it is not appropriate to consider whether the views might be 'representative' of people from a particular socio-economic background or newspaper readership, for example. However, with regard to the latter Table 3.2 indicates that the newspaper reading habits of our focus group participants were reflective of national trends, except that broadsheet readers (particularly of The Daily Telegraph) were slightly over-represented and tabloid readers (particularly of The Sun) slightly under-represented. We did not, of course, seek to achieve representativeness in this regard. Furthermore, the data in Table 3.2 are not strictly comparable in that the national picture is based on circulation data (which is not necessarily the same as readership) and our focus group data are based on people's identification of papers that they read (perhaps amongst multiple papers and copies in the workplace)

² In the quotations we employ the following conventions: speakers are identified as male (M), female (F) or moderator (Mod): where the speaker was identifiable a number is added (e.g. M2): the source of each quote or sequence of quotes is identified at the end by location and risk issues which was the focus of the groups (e.g. Somerset, Mill), the shortened form for each issue being Air (air pollution), GM (GM foods), Rail (train accidents), Rad (Radon), Mill (Millennium Bug). Two of the Radon groups were in Mansfield Woodhouse, Derbyshire – Mans-Home is used to denote the group of home owners, Mans-Non is used to denote the non home-owners group. The two Muslim groups in Nuneaton addressed GM foods – Nuneaton-F and Nuneaton-M is used to identify the male and female groups. The socio-economic characteristics of the groups are presented in Table 2.2.

and/or buy. People reported multiple papers read or bought therefore the focus group figures add to more than 100%. 25% of participants did not read a daily newspaper, however, 89% reporting reading a local newspaper (which could include 'free' papers).

Table 3.2
Comparison of newspaper readership of focus group participants
with national circulation rates*

	Circulation		Focus groups
	Size – '000s	% of total	% read/buy
Daily Telegraph	1042	8	16
The Times	744	6	12
Guardian	399	3	6
Financial Times	379	3	1
Independent	220	2	3
Daily Mail	2338	18	24
Daily Express	1090	8	10
The Sun	3698	29	19
Daily Mirror	2296	18	13
Daily Star	622	5	2

* Derived from data in Table 1.1

3.4 AIR POLLUTION

All of the groups in built-up areas in the Midlands and three groups within 40 miles of London mentioned air pollution, one of the Somerset groups and the group in Portsmouth on the south coast did not. Air pollution discussion was characterised as follows:

- ease of discussion with many people taking part – i.e. most people had a view on the issue;
- the use of narrative which drew on personal experience and local evidence, including perceived changes in air quality over time;
- searching for linkages and explanations as to the source of the problem – particularly links with traffic;
- searching for explanations of health problems, particularly direct and personal evidence of asthma, bronchial and heart conditions;
- presenting strong visual evidence with people characterising their local areas as being stigmatised by air pollution;
- interpretations of the effects of air pollution based on mediated knowledge, but no specific referencing of the media, and
- suggestions of official 'cover-ups' about the level and effects of air pollution.

3.4.1 Links between Air Pollution and Poor Health

Twelve of the 16 groups linked air pollution with poor health, all of them citing asthma and other respiratory problems, and half of these raising the threat of cancer. The participants displayed what has been described as "lay epidemiology" (Brown, 1992) as they interrogated their experience to examine different possible causes for the adverse health they and their friends and families were experiencing, e.g:

F: It (air pollution) should worry us all I suppose, We don't know what damage it's doing, I'm sure it is there.

M: (who works as a microbiologist) there's a lot of rubbish that comes out from exhausts and it does have an effect on my body... I know people with asthma are particularly affected but there's other worries for healthy people long term, on your heart and your lungs and your brain. All the crap that comes out basically over a long period you've been exposed to it and petrol fumes are cancerous in themselves".
(Leicester, Air)

M7: ...and your window ledges....when we first got married....we've been married nearly twenty years....were always black and you were always having to wash them and clean them. So the soot particles in the air have disappeared but you get a lot more people getting asthma...I mean I'm the leader at the local Cub Pack and half the kids have got inhalers now
(Mans-Home, Rad)

F3: daughter has had three asthma attacks and she's only two, although she don't suffer from it all the time, she's just had three attacks. The last time she was hospitalised but they don't know what triggered it.

?: And they say it will just go don't they.

F3: that's how it was, it was one Saturday afternoon she started with it, she got no better through the night, I took her to the emergency doctor on the Sunday morning and he referred her straight down to the Royal but we still don't know what brought it on.

Mod: So do you suspect anything yourself?

F3: Well I thought it might be animals because every time she had been near animals because we've got two dogs and we've got two rabbits, but the first time it happened we had been on holiday and she had been on the donkeys so we didn't know if it was donkey hair.

F2: She could be immune to your animals.

F1: Yes that's what my husband said, he's allergic, other animals set his off. We've got two dogs but he can go down near my mother in law's dog, his mum's dog and it can start.

?: So you don't think it's air pollution?

F2: I don't know whether it is air pollution, I don't think it's our animals any more.

?: It can be all sorts can't it..

F4: Dust mites in the house and things.

(Leicester, Air)

Only a few people drew on apparent mediated knowledge to offer other explanations for asthma, the group in Crowthorne, for example, referring to central heating “*being a big cause of asthma*”.

The male Muslim group in Nuneaton reflected on the causation of asthma by appealing to direct experiences of conditions in India and contrasting them with Britain:

M1: I feel there is an increase [in asthma] because personally, having nephews and nieces, I think my brothers and sisters don't suffer from anything like asthma and a few of them do so I think there must be link on the increase in the coming generations

M2: It's probably down to where you are located, that sort of thing too, the generation of pollution is increasing, it's probably where the younger generation live as well and you can't narrow it down the pollution is causing it

M3: I think you can, because basically in India you can see that half the people haven't heard of asthma, most of the little kids there don't suffer from asthma and there's got to be reason why there's more pollution there

It's not polluted

M2: In the big cities there is but in the little villages there is no pollution whatsoever

M4: Speaking from personal experience I've got a nephew who's only about eighteen months- two years old, he's got asthma, I find that quite surprising but having said that it's the environment he's living in as well. My personal feeling is his father smokes so I think that may cause the relation of him having asthma but again it's lifestyle, the environment we live in, there could be a number of features, you can't say it's just pollution that's affecting him, people like that it could be what's going on inside the house itself or the surroundings of the child's but speaking from personal experience I was quite surprised an eighteen

month-two year old having asthma. I've never heard of asthma when I was growing up and I never knew people who had asthma

M2: In fact I tend to go to Pakistan almost every year and I go to the industrial capital of Pakistan which is Karachi, now that's got so much pollution in it and I hardly know of anyone who's got asthma

3.4.2 Links between Air Pollution and Traffic

The perceived connections between air pollution and health were strongly rooted in everyday experience of traffic congestion and fumes. In the two following sequences, participants considered their experiences of the increasing volumes of traffic on the roads and of fumes and smell, but also raised the difficult issue of societal dependency on cars:

F1: The amount of cars that are on the road...I mean I've been driving now 23 years, I suppose....the amount that was on the road back then, there's just nothing like what it is today...I travel down to Yeovil every day and at 6 o'clock in the morning, I'd say 4 years ago I wouldn't see anybody. I mean today..."

F2: That's just the way the world's changing...we're far more mobile now

F1: We are

F2: I don't think it's bad

F1: Myself we've gone from a single car family to we've got...I've got a son that's driving...we've got three cars....

*F1: Makes you tired..it's obvious that it's not doing you any good isn't it? and what area do you thin that might be in?...well it's obviously not doing your lungs any good is it? you've only got to go to the Welsh mountains where the air's a lot cleaner and you can smell the difference
(Somerset, Air)*

F1: I had hay fever but not this nose problem that I've got..I've even had an operation on my nose because I couldn't breath and they said when I had it done it didn't work and they said well, it's got to be. I had all these tests done and they said it's through the air pollution..it was only when I moved down here..because we're actually on a bus route..and I sleep with the windows open because of air..and it's got worse and now I have to have an inhaler and a nose spray every single day..I can't do without it.

M1: I would yes... I'm right in the middle.. I open the window and choke...it's a problem. I haven't a clue what to do about it. If you stop all transport we'd all starve within a week

F2: it's the transport causes it isn't it

M1: what do we do?

M2: it's the council's policy isn't it to encourage it. They build a great big shopping centre in the middle of the town just to encourage people from outside the area to come in

F1: that's true

M2: then they complain there's too many cars...if the cars didn't come in from outside there would be supermarkets on the outside and a big place inside then they would just fold up

M1: if you build all the supermarkets out of town then you have to have transport to go to those....either way

M3: I live next door to Asda and Sainbury's now which wasn't there a few years ago...so I live more or less in a traffic jam now.

F1: you can sit in a car can't you...sometimes I think when we are driving along. I sit with my handkerchief over my mouth because I can smell it coming in through the vents

you see people's exhausts...they say they are checking the emissions but you can see the smoke coming out!

(Watford, Rail)

A few factors other than traffic exhaust were mentioned. At Mansfield a woman mentioned “*power station things*”. In this group miners also talked about coal being blamed for pollution and the bid to cut pollution being responsible for pit closures. Several people agreed that air pollution levels have not come down with pit closures. They talked about importing cheap coal high in sulphur from places where labour is cheap. Industry was seen as being to blame rather than cars in some groups:

M1: "Car pollution is actually a relatively small percentage the majority of the pollution is industry..."

M2: "When you walk around the streets of London you can taste it"

M3: "as you say, industry, power stations, aircraft, I mean you go around Heathrow, you smell the paraffin" (Crowthorne, Rail)

3.4.3 Visible Evidence

As shown by previous studies (eg Irwin *et al*, 1996; Horlick-Jones *et al*, 1998; Walker *et al*, 1997), sights and smells are powerful sources of evidence, including "grey clouds", "haze", and noticing "black marks" on objects. Visual cues played a key role in providing evidence of the presence of air pollution:

F1: *Yeah, and to do with the environment pollution we don't get any sunshine now it's mainly all, I mean I think it was last year it was just grey cloud over us during the summer*

F2: *We don't have a summer do we*

F1: *We don't no, I put washing out and it comes back grey*

F3: *You need to wash it again*

(Nuneaton –F, GM)

One group talked about a big grey cloud over Nottinghamshire: "you go anywhere within about five, ten miles, and they've got sun but we never have".

In Swansea, women talked about air pollution near the steelworks at Port Talbot, again referring to washing being marked and smells and "a thick cloud all around all the shops" when you look over to Swansea from Port Talbot in summer. There was an attempt to rationalise the latter - "I think that's partly the location because it's in the bottom of a valley and all the smog and everything collects there", but traffic was viewed as adding to the problem

In general, however, people agreed that it is not only Britain that suffers, as one woman in Crowthorne noted: "...the same in any city round the world and when you are on holiday in the Greek Islands, I remember as the sun was setting you could just see this black haze of pollution across the Med and I thought it's just everywhere"

Mediated knowledge was presented to provide international comparison:

M: *[the television coverage] either covered New Zealand or America where they showed you the amount of pollution above one of the major cities and it was just black, you couldn't see anything above it and then they showed you the same place on a Bank Holiday when there wasn't a lot of traffic about and there was a beautiful clear sky, you could see mountains in the background and they said then they were trying their best to try to cut inner city pollution (Farnham-Mill)*

3.4.4 Conspiracy Theory

A number of participants held the view that information about air pollution is deliberately withheld. They regarded vested interests, including industry and government, to be responsible for this conspiracy, and media information to be, at best, limited.

M7: *I think we are shielded from the truth - most of the pollution from factories and industry*
?: *Yes that's right.*

F3: *There's probably a lot of pollution in our rivers that we don't really no about.*

M7: *That's right, it's all dirty dealing to keep that out of the press. Big bucks there. Big bucks*
(Watford, Rail)

M7: Well I mean television had various programmes but I feel that they don't say enough. As I say coming back to the faceless bureaucrats, the whole country seems to be under one big you mustn't let the public know that; we can't let them know too much because they'll go in an uproar but the trouble is there isn't an uproar. We know what's in the sea, we know what's in our rivers, we know what's in the air but we just accept it.

*M1: I think whatever government is in, it doesn't matter whether it's Conservative, Liberal or Labour, I think they can keep so much back....it's like the ozone layer...I mean now they're showing us on the television where it's like high ozone or low ozone, where you're going to get burnt and where you're not going to get burnt but when we think back to when we were kids, you never had that.
(Mansfield-Hom)*

3.5 GENETICALLY MODIFIED FOOD

Like air pollution, GM food was raised directly by the majority of the groups. However, in relation to GM foods discussion was characterised as follows:

- disjointed discussion which often wandered off the issue as people tried to make sense of it;
- some people simply saying that the issue did not bother them;
- the use of lay accounts which attempted to make sense of formal accounts often drawn from mediated information;
- concern about the role and reporting style of the media;
- questioning of science and certainty of knowledge;
- being based in ethical concerns;
- distrusting of politicians, scientists and industry, based primarily in concerns about vested interests;
- distrusting of government's role;
- concerned about 'messing around with nature', and
- wishing to be precautionary to ensure future generations are protected.

These characteristics set the GM food discussion significantly apart from that of air pollution. There was none of the personal experience and direct evidence offered in relation to the latter. People were trying to make sense of diverse mediated sources of information. Whereas air pollution was discussed as a social problem with recognition that society has a responsibility, GM food was perceived as a moral and ethical issue, a problem of science and the greed of organisations. GM food was, perhaps predictably, closely related with recent food scares - in particular BSE (all 16 groups making the link), chemicals in food (7 groups), and salmonella in eggs (6 groups). Indeed in some groups more discussion focused on BSE and beef than upon GM food, partly because people were able to draw upon personal responses to the issue (e.g. beef buying).

Box 3.1 presents some lay accounts of genetic modification as expressed by individuals attempting to explain what they understood by the term. There is evidence of mediated information, with a mixture of views about the 'unnatural', but also potential benefits in terms of disease-free crops. 'Science fiction' is evident in the descriptions and also scientific confusion. However, it is important to remember that people were not given any assistance or prompts by the research team. People felt a need to try to explain what genetic modification might be to place their views into context. However, many also simply admitted to lack of knowledge – e.g. *“I don't really understand it to be honest”, “I don't understand it and I need a lot more information”*

Box 3.1
Lay accounts of the nature of genetic modification

'What I think is they crossed a tomato with a flat fish to give it a longer shelf life you know and they're growing all these crops...they start them off in test tubes placing two things together'
(Female, middle-aged, part-time cleaner)

'Well the thing is if you can turn round and put the gene of a cod or whatever it is into a tomato god knows what that's going to do to the body'
(Male, retired)

'I mean originally it was invented to weed out disease in the field so you could just plant it and know there's no weeds that are going to grow, it's just going to grow straight, it's all going to be the same height'
(Male, middle-aged, divisional manager industrial cleaning)

'They've gone from having fertilisers that we put up with to this genetic stuff which is like a grub thing isn't it, that grows on the thing'
(Housewife in her sixties).

'To feed the world they are producing these magnificent plants that grow bigger and stronger and resistant to the atmosphere but they don't produce any seeds so the farmers will have to buy all the seeds from a supplier and they are now getting worried that it will end up like Sky TV you know, there will be one supplier, one culturer will sort of hold the seeds of the world's food supply because you won't be able to grow anything that produces a seed.'
(Housewife in her fifties)

'They are using genes aren't they, genetically from plants and scorpions mixed together somehow to grow these extra strong whatever, carrots or cabbages you know'
(Housewife in her fifties)

'There were experts on the Vanessa programme and the one thing that alarmed me was that they said they were genetically modifying their soya bean so that they could spray it with all of these pesticides and then the soya would be resistant to the pesticide...it wouldn't be more selective than the pesticides...so the spraying hasn't killed it.. but it has still got the pesticide on it' (Female, health visitor in her thirties)

3.5.1 Scientific and Government Uncertainty

Lack of understanding was not seen as being confined to lay people. Scientific uncertainty was seen as a problem, with a view that lessons should be drawn from BSE where people were concerned that there had been attempts to downplay (or even not acknowledge) uncertainty:

F6: It may be safe now but I mean in the long term, the effects, he doesn't know does he [Tony Blair], he's only just started eating it

F5: It smacks of a comment that chap said about giving his kids beefburgers and then it was found later that there was BSE being transferred

F6: He doesn't know does he
(Swansea, GM)

Two groups discussed their concern that 'people' can say something is safe when they do not 'know for sure'. The following sequence illustrates the links made between uncertainty, scientists' promotion of different views and the need for more research:

M3: Whether or not it introduces something into a plant, it's going to actually produce a monster but according to my son (who is a biologist), it can have side effects which are certainly unknown at the moment.

M2: My objection is the fact that here we are we have got all of this GM food, we don't have any choice about it and we don't know anything about it. We're told about all of the good things. What we're not told about is the fact that we don't know about any bad things there might be and the reason we don't know about it is because we haven't done enough tests. I'm an engineer and scientist at heart.

*M6: I take the view that there are scientists out there that will give you differing opinions on just about anything and everything
(Swansea, Air)*

Articulation of worries about GM foods was linked to the lack of knowledge of the long-term effects:

M3: Well we haven't been told what it's going to do really have we? You know, there's no agreement

F6: There are so many different views

M3: There's no perspective saying in 10 years time if you child keeps eating..., its going to do this to them. They don't know because they haven't been there before

F9: It's the long-term effects isn't it, because it hasn't been around that long to prove itself

*F2: It might be 20 years down the line, it might be 30 – like they say with CJD
(Mans-Home)*

Several groups commented that people want “proof”, “the truth” or “results”. However, there was a certain ambivalence around the topic of information. Many people agreed that they wanted more information but found it difficult to say where they would like it to come from. Some people said they would like more information, but added that they were not sure if people would read it if it was provided. Some people felt they could have too much information on the topic and others said they were not interested in learning more about it. An elderly woman said that she did not seek information on any food issue, because “I think life is so worrying that I'm not looking for extra worry so I just hope for the best you know.”

3.5.2 Trust

The issue of the need for research was linked to who should do this and who would provide ‘the truth’. Independence was a key trust criterion:

F4: If they could reassure me and tell me that genetically modified food is going to last longer in my fridge and that it will not do me or my family any bother then I would buy it because I very often throw things out because the shelf life has gone off fresh food.

F6: And it could be more environmentally friendly if you're not having to waste acres and acres of food.

F1: But what guarantee have you got to be able to trust that?

F4: But as I'm saying you're hoping then that some independent body that has nothing to gain and nothing to lose by telling the truth and you're not going to believe a supermarket who tells you because you know how much they've got to lose by it and that you just need an independent body to step in.

Mod: So you are seeking independent information?.

F1: From the right source, yeah, not just from kind of them advertising their product or them trying to say that it's safe, from the Department of Health and maybe another independent body that would agree with what the Department of Health said and then you might feel fairly safe about it.

(Swansea, GM)

M4: I do think that somebody ought to actually do proper independent research

?: Who would you trust to do this --- this is the problem isnt it

M4: Who is the somebody?

F2: I just think that with GM foods that there isn't enough information, not enough data, nothing that you can really base your decision on

*M1: We don't have a Ministry that represents consumers as far as food is concerned. There's someone to represent manufacturers and farmers but not consumers
(Crowthorne, Rail)*

Trust was explored comparatively as people tried to identify the relevant divergent sources of information in the light of their dependence on such sources (as opposed to their social networks), GM food being a new, unknown and difficult issue. Retailers were identified as an important 'players' but discussion was divided about whether they can be trusted. Thus, while in Swansea two women agreed they trusted the retailer Iceland because of the stance it had taken banning GM foods in its own products, a Muslim woman in Nuneaton (in a group which generated considerable discussion about food) referred to a report she had seen on television which said that "*certain supermarkets are producing foods they say are non-GM which do contain GM products – so who do we trust?.*" However, in the same group a little later a woman returned to the issue feeling that supermarkets "*such as Asda, Sainsbury and Iceland are doing a great deal to be honest - I think at the end of the day it's up to to you, I suppose*"

A woman in this group also felt that neither the government nor anyone else was going to tell her what she wanted to know:

"I don't think there is anywhere (where you can go for information). I mean if you've got government they're not going to sit there and tell you exactly 'Oh genetically modified food is very very dangerous and you know' I don't think so, so there isn't anywhere unless you're going to believe what you see or read or just form your opinion."

A group of women in Leicester talked about the Green Party and Friends of the Earth as bodies they could trust to provide information on GM foods. But one of the Muslim men in Nuneaton was concerned about the activists' tactics:

"the media I think has latched on to the subject of genetically modified food and these pressure groups who go round wearing white suits and destroying crops in the fields they're not putting the argument effectively enough to the general public saying look genetically modified food does this, this and this, I'm not getting a proper feedback either from government or from the pressure groups."

3.5.3 The Media as Information Sources

One group discussed media coverage of GM foods and drew distinctions about styles of coverage and their media preferences:

M2: If its on Panorama, its alarmist and puts the fear of god into you, it's over the top but not giving an answer in the end

F3: If you watch the four different news, BBC 1 & 2, ITV and Channel 4. Channel 4 and Newsnight give you the same sort of [information], they are a more balanced approach, but the two main channels I find very alarmist in their approach. It's a serious subject, I think that it needs to be dealt with in a serious fashion, not sort of we're all going to die.

M1: Don't you think that with the other programmes - say BBC1 and ITV, the audience they've got to appeal to, well..... whereas Newsnight and Channel 4 have probably got a more selective audience and are more specialised programmes and so you will get more details

F3: Yes, they've got the researchers, but I do really object to Panorama's presentation on all subjects

*F4: I find it rather worrying
(Man-Home)*

Four men agreed that the problem with GM foods lay with the media rather than the scientists. One blamed the failure of the media to get the facts, one simply said “*they haven’t a clue*”, while another added they just print anything to sell the paper - “*they’re after your money without a doubt.*” GM food (compared with the other risk issues) attracted particular comments about the media being responsible for scaremongering, two groups talked about media hype of the issue. In Somerset, a supermarket manager expressed concern that the media were reporting poor science:

“But then again the form of censorship that was used to discuss the findings that this gentleman said was affecting rats and affected GM potatoes is coming out today and it’s a totally flawed piece of science but at the time the headlines were grabbed by the fact that it was a Frankenstein food because that’s what was going to sell newspapers and what was going to keep people tuned to that station. It bore no resemblance to the impact on us. It was just to hype it up.”

However, hype was also interpreted as a good thing if it forced an issue into the public eye. A man in Watford commented about the power of the media in this regard and how the media had brought GM food to the forefront comparing it with how beef and BSE had been “covered up” by governments for years.

3.5.4 The Government's Role

Only two groups did not discuss the Government in relation to GM foods. People were concerned, disappointed and angry about the Government’s response to the issue, with the Prime Minister being the particular focus of attack. Four of the groups were shown as a prompt card The Sun’s headline “The Prime Monster: Fury as Blair says I eat Frankenstein food and it’s safe”, with two other groups raising the story without prompting. The concern that “*he is only the Prime Minister, he is not a scientist*” was raised by 5 people in 4 different groups. Two groups felt let down by the Prime Minister’s stance, e.g.

Mod: you weren’t reassured by him?

F1: No

F2: I think Blair’s attitude is disappointing because he’s trying to portray to everybody else that it’s safe and if he doesn’t give a care why should anybody else and if people are going to look up to him and follow him he’s not giving out the right advice

F3: Yeah he should be more considerate about you know other people’s feeling, you should do something about it just to prove, OK even if he’s in the right saying yeah it’s safe but he should do something about it to prove it

Eight groups discussed the need for Government action, questioning why it appeared to be doing nothing. This raised immediate questions about conspiracy, hidden agendas and secrecy and Government vested interests, e.g.

M6: ...The thing is if the general public are worried like they are about these things, why isn’t the government worried about it, why are they prepared to sit back and let these things take pace, I mean to say they’ve known for years there’s been GM food on the shelves of shops, why have they just let it happen, it just doesn’t make sense

F9: Its because companies can hold Government to ransom

Mod: and you find that worrying?

F9: yes

M7: A lot of MPs are on the boards of these companies anyway aren’t they?

M6 That’s right they’ve got interests in these companies for a start and it just comes back to the same thing that was mentioned earlier on by this chap here, money rich and poor and that’s what it all comes back to and that’s what the world is based on, it’s finance.

M8: Its capitalism

(Swansea, Train)

In Leicester a woman who said she was an “avid” Daily Express reader, concluded:

“We are fighting a losing battle, because the biggest pharmaceutical company that does all this genetically modified food and is doing all the research, they funded the Labour Party. They funded Tony Blair so he can’t say, no I won’t eat it, can he?”

In contrast to the discussion on media hype above, some people specifically said that they would be more likely to believe the media than the Government, e.g.

I’d rather believe the Daily Mail because they’ve got no reason to turn round and tell you lies, as a matter of fact it’s bad for the newspaper if they turn round and say things like that. I mean to say I believe what they say, I don’t believe what the government tells me, no matter what colour it is.” (Swansea-Train, retired male)

3.5.5 The Profit Motive

Seven groups out of 16 concluded that GM foods are “*all to do with profits, it isn’t to do with us.*” Some people were aware that there could be a positive side to GM food - “*to increase the yield or stopping crops in Africa from being destroyed in a hard year*”, “*to tailor crops to certain environments to make them grow so they could feed populations.*”. However, they still approached the topic with scepticism. A man in Farnham in a group discussing the Millennium bug and profit motives of computer companies drew direct comparisons with GM food and seemed to sum up many people’s feelings when he said: “*as long as people are going to be making vast amounts of money on genetically modifying foods they’re not going to be worried about the health of the general population at all.*”

3.5.6 Lack of Personal Power

Several people expressed a sense of powerlessness and lack of choice. A Muslim man in Nuneaton talked about the halal meat man who comes round to their street: “*we take a risk, we don’t ask the guy excuse me you’re selling these sausages, where is the soya come from, he wouldn’t even know that.*” A retired woman in Watford said: “*It is a worry, but I think we are inclined to think well what can we do about it?”*

Labelling was an important issue for many groups. Both those who did not want to eat GM foods and those who were less concerned agreed that they wanted to see products labelled so that people were free to make a choice, e.g:

F4: The thing is I haven’t any argument with genetically modified foods anyway I mean maybe it’s the best thing that ever happened, feeding the world and what have you. I don’t know, and I’m not saying they do you any harm. I just do feel that any products that they’re in should be labelled quite clearly

M6: You should have the option whether you do eat and buy or not, that’s right

F4: Yes, that’s the only thing I really feel strongly about, the right to decide

(Swansea, Train)

However, once again there was caution about whether the labels could be correct, combined with concern that the price of food influenced personal choice regardless of labels. The following sequence provides evidence of direct experience, mediated information and personal circumstances being applied to such a discussion:

M7: You can go into an American supermarket and there’s apples virtually the size of footballs, you can fruit, anything you want and they’ve been doing it for years. I don’t think that there’s a crop in America which isn’t genetically modified or altered in some way

Mod: so does that worry you?

M7: Not at this stage I don't think that there is enough in circulation to become a major part in people's diet. It's in a lot of foods in small proportion but when September comes and they start labelling the foods, I think that you will just find things juggled around to reduce the content below the minimum....The thing is you can't tell. All of the soya that comes into the country. They reckon that somewhere like 90% is genetically modified but you cannot physically tell picking up the grains....So it is going to be difficult to pin it down unless we take it back to the farming stage

F2: And that takes it back to America. Around here you go shopping and think I will have that it is £1, I will have that its 50p because I have got two kids.

*M7 People go shopping I think worrying about what they are going to spend or what they are going to get for their money, not what they are going to eat
(Mansfield-Home)*

3.5.7 Possible Effects

Much discussion of the effects of GM food focused on future effects on people, for example about “genetic harm”, building upon their lay accounts of GM (Box 3.1). Three groups talked about “*messing around with nature*”, “*playing with nature*” and “*manipulation*” not only expressing concerns about possible future effects, but also implying that this is ethically wrong. There was little discussion about effects on the environment as such. Four people in different groups specifically referred to children and effects on them in the future. A microbiologist in a group in Leicester seemed to sum up people's fears when he said:

“The thing is it's still in its infancy. We know nothing about the effects of genetically modified foods we don't know in 30 years time you know we could be growing two heads or our feet drop off because of eating genetically modified food.”

In Nuneaton a young Muslim woman agreed that time will tell – “*It will be only when something happens really and then it's too late.*” But then went on to try to find some explanation for apparent elevated levels of ill-health in the Asian community, speculating whether effects were already evident. Another woman in the same group was less worried but still evidently cautious about whether effects are already being realised: “*I think we've all been eating it for such a long time I don't think we were aware of it and suddenly we've been alarmed and everyone's concerned, I don't think it's done much harm up until now but...*” . A young Muslim man concluded with less hesitation that if GM foods were harmful we would have known by now: “*quite a few people would have had some kind of unknown disease or whatever.*” However, in other groups people expressed no concerns and talked instead of “*paranoia*”.

One man (Crowthorne) felt that he has more chance of dying in a car crash driving to the supermarket than from eating any particular food, and in the Swansea Radon group one woman asked another why she is concerned about eating GM food when as a smoker; “*you've probably done the damage anyway*”. However, such lay risk comparisons were relatively rare in the discussions.

3.5.7 No Problem

There were people (12) who said that they were not bothered about GM foods, and some (9) who said that they had given no thought to the issue. These comments were often routed in their attitudes to, and experience of, other food scares and also to BSE, but also to a feeling that the issue has been “*blown out of proportion*”. One man in Farnham (Millennium Bug group) in partly apologetic voice for such a “*way out thought*” concluded that we are “*all genetically modified when you think about it*”.

3.6 TRAIN ACCIDENTS

In order to explore lay perceptions of risks associated with train crashes we convened three groups with the specific intention of generating talk about train travel. These comprised a group of commuters from the South of England (Crowthorne), a group of people without access to a car living in a town close to London where a major rail accident had occurred in 1996 (Watford), and a group of people with access to cars, living in a city with good rail connections to the UK network (Swansea). Two weeks after the Ladbroke Grove crash (October 1999) we convened two additional groups in Farnham, one of rail commuters to London and one of non-commuters.

Discussion of railways was characterised as follows:

- ease of discussion with many people taking part – i.e. most people had a view (like air pollution);
- dominated by direct travelling experience related to poor timekeeping, dirty carriages, overcrowding, and high fares;
- concerns about safety focused on the personal and threatening rather than direct experiences, for example of muggings, women's safety, violent or strange people, all of which served to make newspaper 'horror stories' tangible;
- common safety concerns between men and women, and
- limited attention to train accidents, which was dominated by mediated accounts, and stoical or fatalistic attitudes, sometimes supported by statistical evidence of the relative safety of the railways as a mode of transport.

3.6.1 The Woes of Train Travel

People had a great deal more to say about the sorry state of British railways and rail travel than about safety as such. They were largely concerned with perceptions of everyday inconvenience, discomfort and general unpleasantness. Consider, for example, the following two sequences:

F1: Just literally like a sardine. You have to get on a train because you know that the next one is going to be exactly the same and you are just squashed together

?: So it's the discomfort?

F1: Oh awful, absolutely awful

F6: and there's so much traffic, if you get a bus you are going to be late

F1: plus the stations in London aren't very nice...

F6: and there's not enough public transport say locally after something like 11 o'clock, you can't go anywhere..

F1: I'd say after 9 o'clock

M7: I was going to say 7, it drops right down and they're a bit thin on the ground if you are going out in the evening you've had it

(Watford, Rail)

M6: Well I don't but my daughter did travel up to London the weekend before last and I was shocked at the cost of the fare

F4: Yes it's the cost that puts me off I would prefer to travel by train

M6: That's right it's so expensive that I think they're virtually killing it myself personally I mean to say for some people commuting to London and back round London it's essential they've got to have it and they pay it even though they can't really afford it but to travel from Swansea to London I think first class is about £250, I couldn't believe it

F4: I'm from London and when I go home to see my family I travel by coach, I'd rather go by train but it's too expensive

(Swansea, Rail)

However, in the following sequence London commuters, provide a contrary account, stressing the convenience of train compared to car travel:

M4: This journey is far enough, even Crowthorne to Bracknell I would rather get the train from Crowthorne to Bracknell and then have a five minute, ten minute walk the other end. Driving from Crowthorne to Bracknell in the rush hour.

?: It takes 45 minutes to an hour, it's atrocious

M4: We have to go to Guildford and it's about half an hour on the train, five minutes walk for me to the station. I mean it's a much easier journey than driving the car and it actually works out marginally cheaper I think if you really look at the reality of it and providing the trains behave themselves it's fine.

M1: How much less stressful is it getting a train..

F5: You walk to the trains, even if you've just got a quick five minute journey to the station by car and then you get the train, I mean you just sit there reading a paper.

?: Providing you've got a seat and all the rest of it that's fine.

(Crowthorne, Rail)

3.6.2 Personal Safety Threats

Those safety issues that occurred most often were concerned with threats of violence or other crime, the presence of drunk or otherwise unpleasant people, or specific threats to women. Two sequences from the Watford group illustrate some of these concerns:

F3: well the last time I went in [to London] there was a man on the train and every other stop he sort of got out...he had his bottle in his hand..he was drunk and he was just going from carriage to carriage..walking through, you know..and I tend to get where other women are, in case, but it's worrying travelling alone

F1:.. but if you are with someone else?

F3: Oh no, no with someone else, yes

M7: There are some right lunatics on the tube

?: Real weirdos

M4: It's a crush and you've usually got the smelliest person's armpit right in your face

M7: You've got the drunks, you've got the beer breath and he's drinking his Super 10, you know, all over you, you're hot and sweaty and sticky and you're worried about this guy picking you pocket and that lunatic over there, you don't know what he's up to...so why can't we have the [Guardian] Angel system, you know the volunteers that travel on the trains

?: That's right

?: I'd be a damn sight happier

F1: So much safer

M7: Youngsters have so much power these days

F1: People carry knives don't they...I mean to carry a knife is nothing really

M7: That's right, they go around in gangs, and they're all bucking for promotion within their little gang,,how who's going to be the cheekiest and go and ask this guy for the time and then ask him for his wallet..you know

The following sequence from the same group illustrates the sense of perceived threat corresponding to rail travel outside the peak commuter period. The group collectively considered experiences which apart from the first piece of evidence, amounted to no worse than "feeling uncomfortable". Nevertheless, the sense of threat is tangible. It is summed up to the effect that although statistically the risks are low, "you just don't want to be that statistic":

F5: I had a lot of incidents when I was a young girl travelling on the train back from London, so I'm very careful now.

?: I do think it's different for women, completely different. I wouldn't get the five past one if I was a woman.

F2: I tend to travel during peak times anyway so it really isn't a worry, but if I was travelling later in the evening I would be more worried. My husband is always worried on my behalf if I do catch a later train back, having stayed in for social things.

F3: Yes I made the mistake recently coming home from Reading on the last train, that is actually the last one back to Wokingham and that was just awful.

?: Was it?

F3: Incredibly scary...it was absolutely awful.

M4: I must admit I don't tend to venture out.

F3: Within seconds I was really nervous that I was the only sober person on this entire train. Some lad peered over from the corner round my shoulder and asked me for a light and I tried to explain that I hadn't got a light and he looked at me as though he didn't believe me. I said I haven't got a light, I don't smoke so I'm not really going to have one am I? It was just awful and I had to move to sit with...

F2: My daughter uses that one quite a lot.

M1: Would sit as near as possible to the guard.

F5: That's right and what I do would is dial 999 on my mobile and get ready to press the button if I needed to.

F3: Going from Crowthorne to Reading the last train I know is notorious, the police meet it. Basically all this vandalism going on.

M1; the risk is probably quite small significantly really according to the statistics, but the fear of it is very large and I think if I was a young woman or any age -

?: You just don't want to be that statistic

In the post-Ladbroke Grove commuter group people drew upon newspaper reports and other second-hand accounts to express similar concerns:

M5: Yeah a while ago there were two women attacked that was in the papers

F1: I think that was in the Herald there was one occasion when someone got attacked, I've just seen about, travelling on the trains only twice I've seen security people on there

M4: You do read about people being attacked on trains don't you there was that woman, or that person who was stabbed wasn't there....

?: yeah, but you can get attacked on the street you get attacked anywhere

M4: I think it might be a gender thing as well, I mean I don't worry about people mugging me on the train

?: That's because you're a bloke

M4: Well yeah but blokes get beaten up too and if somebody comes up to me with a knife I'm off, I hear about streaming and things like that but it always happens

Mod: Sorry, what's streaming?

M4: When a gang of oafs start at one end of the train and go to the other with a knife, it all happens in South London or somewhere, it doesn't happen on the way to Fleet, which it should do because they'll get better pickings that way

It seems that people were integrating their everyday experiences with mediated accounts of violence and crime in such a way as to generate a pervasive sense of threat. Few first-hand accounts of such unpleasant experiences were offered. Rather, everyday experiences provided sufficient evidence to make mediated 'scare stories' appear tangible and frightening.

3.6.3 Accidents

Pre-Ladbroke Grove prompting was required to generate talk about train accidents. In the post-Ladbroke Grove groups, we were much more open about wishing to discuss the railways, however prior to the use of crash-related media prompts, the groups also had a great deal more to say about inconveniences of rail travel than its dangers.

The following sequence is taken from the Watford group, and here the talk followed the facilitator prompting discussion of the fatal train crash that happened close to Watford in 1996. Interestingly the

discussion was peppered with fragments of mediated accounts, which have become almost hackneyed components of media disaster reports, concerned for example with blaming the driver, leaves on the track, wrong type of snow, and the privatisation/publicly owned debate:

M7: one person died and God knows how many were injured

Mod: and what was the cause of it?

F1: That's something that happens everywhere isn't it

M7: They blamed the driver

?: They blamed the driver as per usual..but it was poor track conditions..Railtrack hadn't updated the track even though there had been some idea ten years ago that it required to be done

F3: Don't you think the railways are very pathetic..in the winter you listen and it says oh there's leaves on the tracks there won't be any trains running

M7: Wrong type of snow

?: It's all privately owned now and it's even worse

F3: They don't do anything about it, do they

F3: I think it's crazy now, one person owns a railway line, one person owns something else, one person owns something else...it's crazy

M7: Someone owns the platform, someone owns the track signalling

F1: But if someone doesn't maintain the line then the other company maintains the train you know, it just doesn't gel together does it? They should have a company owning the railway I think, one company

M7: Well it was split up to be sold off cheaply

There was evidence in the group of a fatalistic rationalisation of continued use of the railways and also sophisticated black humour at work:

"I was aware of it when I went down to the station after that..I was thinking well, if it's going to happen it's going to happen and the you can't do anything about it" (Female)

"They put us smokers up at the front, they consider we're dead already..I have to walk about two miles up the platform.." (Male).

In the following, participants displayed a rather stoical appreciation of risks associated with rail accidents. Rather than presented as a rhetorical rationalisation to cover denial or fatalism, they were sanguine about the risks they take. The paradoxical nature of statements of low risk was again not lost on the participants, as one of them declared something to the effect "it depends if you were that person":

F4: Well just statistics I suppose there are more road accidents aren't there you know than, I know there are accidents sometimes on the train and the reason they come to make headlines is because usually then a few people you know would be killed wouldn't they, you know it's a bigger thing but it doesn't happen very often, touch wood, but I'm sure it's safer and it's more pleasant you can walk about, stretch your legs, I would prefer it

M8: I mean you know percentages go out in a car obviously even if I don't go, if I walked I'd probably get a good chance of getting run down as well

Mod: So you perceive train travel as risky?

M8: It's got it's risks yeah like everything but I wouldn't find it overpowering, I'd go on the train if I had to go

Commuters, even immediately post Ladbroke Grove, rationalised the risks in terms of choice – e.g. "You've got no choice at all". Non-commuters expressed doubts but again reluctantly agreed that the train is still the safer mode of travel:

M6: To me the railways are still a reasonably acceptably safe form of transport but I think with Paddington, that's raised some serious doubts in my mind which I think need to be addressed, along with Southall before that, so I think the rate at which the accidents are happening is increasing but they're still you know an acceptably safe form of transport

M5: One doesn't stop flying every time you hear of an accident in a plane

M1: I think the difference is from what we hear Paddington's an accident waiting to happen, there's a lack of safety culture because it's no longer British Rail, now Virgin pay their drivers to go from A to B as fast as possible, if you go past a red light tough, I use Virgin and South West Trains.... nobody's taking any responsibility, oh yes that driver knows you go past a red light every other day for example so he doesn't stop because he's frightened of losing his job

?: It's something like jumping the lights at the traffic lights

M6: The problem is if you jump the lights up here one time something will be coming, I put down the Paddington accident is the unfortunate, I have great sympathy with those that were in the accident, but that was the time when unfortunately the two were together, and it's exactly the same if you have an accident at the top of the road, somebody jumps the lights, unfortunately one time somebody will be coming, it's the same with an aeroplane it will happen because that's the odds it's going to happen some time and you just have to hope obviously you're not in it

M1: Well I've relatives who lived in Reading and I thought I could have been on that train possibly

F3: I don't think it matters if you know somebody or it's a line you use or whether you don't, I think all of a sudden you think is it safe but then when you look at it in the long term it's got to be safer to be on a train than it is to be in a car

?: Every time you get in a car you're taking your life...if you walk across the street you're taking your life in your hands

3.7 MILLENNIUM BUG

During the first six months of 1999 the so-called "Millennium (computer) Bug" was the focus of a Government information campaign and media attention, although the latter was often spread across a large range of reporting from financial and corporate news to leisure and travel. However, this was not an issue that had much salience for our participants. In the three groups convened specifically to discuss the issue we had to prompt discussion and in the other groups it was not an issue.

The limited discussion which was generated was characterised as follows:

- unconcerned;
- sceptical that the threat was being hyped by the media and those out to make money (e.g. computer specialists);
- often lacking in knowledge – "what actually is it?"

The group in Portsmouth displayed some familiarity with the issue arising from workplace experience and responsibilities (they had been recruited as people connected to small businesses). However, the following sequence reveals that this understanding was limited in scope. Specialist information necessitated contacting "a friend" or one of the "many people" offering advice who were clearly regarded as being of dubious worth, but were "making a lot of money". There was scepticism about the seriousness of the threat, and the group went on to spend longer discussing BSE and food risks than they spent on the Millennium Bug:

M5: Well if you're in business, anyone who's in business, I've got a home computer and they keep on saying in the year 2000, they're going to go bang, they're not going to work. My company's done a survey on it and we found some of the software isn't going to work, we know what's going to crash and we know all we've got to do on some of the cases is put the date back and as long as you don't use the date and rely on the date, it's not a problem. It's really down to accounting packages that are the ones that are going to get hit.

M6: Most of the packages that you would use in engineering certainly the date is irrelevant because whatever date you're using it doesn't matter.

F4: I deal with a lot of accounting and invoicing on a day-to-day basis, it's something that has to fit into

my day and I certainly do use the day. Tracking parcels go, I need to know what day it was delivered and at what time so again it would affect me but it's luckily not something that I plan to get involved in. I certainly will push that aside as it were because I will admit it's not something I tend to know too much about you know. I can certainly get on it and do what have you on it.

Mod: What are your specific worries?

M5: It's really either we're not being told enough information about it; there generally is not to do with, I know it's supposed to do with the chip but is it to do with the chip and what is the exact problem and you try and ask them what is the precise problem and I know it's to do with the two digits on the date but is it a software problem or is it a hardware problem. You try and get someone to tell you what it is.

...

M3: I don't know, I can't see, I can't believe that there aren't people who are far far far cleverer probably than any of us that are going to let this happen like that. I just can't believe that. If it is then something's very wrong somewhere isn't it.

...

M3: Going back to the media thing, it's a year of selling papers. I mean they've done a countdown to the millennium even on telly.

In this second sequence, in contrast with the first, the participants displayed almost total ignorance of the "Bug". Despite this ignorance, and scepticism about expert pronouncements, no one seemed to be taking it very seriously, significantly different to the GM food discussion where similar ignorance and concern about expert pronouncements still generated personal concerns:

F8: I don't know a thing about computers..I don't know a thing about the Bug..I'm just going along with the flow..if it goes up, it goes up

Mod: so you're not worried?.

F8: I don't understand it, I don't understand it at all why things should switch off at a certain time and cause havoc why is it? do you know?

F6: I would have thought somebody would have sorted it out I'm not really conversant with computers either but

F1: Some people may be food stocking might be more concerned I think maybe I might have a few little extra bits and pieces in because I might be a bit concerned that supermarkets' computers might break down and they won't restart

F2: I'm going to stock up on water, I'm not going to bother about my shelves

?: It seems a long way off at the moment doesn't it?

....

F4: Unless they come up with actual evidence to show us that everything is going to run smoothly, I don't think they should make comments that say there's nothing to worry about, it's all under control

Mod what evidence would you find believable?

F4: well I don't think they've got any quite honestly,,I don't think they have...I think a lot of it is they just won't know until the night

F8: don't you think it's all guess work?

F4: There's too many different bodies involved isn't there really?

F1: It's like anything in life.....whether you trust it or not I think anyone who puts their trust into an individual or to anything in life 100% probably is going to be in for a very rude awakening..

F8: You trust your own instincts in life

People's own instincts in relation to the 'Bug' seemed to be practical. There was something they personally could do (e.g. "stock up on water"), rather like train travel. Similarly with GM foods people felt they could make a choice if food was labelled. However, the 'Bug' being related to computers, for many did not have direct day-to-day relevance (unlike food). The concept that "they" would have done something about it if it was a real threat resonated with other talk of power and institutional motives. In this case resulting in a belief that institutions had too much to lose (unlike in relation to GM food where they were perceived as having too much to gain) to allow the problem to arise. In the event, of course, the lay public's instincts proved right.

3.8 RADON

Radon was not raised naturally by any group. In the three groups convened in Radon areas the topic had to be raised by the moderator. Discussion in these three groups was characterised as follows:

- based in considerable ignorance of the hazard posed;
- people struggling to make sense of this 'new' (to them) issue;
- direct questioning of the research team to try to understand the issue;
- scepticism about the seriousness of the hazard, and
- suspicion that the problem had been contrived in some quarters to "get money out of us".

Only one person in the three groups seemed to know about Radon and could give a description of it. He worked in mining.

3.8.1 What is Radon?

Firstly, two sequences that illustrate the initial responses by the groups to the issue being raised by the moderator. The groups collectively worked at trying to make sense of this "new" problem. Analogies, for example, with threats posed by tobacco smoke, were commonly used. Significantly, the whole process was embedded within both a financial and moral discourse: how are we going to pay for these tests? whose responsibility was it to tell us about these things?:

M3: Why haven't we been told about this?

?: You don't care about it?

*M3: No, but smoking kills, smoking causes heart disease, I still go out tomorrow and buy
F2 I don't believe it anyway I mean my grandmother died of lung cancer and she never smoked a
cigarette in her whole life so how can they say, alright maybe it contributes*

F8: Could it be stopped?

[Moderator informs of tests available and pump systems]

F8: Oh well I would want to know yes

?: What can I do if I find my house has a Radon problem

?: How can you find if you've got a Radon problem first?

?: If you can't smell it or taste it or anything

*?: But if this comes up through the earth then OK you can seal your house off from it but what about
when you go outside*

Mod: No it's dispersed naturally, it's only actually dangerous in the house

M5: Oh, so it's like carbon monoxide

(Swansea – Homeowners)

Mod: Has anybody heard of Radon gas?

F1: I've heard of it.

M3: I don't know what it is.

F1: I've heard of it.

*F5: Didn't we have somebody come round testing for it not long ago? I'm sure we had somebody come
round with a machine testing for it unless I were dreaming.*

?: Did they give you a result?

*F5: Don't know. I can't remember if somebody came round or I watched it on the TV. I can remember it,
[Moderator reads from NRPB information about Radon and available tests in response to requests for
information]*

*F2: I'm surprised anybody is being asked to pay really. Surely you shouldn't have to pay to have tests
like that done.*

Mod: So how do you feel about this?

F2: Damned annoyed. Have we had anything from the council?

(Mansfield-Homeowners)

3.8.2 Rationalising Radon

The next stage of the process was one of rationalisation. The following sequence displays processes that led the group close to a position of denial, as the "new" threat was seen as yet another addition to their already complicated lives:

M7: Are we talking seriousness here? Are we talking like a serious hazard to health?

[Moderator refers them to information pack - 2000 people a year die of lung cancer caused by Radon and to a test costing £36].

M7: I'd rather have Radon gas

F3: People smoke for donkey's and donkey's years that have lived to a ripe old age never had no such thing as lung cancer so I don't really agree with all this smoking causes it because again it's a modern thing isn't it. All of a sudden it's smoking.

Mod: Similarly Radon has been around for thousands of years.

M7: Yeah I mean you look at Cornwall a lot of tin mines yeah. Disturbing the earth. I mean these miners lived a right old age. It's like Mansfield, it says we've had mines round here for years and years and years. Well I don't know. Sometimes I feel that modern technology is frightening you to death. Mad cow disease, this Radon, various other things. They've found out about it, salmonella in eggs and stuff. It scares you to death. If you really thought about it and you worried about every single thing that they hit you with, Radon and all this sort of stuff, you wouldn't go out of your house and you'd live in an oxygen tent.

?: Die of starvation.

F3: Yeah you wouldn't eat.

M1: To think about it, probably all these things have been around for years and years but then there was never a name for them.

(Mansfield- Non Homeowners)

In the following sequence doubt is raised about the validity of the technical knowledge that is being presented by the moderator. As Michael (1992) has argued, interpretation of such observations may be complicated by possible threats to lay identity posed by formal scientific knowledge (i.e. processes of the form: "it is not appropriate for a person like me to be engaged in this formal discourse"). Nevertheless, it is interesting to note that the first response to the moderator illustrates an appreciation of the problematic nature of causality. There is evidence of an inability to appreciate the universal nature of scientific knowledge, and the possibility of being able to calculate 'theoretical deaths' on the basis of certain assumptions without the need to count specific corpses, and the participant asks "are they just guessing then?"

M1: So how do they know there's 2000 cases?

M7: If you haven't died from lung cancer from an obvious cause which is smoking or emphysema.

F2: So are they just guessing then? It's just an assumption.

?: It may be you died from some other cause, perhaps another environmental cause but maybe not Radon but it would have to be an estimate.

The moderator compared Radon with genetic modification, and asked why, in comparison, Radon has generated so little media coverage and discussion. First the group supposed government action to suppress publicity, and then speculated about Radon's lack of newsworthiness. Interestingly they provide an example (carbon monoxide) which leads to both short-term deaths and the possibility of culpability:

Mod: So if we compare Radon with say GMOs which you've had a huge amount in the paper about, why do you think there's been so much on this and not Radon?

M5: We wanted to know, I think the media realised that the public wanted to know about it so until something else comes up in the media they'll keep on feeding us with that and half the stuff I'm sure is legit but I'm sure they exaggerate a lot more just to make us interested, there's only so much you can milk out of any situation

Mod: But they could make a big story out of Radon couldn't they?

M5: Why haven't they then, or suppressed as it was by the government or something. If the newspapers want to sell things they'll put things in there just to shock Joe Bloggs .. so why aren't they doing it

*M3: They've never found anyone dead have they, if they came into a house and found two people dead carbon monoxide or we'd hear about it quick enough
(Swansea – homeowners)*

3.8.3 Human Intervention?

During the sense-making processes, all three groups featured a similar contribution in the form of raising the possibility that Radon occurrence was the result of some human intervention - namely either waste dumping or mining. These contributions did not lead to extended discussions, possibly because of the question and answer character that the discussions developed. Nevertheless they serve to illustrate a potentially important way of understanding hazard issues in terms of human activity and responsibility.

3.8.4 The Radon Racket

Finally, we return to our earlier observation that the talk about Radon was embedded within a financial and moral discourse. The "new" threat was interpreted as a contrived issue, formulated or highlighted by individuals whose motives are making money, and was therefore greeted with scepticism. One man explained his response to a person who called at his house offering a test for damp - *I says I haven't got any. He says well how do you know? I says well I don't want to be tested because I know that's another way of getting money out of us.* Such responses illustrate that attempts to promote public understanding of risk issues need to appreciate the fundamentally political and situation-specific nature of practical reasoning.

3.9 LAY ACCOUNTS OF RISK ISSUES

The third approach we adopted to analysis of the focus group data concentrated on how the accounts of risk issues used by participants were constructed. Although this work drew on a number of strands of previous research, the method that we developed to address this task was itself novel.

The central objective of our project was to explore the influence of the media on people's attitudes about risk issues. In methodological terms this is a non-trivial problem. One could ask people directly about the influence of media sources on their views. Indeed, such talk formed part of the focus group and other forms of data that we collected. There are, however, considerable dangers in taking such accounts at face value as providing simple statements of truth (e.g. Silverman, 1993). This, of course, does not imply that our focus group participants lied about these matters. Rather, it reflects a recognition that none of us are necessarily consciously aware of all the influences on our thoughts, and that we are all subject to post-hoc rationalisation, romantic imagination and selective amnesia. Crucially, accounts can serve a range of rhetorical functions within conversation (Radley & Billig, 1996).

We were left with the problem of how to analyse the accounts in themselves, rather than the claims these accounts made about people's attitudes. We considered what was known about the ways in which people talk about risk issues. This matter had been addressed by both the projects which were important influences on our methodological approach. The PRISP project had identified a categorical distinction between the language and imagery of "chronic" and "acute" risk; i.e. "risk as pollution" and "risk as danger" (Horlick-Jones *et al*, 1998). The HSE-sponsored work (Walker *et al*, 1998) had examined "argumentative repertoires" deployed by people in their risk talk e.g analogies and comparisons, allusions to consequences, moral arguments, trade-offs, etc.

We were drawn to a relatively small literature which has examined the structure of arguments deployed by stakeholders in disputes about the siting of hazardous industrial plant (Farago *et al*, 1989; Gray, 1995). These studies drew upon a method for the analysis of arguments developed by the philosopher

Stephen Toulmin (1958). This method entails the dissection of arguments according to their claims and the corresponding evidence (or "data") and warrants (logical bases) for those claims.

In devising an analytical procedure to examine accounts, we were interested in finding some means to capture the 'strength' of media influences on their construction. In previous work, a number of researchers had developed simple counting procedures, and applied these to entities that had emerged from qualitative analysis. A number of such multi-method analyses had provided insightful results (e.g. Morgan & Spanish, 1985; Silverman, 1987; Hornig, 1993; Johnson, 1995). In a similar way, we chose to count the number of times speakers appealed to different sources of 'authority' in constructing their accounts of risk issues, i.e:

- (i) direct experience;
- (ii) the experiences of others, forming part of their familial and social networks, and
- (iii) mediated sources (any form of mediated information)

In this way, we sought to produce a measure of the influence of these different sources of authority on the way people interpreted messages about, and made sense of, these risk issues. Of course, we had no way of knowing about how individuals came into contact with these influences, or the perhaps complex social trajectories of associated knowledge. Nor could we 'see into' people's minds to examine how they reconciled contradictory risk-related experiences.

Figures 3.1-3.3 illustrate the results of our analysis of the structure of accounts which draw on the entire corpus of focus group data. These analyses correspond to train accidents, genetically modified foods and air pollution respectively.

In relation to train accidents (Figure 3.1) appeals to direct experience of untoward events, whether direct or indirect, were entirely dominated by mediated knowledge. This is not surprising as few people have experience of railway accidents, or indeed know someone with such experience. It is important to stress that Figure 3.1 illustrates the structure of accounts corresponding to just accident hazards. The rest of the train data tells a rather different story. Accounts of more general safety issues (and of various shortcomings of railway travel) were dominated by direct experiences, which as we have seen above (3.6), seem to have a reflexive relationship with media "scare stories". In other words, the nature of experiences whilst travelling by rail serve to make such stories tangible, but equally, people's understanding of those experiences, and pervasive sense of alarm, seems to reflect a process of interpretation, which serves to make possibly innocuous experiences seem indicative of possible threats.

This simple procedure revealed significant differences in the way people spoke about these different risk issues. Accounts of GM food (Figure 3.2) were dominated by mediated knowledge. Indeed, this corresponds to the widespread use of (versions of) formal quasi-scientific knowledge deployed in talk about GMOs. One might argue that the GM issue has an unstable character because of people's difficulty in grounding their understanding in terms of direct experiences.

In the case of air pollution (Figure 3.3), the accounts drew primarily on knowledge deriving from direct and networked experiences. This reflects the results of our earlier analyses in which talk about air pollution was strongly grounded in direct experience rather than more theoretical ideas drawn from formal or mediated sources.

Although the Millennium Bug and Radon data were analysed in the same way, we have not provided corresponding diagrams. Talk about the "Bug" was wholly dominated by mediated knowledge. In this case an instability existed in a similar way to that of GMOs, however one might argue that there was insufficient grounding to direct or indirect experiences to even make the threat a credible one. The Radon data were rather different in form, reflecting collective processes of interrogation of mediated knowledge (presented by the moderator) by drawing on direct and indirect experiences.

Figure 3.1 Sources of Knowledge in Accounts of Train Accidents

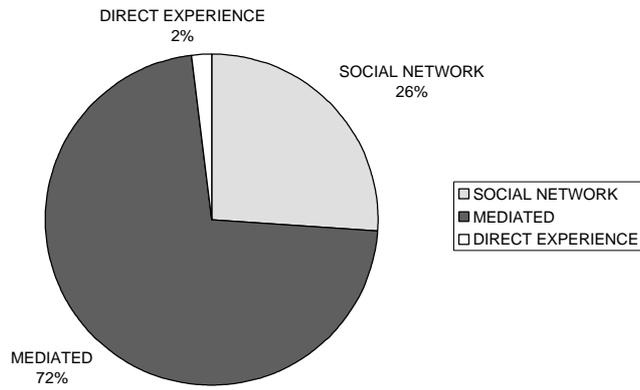


Figure 3.2 Sources of Knowledge in Accounts of GM Food

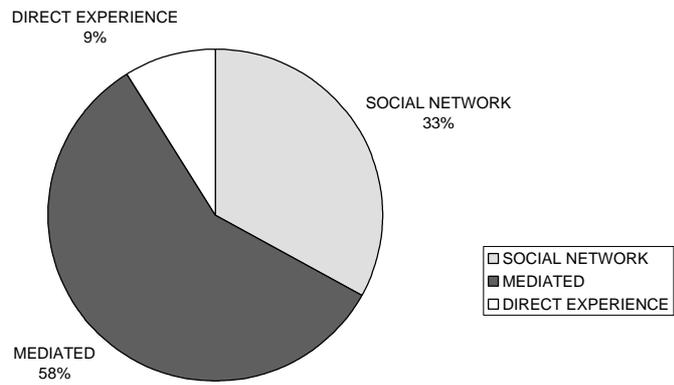
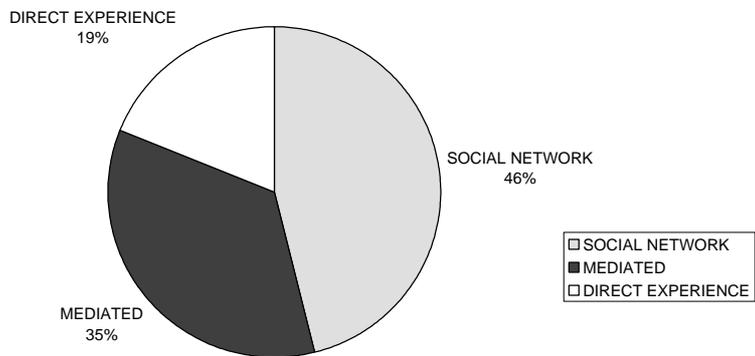


Figure 3.3 Sources of Knowledge in Accounts of Air Pollution



During the process of this analysis it became clear that the structure of the talk was heavily dependent upon the use of devices that we have termed "lay logics" (see Box 3.2). Such devices, like "there's no smoke without fire" and "if its going to happen, it's going to happen, and you can't do anything about it", provided the means to examine accounts and to explore the relative merits of contradictory accounts. Although they provided shared resources among the focus group participants, a given logical device does not provide an official source of authority, as other logical devices often provided contradictory perspectives and conclusions. The subject of lay logics has received some attention in the literature (eg Williams, Rory, 1981; 1983; Radley & Billing, 1996; Walker *et al*, 1998). However, this is a matter that warrants further research attention.

Box 3.2 **Some examples of lay logics**

"There's no smoke without fire" (Swansea - Rail, Female, housewife, line 712)

"People smoke for donkey's and donkey's years that have lived to a ripe old age never had such a thing as lung cancer..." (Mansfield-Non-owners, Female, line 817-819)

"...people die with lung cancer that's never touched a cigarette in their life, so you can't say that's just because you've smoked all your life or no, it's killed you but you've never smoked..." (Mansfield-Homeowners, Female, line 787-789)

"If it's going to happen, it's going to happen and you can't do anything about it" (Watford, Rail, Female, line 799)

"If you listen to everything you weren't supposed to eat or touch you wouldn't eat anything" (Leicester, GM, Female, line 270)

"You just don't want to be that statistic" (Crowthorne, Rail, Male, line 913)

"They put us smokers up at the front....they consider we're dead already" (Watford, Rail, Male, line 733)

"It's the same principle as free range chickens and free range eggs really...the fact that we'd all be paying more because we don't like the manufacturer getting to a profit quicker..." (Swansea, GM, Female – line 733-735)

"To be honest, the supermarkets seem to be having more of a say and deciding...what again it comes down to money...they don't want to lose their customers so they're banning certain foods...which has to be the best way of going about it because if it's not on the shelf to buy, you can't go out and buy it..."

Research into conversational practices indicates that people have a preference for the use of 'local' resources in explanations (Sacks, 1992). This bias is reflected in a series of studies of accounts of unlikely events, which show that a common 'plausibility device' take the form "I was just doing X...when Y". In this way, those providing accounts of strange or rare events seek to anchor their claims by means of linkages with concrete, everyday detail. In so doing, they seek to establish the veracity of their account, and, in turn, maintain their own presentational credibility (Wooffit, 1992).

We identified the use of similar devices by which the lay public tried to make their accounts concerning risk issues appear plausible. Both occurred in a group trying to deal with the new information they had been provided on Radon and while they were trying to apply some logic relative to other 'natural hazards'. In the first extract we first hear about someone's experience of an earthquake and then, in the second account, an extraordinary road accident produced by subsidence:

...because I was sat in bed reading a puzzle..doing a puzzle book...and husband were coming upstairs and he'd just sat on the bed and I was leaning on the headboard and it just rrrrrhhhhh...just like that. He said 'what the Hell's going on?' and went running around the house trying to see if something had happened in the house...
(Mansfield – Non homeowners, female)

The worse scare I think I've ever had in my life was when I was in Norwich one day and I'll always remember it. I got a double decker bus and it was a number 65 and I only...I had to go about a mile up...and I got off the bus and only gone up the road about I suppose 50 yards and then all of a sudden I heard a great big bang and the road literally opened up and the double decker went straight down...
(Mansfield-Non homeowners, male)

3.10 SUMMARY

People are concerned about things that are either directly affecting their lives at a point in time or present a tangible threat of doing so. We return in Chapter 6 to consider what implications this has for risk communication. However, at this point it is important to stress that different risk issues have different 'signatures' or 'images' in terms of their capacity to engender certain patterns of understanding and response. Thus, air pollution was firmly grounded in direct personal everyday experience, making it a credible and threatening risk. GM foods was sufficiently grounded in direct experience (of buying food, of the BSE crisis etc) to present a possible threat, however, insufficiently for a consensus to emerge from competing 'expert' accounts. The Millennium Bug and train accidents were not tangible, both being poorly grounded in direct experiences.

People's discussion of risks reveals dynamic sense-making and reasoning processes involving the reconciliation of mediated and direct experiences to varying degrees to derive rational interpretations. The media are more or less important depending upon the extent to which direct and social experience and information can be called upon.

Multiple and meaningful sources are used by people to rationalise and interpret risks. It is noticeable that those risks about which people expressed uncertainty and had difficulty identifying the nature of the tangible threat, were exactly those where scientific, institutional and/or political failings and vested interests were conceived. Risk is as much (if not more) about these failings as about physical harm. These failings are pervasive in lay accounts of risk, and when forced to account for a 'new' risk (e.g. Radon), responses build upon grounded interpretations of such failings to provide seemingly plausible linkages. This is also what has happened in relation to GM foods and the linkages to BSE.

People displayed considerable media 'savvy' – a sophisticated understanding of the different media, their approaches and practices. Just because a person consumes a certain media source means neither that they directly influenced by it, nor that their views are shaped by it. That the lay public are passive recipients of mediated information is strongly refuted by the evidence from these data, and we turn now to examine in more detail, firstly how the media reports risk (Chapter 4), and then how lay people understand and use the media (Chapter 5).

4. HOW THE MEDIA REPORT RISK

4.1 INTRODUCTION

SARF sees communication primarily as a 'message' transmission system. This central metaphor of the 'message' has two consequences.

Firstly, it implies that public communication is primarily a matter of written texts (analogous to letters or telegrams), deflecting attention away from the central role of visual communication in constructing media meanings. One of the defining features of contemporary communication is its visuality. To ignore this is to examine only part of the communications process. Over half of all the stories in the national press titles selected here for systematic content analysis contained at least one visual image, mostly news photographs. The Daily Telegraph was the only exception, an anomaly that can be explained by the large number of brief stories that the paper carries. Similarly, few of the television news items we analysed were confined solely to shots of the presenter reading direct to camera. The majority contained at least some additional visual material. Ignoring this produces a one-dimensional analysis of the communication process.

Once we start to look at images however, we immediately encounter the second main limitation of the 'message' metaphor. By focusing attention on the obvious or manifest level of meaning it ignores the central role played by the attributes of key images or linguistic expressions. It is impossible to examine the debates around GM foods, for example, without taking account of the ubiquitous metaphor of 'Frankenstein'.

Unfortunately, including images in a research study immediately multiplies the practical problems and the pressures on time and resources. It is now possible, for example, to access the stories and features published by most of the major national news newspapers on CD-ROM. This delivers enormous gains in terms of convenience, but as John Durant notes in his recent study of the GM debate, because the items are presented in text-only form it is 'not possible to retrieve pictures' for many articles, which precludes any systematic analysis of images (Durant & Lindsey 2000:24). To do this one needs access to a hard-copy archive.

The difficulties of conducting a systematic analysis are even greater for television news, since in the absence of a comprehensive national archive (similar to the Vanderbilt Archive of US network news in America) this requires bulletins to be recorded off-air and stored for future use. Added to which, the subsequent logging of key characteristics of all the items that fall within the scope of a particular study is immensely time-consuming as researchers play the item over and over again to record and check their observations. Not surprisingly, as pointed out in a recent report on the media coverage of science, the resources involved have been beyond the means of most university-based research projects (Hargreaves & Ferguson 2000: Chap 4:9), leading researchers either to ignore television news altogether, to work with small (and therefore manageable) samples, or to code only basic features of coverage.

Since one of the aims of the present study was to detail the news media's basic structure of attention in the field of risk, we needed to construct a reasonably large sample and to record a range of key features of the coverage. To achieve this we built up a comprehensive archive of major national news media over a twenty-five week period from the beginning of February to the end of July 1999. This included all the national daily and Sunday newspaper titles distributed in England and all the major nightly news bulletins broadcast on four of the major terrestrial channels (BBC 1, ITV, Channel 4 and Channel 5) together with Newsnight on BBC 2 and the two early evening local news bulletins broadcast in the Central Region where the project was based (Central News and East Midlands

Today). This last addition was particularly important since we were interested to see if local coverage differed from national coverage in its structures of attention.

In addition, we recorded a number of additional television current affairs, documentary programmes and dramas, and collected a range of fugitive printed material and selected material from the Internet that appeared over the sample period, paying particular attention to those dealing with case study topics. All of this material is now part of a permanent project archive based at Loughborough University and is open to other researchers to use.

Although the project archive is extensive it is by no means complete. It does not include any radio broadcasts and has sampled Internet materials and popular television drama selectively. Arguably all of these sources contribute, in important ways, to constructing and cementing the public meaning of risk events and issues. Even so, it was clear from early point in the project that in the time available it would not be possible to analyse in detail all of the materials collected. To ensure the project's main analytical aims could be accomplished within the constraints imposed by deadlines and resources, it was decided:

- (i) to monitor all the material collected on a routine basis in order to allow for qualitative analyses of key aspects of the coverage, and
- (ii) to conduct a systematic quantitative content analysis using a representative sample of the core material.

We decided to focus on national and local television news in order to address the relative lack of attention so far given to broadcast news in studies of risk reporting. In addition, because of the continuing debate around the differences between tabloid and broadsheet reporting we decided to concentrate the newspaper analysis on the three leading titles (by circulation) in each main segment of the national daily market - the Daily Telegraph, the Daily Mail, and The Sun - and to add The Guardian as the title with the most sharply differing readership profile, in terms of political affiliations, in the broadsheet market.

For the purposes of the synoptic content analysis, two days in each sample week (Monday to Saturday) were selected for detailed coding, starting on a randomly selected day and then sampling at three-day intervals. This ensured that all days of the week were covered equally. This process produced a sample of 516 newspaper items and 427 television news items. However, it is important to note that even with these relatively large numbers the subdivisions used in the analysis sometimes produced relatively small numbers in individual cells. The statistics presented here should therefore be seen as providing indicators rather than full conclusions. Cumulatively, however, they do point to certain important general trends.

Finally, it is important to note that the first part of our sample period coincided with the NATO action in Kosovo which attracted considerable news coverage. Consequently, our sample period may not be entirely typical of the 'normal' coverage of risk events and processes.

4.2 ANALYSIS APPROACH

As noted in Chapter 2, there are two main ways of analysing media output: (i) quantitative content analysis which systematically counts the appearance and prominence of selected aspects of coverage; and (ii) qualitative analyses that explore various aspects of the way language and imagery are deployed in stories, using techniques adapted from linguistics and visual analysis. As we also noted, since both illuminate different aspects of media representations they should ideally be used in tandem.

Content analysis was employed in this study to compile systematic maps of the structures of attention reproduced by the routine news reporting of risk. We were particularly interested in four main aspects of these patterns:

- (i) *News Attention* – the distribution of spotlights and shadows. Which areas or aspects of risk are frequently covered and which appear only rarely or not at all?
- (ii) *News Making* – the differential attention paid to various potential ‘prompts and pegs’ for news stories. Which events make the news - accidents, political initiatives, scientific research, pressure group activity, personal experiences – and how often?
- (iii) *Access to Voice* – whose views are quoted and publicised?
- (iv) *Explaining and Blaming* – what explanations are offered of risk events and situations and is blame attributed, and if so, who is held responsible?

As noted earlier, because content analysis uses the same codes to record the relevant aspects of all the items included in the sample it also provides the basis for systematic comparisons between different media outlets (or the same outlet over time).

We were particularly interested in assessing how much light the central divisions between tabloid and broadsheet newspapers could throw on the dynamics of risk reporting, though we should make it clear that we are using ‘tabloid’ here analytically rather than evaluatively, to describe a style of reporting that :

- (i) draws on people’s everyday experiences and anxieties by building human interest stories around individual testimonies;
- (ii) addresses audiences primarily as consumers with rights in the marketplace; and
- (iii) works with a strongly populist framework constructed around the opposition between ‘us’, the ordinary people, and ‘them’, the politicians, paid experts, and ‘fat cats’.

In debates about the press what began as a classification by paper size has long since become an evaluative divide, in which ‘tabloid’ reporting is contrasted with the ‘serious’ coverage provided by the broadsheet titles (printed on paper double tabloid size) with the mid-market titles (which are tabloid sized) occupying a disputed no-man’s land, somewhere between. We were interested in whether our results would reflect these divisions.

Recently, this debate has also begun to gather momentum in discussions of television news, with observers arguing that increased competition for audiences has led to tabloidisation. They point particularly to the launch of Channel 5 and its more informal presentational style and emphasis on consumer issues.

By systematically logging basic features of coverage, content analysis provides a valuable general map of presences, absences and emphases, but it does not tell us how news stories or television programmes actively construct meanings by drawing on particular forms of language and imagery and organising the relations between them. These aspects of coverage cannot be reliably counted. They can only be explored by developing detailed qualitative studies of representative instances. We drew on insights from linguistics and visual analysis in this study to illuminate two aspects of the way news constructs the meanings it offers to audiences: framing and anchorage.

Framing has been defined in several different ways in media analysis, but we are using it here to refer to the way that news coverage draws boundaries around an event or issue, classifying it as an instance of ‘X’ rather than ‘Y’. Confronted with any event, journalists need to answer the question ‘What have we here?’, firstly for themselves and secondly for the audience. In doing this they draw on past incidents that appear to be similar and which audiences are likely to remember. In this sense all ‘news’ is in fact ‘old’. Indeed, rather than thinking of news stories as reports about distinct and separate events (as implied in SARF) it is more useful to think of them as episodes in a continuing narrative, built around sets of master themes and central images. Hence, the reporting of the Ladbroke Grove accident (October 1999) drew heavily on public memories and representations of the Southall crash (September 1997) and has been carried forward into the coverage of the recent fatal derailment at Hatfield (October 2000).

At the same time, frames are not fixed. Like paintings, events and issues can be re-hung and placed in different positions in people’s mental galleries suggesting new contexts of interpretation and new connections to other events and issues. This gives struggles over framing a central role in the organisation of public understandings and responses.

Framing is not an abstract process. On the contrary, its success depends on finding publicly meaningful linguistic tags and images that can crystallise the chain of associations that supports a particular interpretation and embed them firmly in the popular conscious. Like throwing an anchor over the side of a boat, these key elements keep an interpretation stable and prevent it from drifting. In a media environment that is increasingly dense visually, this essential task of *anchoring* is often most effectively accomplished by images.

In the space available here we can only offer some outline illustrations (from our whole analysis) of these processes of framing and anchorage in action. For example, we have limited our discussion here to UK stories. Nevertheless, taking the overall approach suggests that we might usefully move away from the well-worn issue of media ‘sensation’ and ‘exaggeration’ and explore the dynamics of ‘resonance’, looking at how and why particular imagery and headline language forge connections with people’s deepest hopes and fears.

4.3 NEWS ATTENTION

Table 4.1
Newspaper items with selected risks as a primary focus (% - UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Medical Risks	19	11	14	13
Travel Risks	19	7	4	9
Health Risks	8	21	18	17
Work Risks	8	9	8	2
Natural Hazards	5	3	-	2
Accidents in the home	5	3	4	-
Risk associated with leisure/sport	5	1	-	-
IT Risks	3	1	-	2
Food Risks	3	2	2	7
GM Foods	-	8	12	7
Millennium Bug	-	-	4	1
Air quality	-	2	4	2

Table 4.1 suggests that in covering risk-related events and issues that occur in the UK attention tends to be focussed on three main areas - health risks and risk associated with medicines and medical procedures; risks related to travel, and risk related to work. These are all areas rooted firmly in daily routines and personal anxieties about illness and well being, suggesting that news about risk speaks (at least in part) to shared experiences and worries (strongly evidenced in Chapter 3). This pattern is common across all four titles sampled. Given the size of the sample weight should not be attached to the differences between papers.

However, it is notable that on the days sampled, The Sun carried no items on two of our case study areas - GM foods and the Millennium Bug -, that none of the titles carried any items on Radon, and that relatively little coverage was given to air quality.

As Table 4.2 shows, these same three ‘spotlight’ areas – medical risks, health risks, and travel risks - also feature prominently in the structure of attention of television news. Similarly, air quality, Radon and the Millennium Bug remain in the ‘shadows’. There are however some interesting differences in

the distribution of attention as a whole. National television news was more likely than the newspapers (with the exception of The Guardian) to feature stories on food risks, with GM risks receiving significantly more attention on the three main channels than the newspapers and Channel 5. They were also more likely to cover risks associated with leisure and sporting activities. Local news bulletins paid particular attention to travel risks.

Table 4.2
Television news items with selected risks as a primary focus (% - UK studies only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Medical Risks	10	8	8	13	10	6
Travel Risks	17	8	20	21	36	26
Health Risks	17	23	22	14	2	10
Work Risks	3	-	6	-	5	5
Natural Hazards	10	8	6	6	10	2
Accidents in the Home	-	-	-	2	5	6
Risks associated with Leisure/Sport	7	8	2	5	7	11
IT Risks	-	8	-	2	2	2
Food Risks	7	8	6	6	2	-
GM Foods	17	15	18	6	-	2
Millennium Bug	-	-	-	-	-	-
Air Quality	-	-	2	-	-	-

Overall, the results lend some support to the argument that we may be witnessing a shift away from media organisations addressing audiences as citizens with shared obligations, towards an address that speaks to people in their role as consumers of goods and services with entitlements to personal safety and well being.

4.4 NEWS MAKING

In considering the news-making process, we can ask two basic questions: (i) whose activities or talk relating to risk break through the threshold of ‘newsworthiness’, and (ii) who covers the ensuing story, a general reporter or a specialist correspondent?

Table 4.3 shows the major prompts for the stories carried by our sample newspaper titles. Several trends are immediately apparent.

Firstly, the broadsheet titles are more inclined to base items on initiatives by politicians or members of the Government than either the mid-market Mail or the tabloid Sun (26% of the principal prompts compared to 14%). Conversely, The Sun is much more likely to base stories on something that has happened to an ‘ordinary person’ (38% of principal prompts compared with 14% in the Mail, and only 4% and 2% in the Telegraph and Guardian respectively). This lends support to the argument that tabloid journalism is informed by a strong populist sensibility that seeks to speak to and for the ‘man and woman in the street’. It also suggests that rather than seeing lay publics as simply audiences, we need to see them as potential news actors in their own right, supplying news organisations with narratives of being victims, of resilience, and grounded instances of common-sense in action.

Table 4.3
Principal prompts for newspaper items (% - UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Lay experiences and initiatives	38	14	4	2
Legal initiatives	19	5	4	13
Governmental/ Political initiatives	14	14	26	26
Scientific/Expert initiatives	6	24	28	11
Media generated initiatives	6	4	-	7
Pressure group initiatives	3	10	4	20
Corporate initiatives	3	6	2	-

Secondly, pressure group initiatives enjoy only relatively modest success in prompting stories, except in The Guardian (20% compared with <10% in the other papers) which is more sympathetic to the politics of social movements than the other titles. However, as we will argue in 4.9, the engineering of imagery that is now central to a number of pressure groups' persuasive strategies can play an important role in anchoring particular understandings of an issue by providing pictures that resonate with deep seated anxieties.

Thirdly, corporate actors rarely make the news. The Daily Mail had just 6% of such prompts with none in the Guardian. Corporate actors prefer to exert influence directly (through lobbying for example) out of the public gaze. They may, however, be forced to 'go public' if their interests are threatened by initiatives launched by other players on the field of risk (see Figure 1.2), as Monsanto did, during the GM foods debate.

Table 4.4
Principal prompts for television news items (% - UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Lay experiences and initiatives	-	-	-	7	38	16
Legal initiatives	8	9	23	19	18	13
Governmental/ Political initiatives	46	18	25	11	9	12
Scientific/Expert initiatives	4	18	16	25	-	4
Media generated initiatives	-	9	2	2	-	-
Pressure group initiatives	8	-	7	9	9	5
Corporate initiatives	4	9	11	7	-	14

As Table 4.4 shows, however, in the case of television news, while it is arguably possible to discern a tabloid /broadsheet division in patterns of coverage the divide runs as strongly between national and local news, as between public service and commercial channels. It is the two local bulletins that were more inclined to base stories around lay testimonies and experiences (note no items under this

category formed prompts for items on the main news channels). This suggests that future studies need to pay far more attention to local news sources and to the complex interplay between the local knowledge they circulate and people's grounded experience.

At the same time there was also a clear difference in the weight that the BBC early evening news gave to political and government prompts for stories compared with the new, more populist, Channel 5 (46% of prompts compared to 11%). The populist orientation of particular segments of both the press and television news has important consequences for the way risk stories are covered which are further reinforced by the dearth of specialised correspondents on tabloid newspapers and in local television studios.

Table 4.5
Newspaper items: Who reports risk? (% of newspaper items - UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
No name in the item	35	17	16	7
Named reporter but no specialisation given	54	39	26	63
<i>Specialist correspondent named:</i>				
Politics/home affairs	-	3	6	2
Environment	-	-	6	9
Science	-	3	10	2
Health medicine	11	25	18	9
Consumer affairs	-	6	-	-

Table 4.6
Television news items: Who reports risk? (% of television news - UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
No specialisation given	32	88	58	100	100	82
<i>Specialist reporters:</i>						
Politics/home affairs	12	-	4	-	-	9
Environment	12	-	-	-	-	2
Science	-	-	19	-	-	-
Health/medicine	4	8	-	-	-	6
Consumer affairs	-	8	-	-	-	-

As Table 4.5 shows, just over a third of sampled stories in The Sun carried no by-line and over a half were written by journalists who were named but with no area of specialisation mentioned. Only the health correspondent was named. This suggests, that the majority of risk stories were written either by general reporters or reporters with expertise in areas other than science or the environment. In contrast 16% of stories the Daily Telegraph and 11% of stories in The Guardian were written by specialists in either science or the environment. However, the broadsheets also assigned a significant number of the risk stories we sampled to named reporters without an identifying specialism (Telegraph – 26%, Guardian - 63%), making it difficult for readers to judge their competence in

dealing with technical issues. John Durant found a similar pattern in his study of press coverage of GM foods in the first half of 1999. He found that on average, almost half (46%) of his sample of stories were written either by general reporters or political correspondents, as against only 10% written by science correspondents (Durant & Lindsey, 2000: 12)

As Table 4.6 shows, television news is even more inclined to leave risk reporting to non specialists (>80% for ITV, Channel 5 and local news). The BBC is the exception (32% non-specialists) referring a number of reports to the environment correspondent. Channel 4 news (58% non-specialists) drew on the expertise of its experienced science correspondent.

These findings have important implications for risk communication. They suggest in using the mainstream news media to reach substantial audiences, risk communicators will be dealing principally with general reporters or reporters whose specialisms may not be in the areas most directly related to risk assessment and management, and that they will need to find ways of working within the frameworks set by general criteria of newsworthiness.

4.5 ACCESS TO VOICE

As we argued in Chapter 1, the field of risk communication is most usefully viewed as a field of play, or contest, in which the major players battle to gain publicity and credibility and to define the terms of debate. This requires access to the public.

Table 4.7
Newspaper coverage: Who is quoted?

(% items containing quotes from selected sources as first or second speaker – UK stories only)

Quotations from	The Sun	Daily Mail	Daily Telegraph	The Guardian
Members of the public	80	42	23	12
Politicians and members of Government	20	22	23	39
Corporate spokespeople	3	14	23	7
Scientists and experts	6	30	46	29
Members of campaigning groups	-	4	2	37

Table 4.7 shows the percentage of items in the sampled newspaper titles that quoted representatives of the main contenders on the field of risk communication (shown in Figure 1.2). Five points are worth noting:

- (i) political representatives gain a reasonable degree of access to voice across all four titles;
- (ii) members of campaigning groups find it relatively difficult to gain a public voice, with again, the exception of The Guardian, where representatives of the new politics of social movements enjoy more or less the same degree of access as representatives of the established system of party politics;
- (iii) corporate spokespeople are also relatively infrequent public speakers, except in the Daily Telegraph which is generally strongly supportive of business interests;
- (iv) The Sun pays far less attention to expert voices than any of the other titles, confirming its basically populist stance, and
- (v) this stance is most evident in the extensive access given to lay voices (80% of quotes). Indeed the steady decline in the space given to members of the public as we move through the main segments of the newspaper market (42% Daily Mail to 12% in the Guardian) confirms the continuing utility of the established divisions between tabloids, mid-market titles and broadsheets.

When considering the organisation of voice on television news, we are faced with two forms of access rather than just one. People can be quoted, but they can also be interviewed on location or in a studio, speaking directly to camera. Arguably, however, quotations (in a form such as government announcements or reports of research findings) still act as the primary form of access since they very often define the focus of the story. Table 4.8 shows the distribution of quotations for the sampled news bulletins.

Table 4.8
Television news coverage: Who is quoted? (% items containing quotes from selected sources as first or second speaker – UK stories only)

Quotations from	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Members of the public	-	33	4	24	11	17
Politicians and members of government	88	17	57	18	26	27
Corporate spokespeople	13	17	13	6	11	23
Scientists and experts	13	-	-	18	-	10
Members of campaigning groups	19	-	9	24	5	3

Several aspects of Table 4.8 are worth noting. Firstly, the two national channels with a clear public service remit (BBC1 and Channel 4), are more likely than either of the two national commercial channels or the local bulletins to carry quotations from established political actors (88% BBC 1, 57% Channel 4). Second, the two national channels that are arguably most commercially oriented (ITV and Channel 5) are more likely to carry quotations from members of the public. Note that there were no such quotes on BBC 1 corresponding with the findings in Table 4.4 that lay experiences provided no principle prompts. Once again, this suggests that we can usefully apply a version of the tabloid/broadsheet division to television news.

However, turning to the distribution of interviews (Table 4.9), on all channels, members of the public are much more likely to be asked to speak to camera than any other group (only politicians at 23% on BBC 1 and members of campaigning groups at 24% on Channel 5 are worth noting but are still significantly less than the public). However, this high degree of access cannot be taken as an indicator that lay views set the agenda of risk debates. On the contrary as recent research has argued, they act to give issues recognisable faces and accents and to ground them in common-sense concerns (Cottle, 2000). They are called upon to speak from experience not to offer analyses or explanations. The ‘vox pops’ they provide act as a comforting and familiar ‘Greek chorus’, commenting on the action from the side or the back of the stage. They also contribute to the battle for audiences by offering viewers points of access and identification. However, as discussed in Chapter 5, the brevity of many of these lay contributions to television news was a source of considerable discontent among our participants. A number saw it as tokenism and argued strongly for more extensive and egalitarian forms of participation.

Table 4.9
Television news coverage: Who is interviewed? (% items containing interviews with selected sources as first or second speaker – UK stories only)

Interviews with	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Members of the public	70	39	32	80	90	88
Politicians and members of government	23	15	8	2	3	20
Corporate spokespeople	7	-	6	15	9	13
Scientists and experts	7	8	6	12	-	7
Members of campaigning groups	7	-	-	24	13	5

4.6 EXPLAINING AND BLAMING

As Table 4.10 indicates, there is a strong tendency across all the newspaper titles sampled to personalise explanations of risk events - to look for causes in the action (or inaction) of identifiable individuals. This was the main explanation offered in all papers except The Sun, which identified failures by politicians and governments (past and present) as the principal cause more often (39% compared to 14-16% in the others). The Sun was also significantly more likely to present risk events as accidental (25% compared to 5% or less in the other titles). Again, this emphasis on the vagaries of chance has long been a central theme in tabloid reporting. Interestingly, The Sun was much less likely (6%) to identify failures within organisations as possible explanations than either the broadsheets (17-18%) or the mid-market Daily Mail (14%).

As Table 4.11 shows, the tendency to personalise causes is even more marked in the case of television news suggesting that news item here are 'stories' in the sense of narratives centred on individual action.

Table 4.10
Newspaper items: Explanations offered
(% items mentioning selected causes – UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Accident	25	5	2	2
'Natural causes'	6	6	24	9
Personal failures	33	37	34	20
Organisational failures	6	17	16	18
Political failures	39	14	18	16

Table 4.11
Television news items: Explanations offered
 (% items mentioning selected causes – UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Accident	3	-	6	7	34	14
'Natural causes'	7	8	8	7	2	5
Personal failures	38	23	38	36	22	32
Organisational failures	17	8	6	5	2	1
Political failures	10	8	29	10	20	6

Tables 4.12 and 4.13 indicate that this tendency to personalisation is also evident in the allocation of responsibility and blame for risk events and situations, with the tabloid Sun taking this option more frequently (42%) than any of the other news sources sampled (13-31%). However, all of them also sought to perform their role as citizens' watchdogs by frequently assigning responsibility to those charged with managing and preventing risks to the public - politicians, governments, and regulatory agencies. Corporations were blamed relatively seldom, with the partial exception of The Guardian (20% compared with 4-9%), where the ideal of the press as a 'Fourth Estate' more often extends to monitoring big business as well as the machinery of state and government.

Table 4.12
Newspaper items assigning blame (%) (UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Individuals	42	18	25	20
Politicians/government	23	23	28	14
Public bodies	31	15	3	14
Corporations	4	9	8	20
Scientists	-	12	15	9

Table 4.13
Assigning blame: % television news items (UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Individuals	15	11	24	21	21	17
Politicians/ government	42	22	31	14	15	13
Public bodies	12	33	7	10	13	17
Corporations	12	-	11	10	13	6
Scientists	-	11	-	9	-	3

Table 4.14
Action called for or mentioned – % newspaper items (UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Legal action	26	2	4	11
Inquiry	17	9	6	7
New legislation/policy initiative	22	7	6	14
Preventative action	13	31	14	13
Research	-	10	20	28
Modification of existing regulatory procedures	4	19	27	9

Table 4.15
Action called for or mentioned: % television news items (UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Legal action	-	-	11	10	11	2
Inquiry	17	-	14	5	26	13
New legislation, policy initiative	-	14	6	30	5	-
Preventative action	25	14	9	-	16	27
Research	33	29	9	10	11	7
Modification of existing regulatory procedures	17	14	29	20	21	16

There are interesting differences (Tables 4.14 & 4.15) however, in the courses of action endorsed or called for by the various news sources sampled. The broadsheet press is more likely (20% - Telegraph, 28% - Guardian) to support calls for more or continuing research (to examine possible underlying causes and potential impacts). The Sun more often supports more immediate measures of intervention and redress - legal action (against those it holds responsible) (26%), new political initiatives (22%) and inquiries (17%). This emphasis on decisive action rather than longer term causation assessment, is characteristic of the tabloid emphasis on narrative and drama rather than deliberation.

This tabloid/broadsheet division was not reproduced as clearly in the television news sources sampled (Table 4.15). However, together with the Daily Mail and the Daily Telegraph they were inclined to call for changes to existing regulatory procedures. The BBC and ITV had a greater emphasis on the need for research than the other bulletins, the BBC also calling for preventative action more often than the other channels. Interestingly whereas the tabloids focused on calls for legal action the BBC and ITV made no such calls.

4.7 VISUALISING

As we noted earlier, the majority of newspaper stories sampled were accompanied by at least one image and the majority of television news items contained some location footage shot outside the

studio. Images taken ‘on-the-spot’ play a crucial role in supporting news organisations’ claims to be in touch with what is going on and to show things ‘as they are’.

Table 4.16
Visualising risk: newspaper items (% content of main image – UK stories only)

	The Sun	Daily Mail	Daily Telegraph	The Guardian
Risk sites – general views	13	-	33	18
Aftermath of a specific risk event	-	20	17	9
Victims	75	20	17	21
Risk agents				
• human	-	25	-	-
• technological	6	5	-	6
• natural	-	5	-	12

Table 4.17
Visualising risk: television news items (% content of the main visual sequence – UK stories only)

	National News Bulletins				Local News Bulletins	
	BBC 1 (early evening)	ITV (early evening)	Channel 4 News	Channel 5 News	Central News (ITV)	East Midlands Today (BBC)
Risk sites – general views	37	31	31	14	17	34
Aftermath of a specific risk event	10	-	22	22	31	16
Victims	7	23	6	14	19	11
Risk agents						
• human	10	8	6	13	7	5
• technological	7	-	8	14	19	14
• natural	17	23	-	6	-	5

As Table 4.16 indicates, the tabloid orientation to drama and personalisation and the search for points of connection that foster intimacy and empathy produces a marked tendency to privilege images of the victims of risk events and processes (75% of images in the Sun compared to <20% in the others) This shifts the emphasis from the immediate precipitating causes of risk events (which we have called here ‘risk agents’) to their consequences for the individuals and groups caught up in them. It also removes the wider context within which risk incidents take place - by not giving prominence to establishing shots of the locations but focussing in on the faces of those affected.

As Table 4.17 indicates, this structure of attention is not characteristic of television news coverage where attention tends to be focused more often on shots of risk sites and footage of the aftermath of risk events - showing the damage done, the emergency services at work, and people coping and trying to restore some semblance of normality.

4.8 FRAMING

Framing involves three interlinked processes:

- (i) *connecting* new events or phenomena to instances that are already familiar from past coverage and incorporating them into continuing narratives, as the latest episode in an unfolding story;
- (ii) *contextualising* them by linking them to other resonant contemporary issues; and
- (iii) *anchoring* them in the deep seated fears, anxieties and beliefs carried by popular expression and images with extensive currency.

Although we would need to do more research on popular perception to demonstrate in detail how these processes work at the level of everyday understandings, we can hypothesize that risk issues are more likely to attract news coverage if they can be easily integrated into these three processes. The debate over GM foods is a case in point.

As another element in commonly available foods, introduced without public consultation, GM was immediately linked to the frame already established by the prior coverage of BSE (Durant & Lindsey 2000:12). It appeared all too easily as another instance of the same processes of scientific dispute over the available evidence, business and government secrecy, and pre-emptive official assurances.

At the same time, this central continuing narrative of food safety and consumer choice on the basis of reliable information also intersected with a series of other resonant themes that 'worried away' at the state of the nation and the organisation of governance.

4.9 ANCHORING

To illustrate this pivotal process of anchoring, we have chosen four examples; the linguistic tags 'Frankenstein' and 'mutant' foods; the popular play on words around the idea of vegetation; the use of popular imagery to establish links between GM foods and existing concerns over nuclear power, and the use of idealised images of the countryside and village life.

4.9.1 The Figure of Frankenstein

Mary Shelley's cautionary tale of a scientist who sets out to create a perfect being and ends up making a monster who destroys him, has provided by far the most enduring and ubiquitous images of the unintended consequences of scientific intervention, familiar from countless comic books and horror films. The fact that the creature is assembled from elements taken from a number of different sources also resonates strongly with fascinations and fears around the idea of artificial mutation and alteration. The newspaper language used in the GM foods debate, particularly in the tabloid and mid market titles, drew extensively on both of these notions. Examples include, The Daily Mirror's choice of the slogan 'Label Frankenstein Foods' for its campaign on the issue and its front page photomontage showing Tony Blair as the monster, and headlines such as the Daily Express's 'Blair Battles To Calm Public Fears Over Mutant Food' (19/2/1999).

The story of Frankenstein also carries a clear warning against pre-empting what the major religions believe is God's proper monopoly over the creation of new life. This argument was pursued with particular force by Prince Charles who argued that; 'Mixing genetic material from species that cannot breed naturally, takes us into areas that should be left to God. We should not be meddling with the building blocks of life in this way'. This position, which was one of the cornerstones of his Reith Lecture, broadcast on BBC Radio in May 1999, attracted widespread media comment and debate. Despite the widespread belief that we live in a secular age, religious imagery remains a rich source of popular iconography, particularly on matters of life and death, and can appear in surprising contexts. On the 5th March 1999 for example, the satirical magazine Private Eye carried a cartoon showing two elderly men walking past a trial field planted with GM crops with a line of men working with scythes dressed as 'grim reapers' the traditional harbinger of death in Christian iconography. The caption read; 'Harvesting already, I see...'

4.9.2 States of Vegetation

Western cultures draw a sharp division between the human and vegetable domains. Humans have consciousness, animation and free will, vegetables do not, which is why people who lose these faculties (such as patients with severe brain damage) are often dubbed ‘vegetables’ in common speech. The idea that genetically modified vegetables might make people more vegetable like in this sense, was a consistent theme in press coverage. Examples include portraits borrowing the technique pioneered by the Venetian painter Archimboldo depicting faces composed entirely of vegetables and The Guardian cartoon of 16th February 1999. This showed Tony Blair standing in front of a mass of back bench MP’s all of whom are depicted as carrots wearing rosettes with the slogan, ‘Modified Labour’ except for Ken Livingstone, who is shown as himself, holding up a placard reading, ‘Me For Mayor’. An advisor is whispering in the Prime Minister’s ear, ‘Don’t look now Boss, but we seem to have neglected to modify one of the vegetables..’. This image deftly links the mounting media commentary on Tony Blair’s centralised style of party leadership (symbolised by the bitter dispute over nominations for candidates in the London mayoral election) with the widespread press comment on his strongly voiced support for GM foods and his seeming lack of responsiveness to public concerns.

At the same time new strains of vegetables also feature prominently in popular science fiction, as potentially predatory and dangerous. Examples include, Attack of the Killer Tomatoes and Day of the Triffids. These images are particularly familiar to young people and provide a potent reference point for understandings. As one seventeen year old argued in one of the focus groups;

‘I think the only thing the public are a bit worried about is they’ve all seen or read Day of the Triffids, and that’s what they are worried about I think. They are worried about the plants having a life of their own and having a bit of a will of their own’

Although we have no further direct evidence from our focus groups, it can be argued plausibly that this latent image of destructive vegetation marching inexorably across the countryside may have helped to reinforce popular concern over the uncertainty surrounding the degree of likely drift from fields planted with GM crops to other fields in the area. This image of contamination is linked, in turn, to another potent set of associations.

4.9.3 Imagining Contamination

A number of commentators have suggested that whilst the last fifty years of the Twentieth Century saw discussions around the unanticipated consequences of scientific innovation dominated by images of the destructive potential of nuclear power, debates in the Twenty First century will centre on the impacts of genetic engineering. This argument misunderstands the dynamics of change. It is a process of superimposition not of displacement. Bob Shapiro, the CEO of Monsanto (one of the companies at the centre of the GM foods debate) recognises this. As he told a journalist; ‘When people hear about biotech, about how it’s tinkering with the very essence of life the immediate association is to nuclear science. It’s dawned on them that we have probed the mysteries of the universe down to their atomic level, and look what happens: Boom! You kill millions of people’ (Herrera, 2000:162).

This association was powerfully evoked by the Greenpeace activists who destroyed a field of GM oilseed rape in Oxfordshire in July 1999. They publicised it as an act of ‘decontamination’ and were photographed wearing the protective clothing that would be very familiar to audiences from news images of teams entering nuclear installations after an accident and from television police dramas showing forensic teams gathering evidence at a crime scene. In Chapter 3.5.2 we identified a person who found these images portrayed in the media as failing to offer her the real argument. However, it is evident that as images they did resonate with her.

4.9.4 Contested Countryside

Throughout the coverage of the GM foods debate, depictions of ‘spoiled’ landscapes jostled with idealised images of the English countryside. Prince Charles for example, bolstered his arguments against GM technology and for organic farming with a widely reprinted photograph of himself standing in a sunlit field, leaning on a traditionally carved crook, carrying the flat hat associated with farm workers. It is an image that evokes the seemingly timeless pastoral world celebrated in the long-running BBC programme One Man and his Dog. It is carefully composed to evoke notions of unbroken continuity and tradition and to confirm the Prince’s own claimed credentials as a working farmer with detailed practical knowledge of the issues.

The rhetorical force of his argument that organic farming is ‘in harmony’ with nature, received a further boost from stories detailing the possible impact of GM crops on traditional wildlife. On February 19th 1999, for example, The Guardian carried a story headed ‘Gene Crops Could Spell Extinction for Birds’ accompanied by photographs of three familiar and much loved species - the turtle dove, bullfinch, and linnet -, images already familiar from a range of other media, relating to concern about the disappearance of a diverse landscape that defines Britain’s distinctiveness.

4.10 SUMMARY

Of course, these examples are open to contrary interpretations. We offer them to illustrate our central argument that in considering the dynamics of risk communication we need to pay careful attention to the associations cemented within familiar images and turns of phrase and to the underlying anxieties they express. It is tempting to dismiss a phrase like ‘Frankenfoods’ as irrational and emotive. But this misses the key point. Instead of thinking of communication simply as a transmission system and focussing solely on the manifest content of the message we need to recognise that it is also an exchange of symbols in which whatever words or images we use will inevitably drag a baggage of accumulated and engrained meanings in their wake, tapping into deep-seated beliefs and anxieties.

When people read newspapers or watch television news they are making sense of events and issues by passing the arguments and anchors offered by the media through their own interpretive grids. The latter are made up of their own experience, formal education and local knowledge, together with the evaluative schemas derived from their familiarity with particular media forms and their working judgements of presenters’/communicators’ sincerity and trustworthiness. We discuss this in detail in the next Chapter.

5. HOW LAY PUBLICS TALK ABOUT MEDIA

5.1 LAY PUBLICS' MEDIA ASSESSMENT

5.1.1 Audience Activity

In Chapter 1 we introduced two central propositions that have arisen out of recent debates around 'active audience' research. Firstly, that people do not simply receive media 'messages' (as SARF appears to imply). Rather, they actively negotiate their meaning drawing on the resources provided by personal experience, formal education, the local knowledge acquired through living and working in a particular community and occupation, and the frameworks derived from prior media consumption. As a young Muslim man explained in one of the general focus groups (discussed in Chapter 3), when asked how he set about sifting mediated information:

"I'm the eldest in my family, that plays an important part because if I take information and then regurgitate it, or basically give it back to the family, then I'd like for it to be as accurate as it can be. I live in a social setting, within an Islamic community, so I suppose that has a part to play. I've been to university, so that has a part to play. I think with any individual, what their social circumstances [are], their income, their social position, where they want to be, their aspirations - it all has an effect, and they assimilate their information accordingly"

The evidence collected here also shows how people place news stories and representations onto their 'working maps' of the media system. These are constructed around clear distinctions between different media outlets and forms of expression and clear criteria for evaluating utility, credibility, and responsibility.

Secondly, the 'active audience' perspective argues that interpreting and evaluating media are always social processes in which people's personal understandings are continually tried out, tested (and possibly changed) in the course of everyday conversations and arguments with friends, family and workmates.

We also took note of recent caveats lodged against the less nuanced versions of this perspective, arguing that accepting that people's involvement with media is active does not mean that the media have no influence. Rather it changes the way we think about influence, encouraging us to look more carefully at the complex and shifting relations between media representations, situated experience and knowledge, and grounded value systems. Where other sources of knowledge are relatively weak or absent, for example, it is likely that the media will provide more of the resources that people draw on to understand issues.

The empirical material collected in the course of this study offers strong support for all three of these general arguments as introduced in Chapter 2, it was collected in three main ways. Talk about media often arose spontaneously in the course of the initial, open-ended, focus groups (as discussed in Chapter 3). However, to investigate the dynamics of people's responses to media in a more detailed and focused way two other empirical exercises were undertaken: (i) accompanied newspaper reading, and (ii) directed viewing.

In the first, a sample of individuals selected to provide a representative cross-section of national newspaper readers were interviewed intensively about the title they normally read. They were asked to read through two copies provided by the interviewer, selected for the contrasting risk stories they contained, and to talk through their media routines and their responses to particular stories. In the second exercise, small focus groups (each of 4 people who were friends or members of the same family) were shown extracts from the television coverage of two of the main case study topics- GM

foods and the Ladbroke Grove crash – chosen to illustrate different styles of presentation. After each clip had been watched, group members were given a sheet of paper with a range of possible programme descriptors, and asked to ring or tick those they felt applied to the extract they had just seen. They were then asked to talk about their choices.

Neither of these methods is well-established in the research on the media and risk and both were therefore to an extent experimental. However, the results strongly suggest that by providing contexts and environments in which people felt able to talk freely and in detail about their media consumption and responses, both exercises threw valuable additional light on processes of audience interpretation and evaluation, and could be usefully applied in future studies.

Since the wealth of data produced by these exercises overlaps considerably in terms of topics, in the interests of clarity the analysis is presented here thematically, drawing on all three sources wherever relevant. Because these exercises focused on the individual more than the focus groups we report the data here in terms of the social characteristics of the person speaking as opposed to the group characteristics used in Chapter 3. However, once again we stress that we are not suggesting that peoples' views are representative of others. The descriptors are added merely to give a 'picture' of the person speaking. Where newspaper readership is reported this is because it was offered as information by the respondent.

5.1.1 Assessing 'Objectivity'

Unlike many commentators (including some proponents of the SARF perspective), who see 'The News Media' as a single, black box, the participants in this research drew clear distinctions between press and television, tabloid and broadsheet newspapers, information and entertainment. They also worked with clear evaluative criteria, although their understandings of key terms did not always coincide with established professional definitions. 'Objective'/'objectivity' was a particular case in point.

The idea that journalists have a duty to purge their reports of all subjective preferences and partisan judgements is central to liberal democratic models of press performance. It was therefore essential to include it on the sheets listing possible programme descriptors that we gave to participants in the television viewing groups. If this had simply been a pencil-and-paper exercise (of the kind often used in risk research aimed at charting public attitudes) we would have known how many respondents had ticked the word 'objective' to describe a particular clip, but we would not have known what they meant by the term. Many studies ignore this problem and proceed on the assumption of shared meaning. This is hazardous. As the subsequent group discussions revealed, a number of respondents had considerable difficulty defining 'objective'. Here, for example, is a working-class housewife in her late twenties, puzzling out loud;

"it's one of those words isn't it? The minute you've watched it, you think 'Yeah', and you tick it. But when you come to explain what is 'objective', it's a tricky one isn't it? There's going to be an outcome that is the objective. Do you know what I mean?"

A number of our participants thought of 'objective' in this way: i.e. as communication with a clear purpose. However, this common-sense usage co-existed with a version of the professional definition which saw items simply presenting the basic facts, as in this explanation by a sixth-form student, commenting on the extract from the BBC news coverage of the Ladbroke Grove crash.

'..objective' I circled simply because I thought its only object was really to tell people what happened'

Although not every participant understood 'objective' in the same way as journalists and academic commentators, most believed that news should be first and foremost a source of reliable, disinterested,

factual information, uncontaminated by personal opinions, public relations' 'spin', or the political views and commercial strategies of news organisations. They also expected a degree of balance in news coverage in the sense of giving contending arguments and interpretations a fair hearing. At the same time they recognised that these expectations would be frequently compromised in practice. As one man put it, in the context of a group discussion of the Ladbroke Grove crash:

"...personally, for me, the newspapers are there to relay facts, unbiased. Now being realistic about it, there are humans writing this, so the likelihood is they're going to have some sort of emotion behind it. But I would expect, or I would hope that they would relay the facts unbiased. You're not going to get The Sun and The Mirror, and the tabloids, doing that"

5.1.2 Tabloids and Broadsheets

As this last remark suggests, participants drew a clear distinction between broadsheet and the tabloid newspapers, expecting the former to approximate more closely to the professional ideals of liberal democratic journalism. Broadsheet readers were quick to disparage the tabloids from their vantage point of assumed superiority, criticising them for various deficiencies, including;

(i) their reliance on public relations material or single sources; e.g.

"You get some newspapers they just write a report. They haven't been anywhere. But if they can state where these reports came from and who they've got their information from.... Some of the better class newspapers are going to differerent people to find the answers" (young woman)

(ii) their lack of interest in global issues; e.g.

" I mean...it's not news, it's more like a comic newspaper. The people who buy it, they don't want to know about poverty and Third World communities, so the way I see it some people will buy The Sun. I mean I'm picking on The Sun here, but people are just buying newspapers to relieve their boredom from everyday life" (young university-educated Muslim man)

His description of The Sun as a 'comic' points to another central theme in the discussions. As we noted in Chapter 1, from its beginnings in the nineteenth century, tabloid journalism has been as much part of the entertainment and leisure industries as the information industries. Our participants understood this very well and a number of tabloid readers, like this middle-aged, female Daily Mirror reader, wove their paper into the routine texture of their domestic lives and leisure activities:

"I, uh, read the Home Life, and things. Get hints and tips. Where to drill a hole [laughs]. I don't read the sports pages [laughs]. That's one thing less. Unless I'm in the mood for a gamble and I will look at the horses. If we're on holiday, or something like that, we have a little gamble on the horses"

As we saw in Chapter 4, this tendency to speak to readers' everyday concerns and domestic choices carries over into the tabloid news coverage of risk, which pays particular attention to areas that impinge directly on personal and family life. However, this self-reinforcing circle can be broken if readers have access to other forms of knowledge and frames of reference through education or work. As another Daily Express reader, a woman whose daughter had gone to university and she herself had begun a law course at evening school, explained:

"Now I'm sort of a bit alert to issues that are coming up around the world, rather than my own little world. It's quite good doing a law course. It's only a basic law course but it's pulling attention to things that maybe, you know, I'd dismiss before"

Other tabloid readers resented critics metaphorically looking over their shoulders, and staunchly defended their right to make their own choices. As one female Sun reader asserted:

“ I read what I want to read, not what I should”

At the same time, a number accepted the common criticism of tabloid news coverage as tending to be sensational. As one regular Sun reader, a civil servant, put it;

“There are some that stand out above the others, like the Daily Telegraph, The Times. You know, they are up there on a pedestal. You’ve got The Sun, the Daily Mirror, much further down the scale. They like to sensationalise things...I’d be inclined to trust the big broadsheet papers rather than your ‘Currant Bun’ [The Sun] as they like to call it these days”

Or as another male Sun reader noted, commenting on the paper’s coverage of the GM foods debate;

“They made quite a big deal out of it. As the way it came out...it’s almost like you drop your dinner straight away. I did think it was sensational”

At the same time, broadsheet readers were quick to condemn their own papers when they displayed characteristics they associated with the tabloids. During one of the accompanied reading interviews, a long-standing Times reader, was incensed to find, in one of the copies he was asked to comment on, a GM food story accompanied by a cartoon depicting a couple, each with two heads, captioned; “Hi We’re Vegetarians”

“They’re jumping the gun. Nobody knows. Or nobody’s prepared to say that there’s been any problem. And The Times, in its ‘balanced’ and whatever way have got a picture of a two-headed vegetarian. If that would have been put in a different form in The Sun or The Star, or whatever paper, saying, you know, vegetarians are going to have, I dunno, terrific health problems or what, you’d end up with an outcry. Well, that’s doing the same sort of thing in a subtler manner”

Even where incidents of bias were less obvious, broadsheet readers often claimed to read between the lines, continually alert to the connotations carried by particular phrases. As one young man explained:

“If you want someone’s opinion then you look at your Suns and stuff like that. But...I’m saying that, everything is written by someone and it would be very difficult to keep their opinion out of it. You know, sneaking in the odd words. Like I remember when they went back to Saddam’s bunkers and that. They couldn’t help but throw in ‘they’ are making ‘their weapons of doom’ or whatever, but talking about ... ‘our courageous defenders’ and stuff like that”

This sensitivity to the compacted associations carried by words and images led broadsheet readers (and many tabloid readers) to take everything their papers said with a ‘pinch of salt’. As one woman, a regular Independent reader, put it:

Well, I read The Independent, so I think I get fairly good, broad, information, news information. It’s quite in-depth, so I mean, if you sit down and read it you can learn a little bit about what’s going on. But no, I wouldn’t believe it all”

5.1.4 Broadcasting and the Press

The problem, as many participants saw it, was that newspapers are commercial enterprises competing for audiences in a shrinking marketplace with no inhibitions about championing particular political platforms and causes. In contrast they saw the regulations requiring television news to be impartial and political neutral as making the medium more reliable as a source of factual information. As one woman put it:

“I think I tend to listen more to what’s on television because they’ve got a watchdog haven’t they? And so I think that perhaps they might check their stories”

As a recent MORI poll confirmed, this is a widely held view. When asked whether they would generally trust various sources to tell the truth, 75% of those interviewed said they would trust a television news readers but only 10% claimed they would trust a journalist (MORI, 1999). The BBC was held in particularly high esteem by our participants.

To avoid directing responses, participants in the television viewing groups were not told where the clips came from before viewing them. Nevertheless, a number immediately identified the clip from the 9 O’Clock News coverage of the Ladbroke Grove crash as coming from the BBC:

“Yeah, the BBC seems more professional. It just seems straight down the line....sort of the facts”
(nineteen year old, male video-store clerk)

“I noticed it was the BBC and you always associate the BBC as it should be trustworthy and reliable”
(seventeen year old girl studying for A Levels)

“I don’t know why, but you take it more seriously. You know if it’s BBC 1 News it’s going to be accurate” *(thirty-four year old special needs assistant in a primary school)*

They were less wholeheartedly supportive of the news bulletins on ITV and some thought they detected a drift towards more tabloid and superficial coverage. As one young man put it,

It’s just dumbing down really. Basic news really. Not going into any depth about things. It’s just really, really, basic on ITN”

5.1.5 Inclusion and Exclusion

As these quotations indicate, participants subscribed to the core ideal of public service broadcasting as a cultural space that operated relatively independently of political manipulation and commercial pressures with the authority to speak ‘for’ the nation at times of collective crisis like the Ladbroke Grove crash or the death of Princess Diana. At the same time, they saw ‘seriousness’ and more particularly didacticism, as exclusive rather than inclusive. This has particular implications for the reporting of risk and science since these are areas often characterised by an impetus to enlighten the public by making expert knowledge and recent scientific findings readily available. As we shall see later (in 5.4), our participants trusted and valued independent scientists as a information source, but recognised that some forms of presentation might erect fences around access.

This emerged particularly strongly in the television viewing groups’ responses to a Channel 4 news clip showing recent laboratory experiments with insects with implications for the GM food debate. The technical aspects of the presentation were felt to exclude less well-educated sectors of the audience. As one eighteen year old student, who had studied A-Level biology argued:

“it’s quite complex information...Like when he was reeling off all them names of, like, the pesticides, and the Latin names of the caterpillars and that .I think you’d have to, like, appreciate and understand it a bit. You know. You couldn’t have your everyday [person], like bricklayers or something watch it. I wouldn’t say bricklayers are thick, but you know what I mean”

This comment was echoed by another young man, a nineteen year old video store clerk who admitted to having difficulties following the argument:

“it went for the more intellectual people, naming the full name of whatever the chemical is, what it’s doing to everything. You need to effectively dumb it down for people so it can be more.....so a lot more people understand it in the long run”

Several of those who saw themselves as not being ‘intellectual’, went a step further, and excluded themselves on the grounds that it was not ‘for them’:

*“that is the sort of learning programme that you need to watch, but I did find it left me [cold]”
(female travel agent)*

“Really you should watch it because it’s obviously something that everybody feels that you need to know...But it just left me. And if it’s that important Richard and Judy [co presenters of the major morning magazine programme on ITV] will talk about it in the morning...It’s the way they do it, not what they’re specifically doing, but the way they do it. They’ll probably have a phone-in on, and stuff, like again, for normal people” (female aromatherapy demonstrator)

The following interchange between three working class women who all left full-time education at the minimum age, and were struggling to imagine themselves as members of the intended audience, sheds further light on this process of ‘counting oneself out’.

F1 “ It was well put out. It’s just something I’m not interested in...I was sitting there and I was thinking ‘Oh, who cares?’

F2 “ You should though shouldn’t you? Well, I personally think you should”

F3 “Yeah. But again, it just comes down to probably the educated person would watch it in that format and then someone that really, like, knows everything, really boring, sits in his bedroom on his computer . That would really interest him”

F1 “ I think just listening to myself, I think I’m just as biased as the suit, you know? Whereas they could be biased and think we’re all common this, that, and the other I just think they’re all toffs. And I just think I’m just as bad”

Television programmes (and newspaper titles) construct imagined communities. They extend seemingly open invitations to involvement, but their forms of presentation - the language they use, the way the presenters address the audience - act like the small print on the bottom of the invitation card, indicating that anyone dressed improperly will not be admitted. Viewers are skilled at reading these caveats, adept at imagining intended viewers or readers, and quick to absent themselves if they feel that they do not belong. Their strong common-sense division between ‘them’ and ‘us’, the ‘suits’, ‘toffs’ and ‘computer nerds’ on the one hand and ‘everyday’ people on the other, offers fertile ground for tabloid communication’s populist distrust and denigration of officialdom and expertise. This has important implications. As we discuss later, how scientific evidence is presented plays a pivotal role in securing attention and trust.

The above extract also supports the argument that the terms of people’s engagement with media materials are being continually negotiated and re-negotiated, in conversation and arguments, and against a background of continual pressures on time and attention.

5.2 NEGOTIATIONS

5.2.1 Making Time and Securing Attention

People seldom sit down to read a newspaper from cover to cover, or to give a television programme their undivided attention. More often than not, their media consumption is spliced into the routine pattern of daily activities, wrapped around other tasks, squeezed into the spaces left over. They have to negotiate time to read and view.

A freelance graphic designer, now working from home, regretted that due to work pressures he no longer had time to read a newspaper as he used to do:

I don't generally read the small print. What I usually do is flick through it. I mean, it depends on how much time I've got. I know for a fact when I've had jobs before, when it's been very different. You will sort of read a paper back to front, because, you know, if you're sat on a break and there's nothing else to do, you will do it"

Those who went out to work often sandwiched their reading either side of the working day:

" I often read it in the mornings when.... as I've just got up and before I go to work. And then I'm just really skimming through it. Start from the front and work my way through, and read things that catch my eye. Very often don't get to the middle at this stage. It depends on what time I've got in the mornings. And I'll probably come back to it later on in the evening when I've got in from work" (female financial advisor and Daily Mail reader)

"Obviously what I do in the mornings is go through the paper. Then I'm off to work. In the evening, depending on how much time I've got, if my daughter's around. If I'm on my own I will sit down and read it more thoroughly" (female Daily Express reader)

Television viewing also often involved negotiating 'time out' from domestic chores and other demands. Asked if she would have watched more of the Channel 4 clip reporting in GM-related research (mentioned above) for example, a young mother pointed out that it depended

"on what time of the night it was on. If it was on at six o'clock, I'm too busy. I'm putting the children to bed. I'm doing dinners. If I was chilling out on the settee and I've just finished watching my favourite programme ...at ten o'clock at night and it came on it would probably have interested me enough not to have left the room"

This situation, where media consumption for most people is often fragmented and continually squeezed, has several important consequences. Firstly, it assigns headlines a key role in attracting attention. Like a barker outside a fairground booth they persuade people to stop and consider coming in.

"I go for the headlines really. All the headlines. And then, if it's relevant to me or something that interests me, I'll carry on with that" (female Daily Express reader)

Tabloid journalism understands this very well. Indeed, when banner headlines were first introduced at the end of nineteenth century they were immediately seen as signalling a new kind of popular communication. Secondly, tabloid presentation also understands the pivotal role of photographs and images in attracting attention.

"I'd instantly go to the picture. Look at the picture, you know? If it, you know, interested me, then I'd go further" (male Sun reader)

Broadsheet readers too were often 'hooked' by images, though some were reluctant to admit it:

"...sounds ever so childish, but anything with pictures grabs my attention first. Sometimes, from the captions I get as much as I need to know" (female Daily Telegraph reader)

As this last remark suggests, captions often operated to distil or anchor the meaning of the image, suggesting interpretations. As one Times reader put it:

"Usually the little bit underneath the picture tells you the kernel of the whole picture"

Once they had decided to read a story, many readers, particularly readers of tabloids and mid-market titles, valued clarity, brevity, and accessibility:

“I do tend to go more for the short stories. Because they’re so small you get a lot of information crammed into a small paragraph. They don’t tend to drag it out” (male Daily Mirror reader)

Another Mirror reader spoke enthusiastically about the paper’s coverage of the GM foods debate:

“they didn’t try to baffle you too much..... The stories they wrote were very good and they sort of put it in plain English so you could understand it”

Several Daily Mail readers mentioned how they had used the paper’s supplement listing GM ingredients in various common supermarket foods:

“I actually buy the tomato puree at Tesco regularly, and read in the Daily Mail on the Saturday, or Sunday, they’ve got an insert about all these foods, and they’re genetically modified. And Tesco puree was one of them. So I didn’t buy it the next time I went” (twenty-six year old male graphic designer)

In contrast, a female Daily Mail reader, responding to a story on GM foods was very critical of its lack of clarity:

“..you’ve got to really read it and take it in. You can’t just....there’s a lot of different references to different people. Different people’s comments. So you tend to lose the thread a bit and ask, ‘Who was that?’..It goes from one thing to another. There’s no clear theme through it”

Even where people’s interest is engaged by an issue, their commitment tends to have a relatively short shelf life. As a Daily Express reader explained:

“I got a bit fed up with GM food to be honest. So now I just kick it. After it went on two or three weeks, I felt, ‘Oh, not this again’. It’s the same boring thing you know”

This pattern of an early spurt of attention quickly building to a peak, followed by a sharp decline, exactly mirrors the pattern of news attention (see Durant and Lindsey 2000: 8). It has important implications. It strongly suggests that people’s major frameworks of interpretation are likely to be established in the initial phase of this process. Once established they become part of the stock of available cultural resources that can be drawn on later when subsequent newsworthy events push the issue back over the threshold of news attention - as Prince Charles’ speech supporting organic farming and the Greenpeace destruction of trial crop plantings did in the case of GM foods. This in turn suggests that these frames may prove very difficult to dislodge and that the problem may be less a matter of sensationalism and more a matter of closure around a single dominant frame.

5.2.2 Circuits and Flows

Another major theme that emerged was that ‘media’ is always plural. People certainly have marked media preferences but these do not exhaust their media consumption. On the contrary, they may provide starting points for additional activity. This is particularly important now, with the introduction of 24-hour television news services, the rapidly expanding audiences for cable and satellite channels, and the growth of internet access. As a consequence people are in the process of moving from simply being active ‘readers’ of particular media texts (their newspaper and terrestrial television news bulletin of choice) to becoming ‘navigators’, charting paths through an increasing complex circuit of interlocked sources. Discussing, in interview, a press story that particularly interested him, about an English tourist killed in an accident abroad, a male Daily Mail reader,

described how he regularly moved from the paper to satellite services in search of more extensive coverage:

“A story like that, it may be small in the paper, but it might have got a fair amount of news coverage on television. I mean the likes of Sky News and that. The normal average sort of news programme, they probably would give it about 30 seconds or so. But Sky probably would have given it sort of two or three minutes. So what I do with, say, the television side, if there is something that is really interesting on there,, I do tend to go to Sky News because I know you get like a whole hour’s worth of it”

Other participants described how they had begun to use the Internet to pursue stories that interested them:

“I’ve really got to grips with the Internet. If I was interested [in a story] I might go straight on the Internet. Go to the BBC site and if I find something I’m particularly interested in, you can go shooting around with various links off it” (male Times reader)

The fact that the BBC’s open-access Web site is currently the most visited general site in the country suggests that the Corporation has successfully transferred its established reputation for accuracy and reliability to the new medium, and staked a claim to be one of the major entry points or gateways to the Internet. It also suggests that to be effective, risk communication in the future will have to follow its target audiences onto the Web.

5.2.3 Talking and Arguing

Even the keenest web surfer, however, does not live entirely in cyberspace. Together with everyone else, they are enmeshed in a complex web of grounded social relations, and the ‘active audience’ perspective suggests that everyday conversations and arguments play a central role in shaping and reshaping individual interpretations:

“...obviously if you see people all day you do tend to get conversation about what’s been happening maybe. And you do listen to people’s opinion and you do start to make an opinion of your own, which doesn’t always have to be the other person’s opinion, but it doesn’t mean that your opinion’s right either. So you just...all the information and you just make an average”

“I wouldn’t rely on one particular [news source]. I just know it’s what other people say as well.. friends and relatives. If they’ve got an opinion on it I listen to them as well” (female Independent reader)

Focus groups allow us to eavesdrop on these processes of sounding out and negotiation. Here for example are a group of women in Swansea, arguing about contending frameworks for explaining the Ladbroke Grove crash and assigning blame:

F1: ... since Railtrack took over basically there was bound to be human error because of the way they run the company. It was inevitable I think, right from the start.

F2: .. I don’t think it is money. Whether that was. Was it human error or was it the signals in a bad state ? Was that the one?

F3: He went through a red light didn’t he?

F2: Yeah. But it was hidden wasn’t it?

F3: Didn’t they say he actually went through two red lights? One report I seem to remember was saying that.

F4: It’s a maze up there though isn’t it? To be able to see anything

F1: But they say that particular signal, when the sun shines, it obscures it quite a lot. Other drivers have gone through that one

5.3 EVALUATIONS

5.3.1 The Use of Experience

As we saw in Chapter 3, people's understandings and interpretations of risk events and issues are continually informed by personal experience (where this is available) and by everyday ambitions and anxieties. So too are their responses to media accounts and representations. Firstly, personal experiences and worries play an important role in structuring attention. For many people, stories anchored in concrete circumstances they immediately recognise, gives them added relevance. Sometimes items activate vivid memories, as in this elderly lady's response to coverage of the Ladbroke Grove crash:

"None of you remember the Whealdstone, Harrow and Whealdstone crash where five trains went into one another. I was there with that. They called us out. I worked at Kodak then. ..I was cycling up Villa View. I heard this hell of a bang. When I got there they'd put out the thing...We were lugging them out... any rail crash brings back memories. Dreadful sights they were, they really were. I mean worse than anything during the War."

More often they connect with particular concrete concerns, as in this mother's response to a Daily Mail story about a missing teenager who had been found dead:

"How old is this one. Oh!. She's seventeen. I've got teenagers, so it's something I would relate to .And you do worry about them. I know there was a girl in Bristol murdered. That was last year. And my daughter, she's down there now, studying. So I remember reading all that because it was all very relevant."

A female *Daily Mail* reader commented that she tends:

"to read anything to do with supermarkets. Price wars, things that are going on. Because I do a lot of shopping"

References to locality also increase a story's salience. As a regular Sun reader living in Leicester noted, commenting on a story in the paper about a girl who had died from a drug overdose:

"the fact that she's from Leicester , it's sort of relevant you know."

As we noted earlier, tabloid journalism trades on these connection points, building stories around issues and people that readers can immediately recognise and identify with. Broadsheet readers on the other hand, were more inclined to see parochialism as a lapse. As one female Daily Telegraph reader explained,

"I feel guilty that I don't, uh...get involved in foreign news. It's purely personal. Probably it's like that for a lot of people who look closer to home. There's not a lot I can do about those things. You can only do things that are closest to you really"

Recent research suggests that this desire to feel that one has a degree of control over one's situation strengthens the impact of appeals which speak to people as individual consumers, making positive, practical, choices (Phillips, 2000). Tabloid news skilfully builds on this consumerisation of public problems.

As well as structuring audience attention, personal experience can also provide a critical yardstick against which to assess reporting. The following account from a Somerset farmer, and staunch

supporter of traditional farming practices, commenting angrily on a story in the Daily Mail (his paper of choice) headed, 'Frankenstein Food Fiasco', provides a particularly vivid example of grounded critique in action.

"I feel very strongly about that because there's an organic farming thing going on. Millions and millions of pounds made available. They put these scare stories out so people who don't really understand it, say 'Oh, I must buy organic food'. And there is a friend of mine. Well, a young lady. She's in charge of this place that makes organic yoghurt. Just up the road here. It's getting bigger and bigger...got a big milk thing, Organic Milk, as though it makes any difference"

As we shall argue (see 5.7) audience members who have no relevant personal experience, grounded knowledge, or educational training to tap into, are more likely to be influenced by media representations, particularly in areas like GM foods, which are unfamiliar to them, 'new' and subject to dispute. However, contrary to the dominant metaphor in the SARF model, these messages are not dropped into people's interpretive maps of the world like a stone dropped into water. They are filtered through a complex grid of common-sense judgements about the value and trustworthiness of particular kinds and styles of presentation. This emerged particularly clearly from the group television viewing sessions.

5.3.2 Information and Illustration

As introduced in Chapter 2, participants watched six clips chosen to represent some of the major presentational styles in current affairs television. There were three standard news extracts, a BBC 1 report on the day of the Ladbroke Grove crash, a BBC report on the political controversy around GM food, and a Channel 4 item reporting on recent laboratory experiments with insects with implications for the GM foods debate. There was an extract from the GMTV breakfast news reporting, the day after the Ladbroke Grove crash, representing the more tabloid style of news reporting, together with extracts from two contrasted current affairs debates.

The first, 'One Week Later', was chaired by the principal Channel 4 news presenter, Jon Snow, and put questions on the Ladbroke Grove crash to rail executives and other interested parties. In the extract used, Snow's questions to the panel (who were seated on chairs facing the audience) were interspersed with contributions from members of the invited studio audience, which included victims of the crash and their relatives. The second extract was from the 'Thursday Night Live' talk show on ITV, where contributions from the specially invited guests (who were sitting in the front row of the audience) were interspersed with comments from the studio audience. These examples were chosen to contrast what we might call the 'classic' discussion format, with carefully phrased questions, expert witnesses, and agreed turn-taking, with the more tabloid form of talk show, which encourages emotionality and often raucous audience participation (see Murdock, 2000)

As noted earlier, after watching each extract all the members of the viewing group were given a sheet of paper with a list of possible programme descriptors and asked to tick all those they felt applied to what they had just seen. Their answers were then used as a starting point for discussion.

Table 5.1 shows the results for selected descriptors. As we noted earlier, when discussing the variability in people's definitions of 'objectivity', these findings must be read in conjunction with the comments and explanations people provided. Nevertheless, the overall pattern of choices does point to important differences in the way participants viewed and evaluated the six extracts.

Table 5.1
Television viewing groups:
Percentage of participants endorsing selected programme descriptors

Descriptors	News Bulletins				Studio Debates	
	Ladbroke Grove Crash		GM Food		Ladbroke Grove	GMFood
	BBC 9pm News	GMTV	BBC1 (political controversy)	Channel 4 (scientific research)	'One Week Later'	'Thursday Night Live'
Informative	97.1	34.3	42.9	77.1	40.0	45.7
Interesting	91.4	31.4	57.1	77.1	48.6	77.1
Balanced	34.3	5.7	31.4	11.4	31.4	25.7
Trustworthy	22.9	11.4	8.6	28.6	8.6	2.9
Dramatic	45.7	54.3	5.7	2.9	14.3	25.7
Moving	37.1	65.7	-	-	5.7	-
Entertaining	-	-	5.7	20.0	20.0	80.0
Exciting	-	2.9	-	-	11.4	31.4
Superficial	-	22.9	5.7	-	11.4	2.9
Sensation	2.9	28.6	8.6	-	2.9	11.4
alist						
Intrusive	-	48.6	-	-	2.9	2.9
Relevant to me	8.6	2.9	65.7	45.7	14.3	51.4

The majority of participants saw both the BBC coverage of the Ladbroke Grove crash and the Channel 4 item on recent laboratory research as 'informative' (97% and 77% respectively). In discussion, a number of participants mentioned that they found the simple animated computer graphic of the crash particularly helpful in picturing what had happened:

"the diagram, the graphics. They showed what actually happened ...easy to follow. You could see exactly what had happened" (female travel consultant)

"I thought, I've never actually seen what happened, so I seen the graphic on there and it does help. It's not flashy or anything but it shows you straightfoward what happens" (male computer games tester)

"They had like, graphic pictures, and they've shown you exactly, like computerised, how the train came down. Which was quite good for people who don't really understand what they are saying" (eighteen year old college student)

"it was very informative, the way they did the graphs. You know, for people? When they were trying to explain what happened, it's quite a confusing thing I suppose if you don't know how a track is. The graph they gave I thought...really helped to explain, to understand how it happened" (thirty-one year old secretary)

These comments suggest that in an increasingly image-intensive media environment, effective risk communication needs to mobilise the full range of available visual resources to express key points in accessible and eye-catching ways.

With the Channel 4 extract, a number of people also said that they found the language accessible:

"For a scientific programme it was easy to follow, which I think they have to be for the majority of us who are not scientists. It's easy to understand. And, yeah, I enjoyed it". (female wild-life rescue assistant)

Others cited the practical demonstrations as particularly helpful. They wanted to see what was happening, as it happened, not simply to be told about it:

“...maybe it’s purely because it was in his lab and the graphs were there, the insects were there . We were actually watching it happen. You were looking at that leaf. We were looking at the insects eat it, watching the caterpillar and the butterfly. And it was there in front of you.” (thirty one year old secretary)

“That’s the sort of programme I like...I like people telling facts. ...they showed the research they’d done. They told the results of the research...that’s the thing with these other programmes. They’re all sitting there bloody shouting at each other. There’s no research done at all. It’s sensationalism. This actually gave you the facts.(female local government officer)

5.3.3 Sensation and Drama

Participants frequently contrasted programmes they saw as providing plain, unvarnished, authoritative facts with programmes that they felt were sensationalist. The clip of GMTV’s coverage of the aftermath of the Ladbroke Grove crash, came in for particular criticism, with almost half of all participants describing it as ‘intrusive’ (Table 5.1). They particularly objected to the close-ups of injuries which they felt were exploiting the victim’s suffering.

“ I felt that people who were suffering, I mean, don’t necessarily need a camera shoved a couple of feet away from them, when they’re clearly in pain and what have you. Maybe that person didn’t mind,but I certainly would” (female residential care officer)

“ when you see the actual bloke who’s all messed up going to the ambulance, I just think that’s intrusive because that’s somebody. If it happened to me and if I was a mess I wouldn’t want it. I just hate the thought of that happening” (thirty one year old secretary)

These criticisms are informed by a strong sense that the suffering of victims and the grief or shock of witnesses should not be exploited. This emerged particularly strongly in condemnations of an on-the-spot interview with a man who was placing a bunch of flowers in memory of the dead, as in this interchange between three women in Swansea:

F1: it was a very sombre thing. But the guy was trying to sensationalise it and he was asking the poor chap one question after another, not even waiting for him to answer. I didn’t like that at all

F2: I agree..I mean the guy’s putting flowers down, there’s just been a train crash. The reporter says ‘Why are you putting those flowers there?’. It’s obvious why isn’t it ?

F3: I would have thumped him

A number of other participants agreed, including younger viewers who had grown up with ‘reality television’ programmes based on close shots of emergency teams in action, extracts from video surveillance cameras or dramatic amateur video footage of accidents and disasters.

“I mean, it’s eight o’clock in the morning and he’s just found Joe who is laying some flowers down as a mark of respect. He’s not even asked him. He’s just put the microphone straight underneath his mouth and said ‘Look , we’re doing a TV programme, what are your thoughts’. So I thought it was a bit intrusive...he’s laying flowers, he’s trying to deal with how he feels by himself and then you’ve got the news camera in your face” (seventeen year old male student)

“I thought it was prying a bit too much...He was obviously upset and I don’t think he needed to be kind of pressed on it, and I think it sensationalised it” (female student)

However, not all participants drew the line between acceptable on-the-spot coverage and sensationalism, in the same place. As one seventeen year old student argued,

“the clip and footage they showed wasn’t too intrusive because nobody was... I mean they didn’t peer inside ambulances. They showed a few with neck braces , wheelchairs, things like that ..and they only really showed them from a distance. They weren’t right up their in their face, if you like, without any privacy”

At the same time, a number of discussants drew a clear distinction between ‘sensational’ and ‘dramatic’. As one young housewife put it, explaining why she had ringed the term ‘dramatic’ to describe the BBC evening news coverage on the day of the Ladbroke Grove crash;

“dramatic not in a horrible way, somebody you think who’s OTT, you think ‘Oh God, they’re so dramatic’.. but dramatic as in, you know, when you see like drama on ‘telly and it really grabs you”

As this comparison suggests ‘drama’ was used in several different senses in the discussions. Firstly, participants valued forms of storytelling that offered points of identification and opportunities for empathy. As one male Daily Mirror reader argued, talking about his interest in a story on the death of a child:

“I mean it’s not morbid. .It’s nice to read, you know, sad stories like that because you appreciate it and you can feel for parents and things like that”

As Table 5.1 shows, the items that were seen as ‘dramatic’ in this sense were also likely to be thought of as ‘moving’. Despite their criticism of lapses into ‘sensationalism’, nearly two thirds saw GMTV’s coverage of the Ladbroke Grove crash as ‘moving’. This is not surprising. As we argued in Chapter 1, ‘human interest’ stories, particularly stories of victims, have long been a central feature of the ‘other’ news in which GMTV trades, though some participants offered a more cynical view of the underlying motives:

“it’s just what people want to see, don’t they, on the news? They want to see the people and how they’ve been affected. And I suppose it just gets viewers, doesn’t it really? It would even more boring if there weren’t any dramatic pictures or anything like that” (nineteen year old warehouse manager)

The fact that the discussion programme, ‘Thursday Night Live’ is also described as ‘dramatic’ by a quarter of participants (Table 5.1) however, points to another sense in which the term was used - drama as unfolding action driven by conflict and the excitement of unpredictable twists and turns:

“you watch some programmes and some people go over the top. They push the chair or something and they push the table over because they can’t handle the interviewing. You’re always I suppose, on the edge of your seat waiting for something to happen” (nineteen year old warehouse manager)

“it was very dramatic because, well, you just didn’t know what was going to happen next. You thought that perhaps he might have got up and lumped that guy one. I would have stayed tuned in just in the vain hope that he might have done” (seventeen year old student)

For the vast majority of participants (80%), however, these characteristics placed the programme firmly as entertainment rather than information:

“that particular programme is part of entertainment isn’t it? ...there’s adverts for that programme that show, like people shouting at each other, and people disagreeing and people not getting on and throwing insults left, right and centre. So to me that just entertainment. It’s not, I don’t think, really informative discussion” (housewife in her twenties)

“Entertaining because at the beginning I thought they were all going to have fisticuffs or something. The way they were all going ‘rrrr’ ” (female teenager)

“ I think it’s more entertainment rather than an informative programme. I think they’re just making entertainment. There was information there ...but I don’t think it’s put together the same as perhaps the news would be” (early years development officer in her twenties)

As the participants recognised, ‘Thursday Night Live’ belongs to the genre of gladiatorial talk shows pioneered in America by Jerry Springer rather than to the longer established tradition of British television discussion programmes, like Question Time, where panellists answer questions from the audience in a considered way. On balance, most preferred the latter as sources of information and forums for clearly organised debate:

“if I see Jonathan Dimbleby behind a desk with a suit on...and it’s Question Time, it’s more of a structured sort of debate , where this seems to be a free for all” (female childcare officer)

“if I really wanted to hear the facts correctly I’d rather have it in a far more controlled environment without an audience, perhaps like Newsnight, where everyone’s given an opportunity to say their piece” (local government officer)

Both these speakers were in white collar occupations which carry responsibilities. As we discuss later (5.6), a number of working-class participants felt excluded from these more formal forms of debate and wanted more opportunities to speak in their own voice. At the same time, these demands for greater participation were underpinned by more general judgements about who constituted a believable source of information or testimony and which television presenters could be trusted to act responsibly in asking relevant questions, chairing discussions, and keeping the needs of viewers at home in mind.

5.4 TRUST

When assessing the trustworthiness of those who appeared as sources of information on television news and current affairs programmes our participants consistently drew on three main criteria:

- (i) whether the person possessed relevant knowledge about the topic, rooted either through expert competence or practical experience;
- (ii) whether the person was speaking for themselves, independently of vested interests or political affiliations;
- (iii) whether the person had the lay public’s best interests at heart or was pursuing a personal agenda.

5.4.1 Evaluating Sources: Distrusting Politicians and Trusting Scientists

When asked in the MORI poll, who they would trust to advise on them on the risks posed by pollution, only 4% nominated politicians and 6% Government Ministers. In contrast, 60%, ten times as many, said they would trust an independent scientist who worked in a university, though significantly, less than a quarter (23%) claimed they would trust a government scientist (MORI, 1999). This wholesale distrust of politicians also emerged very strongly in our study, particularly in relation to debates around GM foods. A number of participants were scathing about what they saw as politicians’ lack of relevant scientific knowledge and expertise, and their impetus to make political capital out of public concerns:

“I’d have liked to have heard from ... a geneticist, is that the right word? someone who knows about genes and stuff, who will explain why they are doing things...But not some politicians. Most of the politicians and heads of department don’t know bugger all about what they’re actually doing” (unemployed furniture restorer)

“When you ask politicians you know...it’s beside the point. Just getting the political slant on it rather than an objective scientific basis of it all. Because we all want to be informed...this subject is something we don’t generally know a lot about and we need people to explain it to us in lay people’s terms. We don’t need a political slant on it” (local government officer)

Distrust was also grounded in populist suspicions that the ‘privileged’ life-styles they imagined that politicians lived insulated them from the dangers and worries of most people’s everyday lives. As one teenage boy put it:

“The Prime Minister tried the GM food, said he would buy it. It made me think, don’t talk rubbish. You don’t give a damn. You’re earning so much you don’t care how much it costs. You don’t care whether it’s cheaper or whatever.”

Other participants suspected that politicians were too often ‘economical with the truth’

“I think we have a lot of things hidden from us. Certainly in terms of crops being sprayed, food being tampered with....it’s a long way down the line before it’s actually brought into the public view. Which makes me angry...I’ve lost all faith in government bodies.. I just think they distort the figures and the facts to make us feel safer about it” (female Daily Telegraph reader).

On the other hand, participants strongly endorsed the traditional view that ‘real’ scientists could be relied on to provide ‘genuine’ evidence based on disinterested scholarly research conducted independently of vested political or commercial interests:

“Scientists, they’ve got nothing to gain by...I mean some scientists, they’re employed by some major companies, but primarily they’re independent. They’ve got no axe to grind with anybody. They’re just telling us how it is. They do research and that’s it...The fact is they’ve go so called experts, but they could be telling a pack of lies. You get a professor from a university who’s been doing research for the last ten years and I’ll sit down and take notice of it” (local government officer)

“I think I would have had somebody independent and more scientifically based commenting on it as opposed to politicians. I think that’s what needs to be done....people need information and they need unbiased information. Not coming from politicians, coming from actual scientists and people actually in the know” (housewife)

Overall, the evidence collected in this study suggests that scientists have a pivotal role to play in meeting the public demand for reliable information and open debate on risks providing two conditions are met. Firstly, that they are perceived to be independent of both governmental and business interests. Secondly, that relevant material is presented in readily accessible forms using lay language and taking full advantage of the opportunities offered by images and graphics.

5.4.2 Trusting Presenters : Questions of Presentation

As we noted earlier, people are much more inclined to trust television as an information source than newspapers. But this goodwill cannot be taken-for-granted it has to be earned, and at the heart of people’s judgements lie questions of presentation. They judge presenters on whether they represented the interests of viewers, and they judge programmes on how far their formal organisation helps or

hinders in building links between the studio to the sitting room. Participants assessed presenters' commitment to the public on several indicators. These included;

(i) involvement in charities, as in this comment from a male Daily Mirror reader, talking about Esther Rantzen, who made her television reputation chairing a consumer watchdog programme;

"...you know, she always speaks the truth anyway ? I suppose you admire her in a way because she does an awful lot of work for sort of all charities. You know? It's someone you can trust"

(ii) their willingness to give voice to public queries and anxieties:

"..obviously the presenter guy is going to ask the right sort of questions that people, the public, want to know" (nineteen year old computer games tester);

(iii) their preparedness to press power holders to explain and justify their actions:

"I like people like Jon Snow. I like people like Jeremy Paxman, John Humphries, who will not suffer fools gladly. If they don't answer the question, they'll come back and say.. 'yet again'..." (local government officer)

"trying to put them on the spot, to get that answer they probably wouldn't normally give had they been pre-warned. Yeah, that is a good thing" (housewife in her twenties)

At the same time, presenters were also judged on the fit between their performance and the topic being dealt with. This emerged particularly strongly in comments in the television viewing groups on two programmes dealing with the Ladbroke Grove crash, the studio discussion chaired by Jon Snow and GMTV's news coverage on the morning after the accident.

One group of working class women, who were otherwise generally supportive of Snow's assertive style of questioning, were particularly critical of what they saw as his self-centredness and lack of empathy on this occasion:

F1: "There was no respect for the people who died. It was a power thing, which it always is ,isn't it? The high powered show no emotion. I'm going to do my job. I'm going to be...he was just like, very cold. He was trying to show everybody, look what a brilliant presenter I am...and that I can be forceful and I can get the answers I want."

F2: "But there are other ways of doing that. Not in such an abrupt way. You have seen people do it, when you see things like they talk to them and calm it down and like, bring the two together to find the answer."

F1: "...but it's not just that is it? It's the setting as well. Really cold and military style...Like a courtroom isn't it? People are being judged."

F2: "It didn't come across as very compassionate or anything."

F3: "I still think that someone like Trevor MacDonald should have done that."

F1: "Oh, he's fab isn't he? ...He's lovely,. I like him. He's not offensive is he ? No, he's just nice and normal. He wouldn't say it in such an aggressive way."

Popular complaints about the ways that ordinary people's experiences and feelings have been distorted or belittled by standard programme formats have a long history (Murdock, 1999) and have fuelled a significant growth in formats, such as participatory talk shows and video diaries, which give people the opportunity to talk in their own voice about their experiences and the issues that concern them.

5.5 PARTICIPATION

5.5.1 'Ordinary People Talking to Ordinary People'

Our participants, particularly those in social groups C2-E, expressed a strong desire to see ordinary people given a chance to speak their mind on television:

"I think people watching it would rather listen to the person who is actually there at the moment, involved. Not like some news reporter in a suit you know, and slicked back hair...It's like the ordinary people isn't it? Ordinary people talking to ordinary people." (male student)

They were also inclined to trust what 'ordinary people' said, on the basis that their opinions were rooted in practical, hands-on, experience, and that they were speaking for themselves, not on behalf of a vested interest:

"I think that's what's it's all about isn't it? The people who actually work .I think they should be the main ones. In my opinion they are the ones you should speak to. Not like people sat up in their offices all day, drinking tea and that. ...I think that's a good way. People actually involved with it being able to talk to the people way above them who are just like, looking over them and seeing it as all paper work."(eighteen year old shop worker)

"Ordinary people's views. See what they think. Because you get sick of seeing these MPs and Prime Ministers, and everything else, giving their views.. you know that you can't really trust them. But just the normal average person, you can relate to them, and you know what they're saying, and they're more trustworthy I think." (nineteen year old male)

"There was a lady with dark hair and she was giving her opinion of what she really thought. And I would have gone more with her because she's on the street .She knows what she's talking about. She's got nothing to lose, nothing to gain, by it. Nobody standing behind her saying 'You can't say that, that's not politically correct' She's saying what she feels."(female secretary in her thirties)

At the same time, a number of participants expressed reservations about the way lay contributions were used on 'Thursday Night Live', which we chose as an example of the new style participatory talk shows. They claimed that the brevity of the contributions and the rapid switching between speakers distorted people's contributions and made it difficult to follow the arguments:

"I didn't think it was that person not telling the truth. I think it was that person not being able to. I think it was the producers or whatever cutting so much. It's not I didn't believe that person. I just don't think you hear the full lot." (young working class mother)

"There was so much going on wasn't there? There was more than one conversation going on at the same time...They forget, like the viewers trying to understand it." (housewife in her twenties)

Taken together, our evidence suggests that risk communication strategies could productively explore the potential of television programme formats that draw on lay testimonies and opinions as well as contributions from independent scientists, but are based on more deliberative styles of debate where both the studio audience and viewers at home are presented with a range of evidence and opinion before being asked to endorse particular courses of action.

5.5.2 New Connections: the Internet

In addition to arguing that ordinary people should have more opportunities to contribute to televised debates, a number of participants expressed a desire to speak for themselves. One young working class woman, who had left school at sixteen, put the case particularly forcefully;

“I’m just a little person...I left school with no GCSE’s and I’m just a boring housewife. ..But you want to put your hand up, don’t you, and say ‘I’ve got an opinion. It might not count for very much, but I’ve got an opinion’.. I want to sit and give my opinion and say, ‘Look I’m sorry but I don’t particularly understand about GM foods or whatever’ I want to talk the way I want to talk . If I want to ask a question, let me ask it in my own way.”

She then recounted how she had started to participate in Internet discussion fora:

‘I’ve got a computer at home and I’m on the Internet. And they have, like, forums, on it. I know how it’s spelt but don’t ask me to pronounce it. They have them on the programmes sometimes and I like to read what other people have put. And I’ll answer to them and say what my opinion is to this certain programme or whatever’

This small anecdote points to the tip of a very large, and rapidly growing iceberg. The convergence of television and the Internet is currently developing by leaps and bounds and will accelerate markedly as the transition from analogue to digital broadcasting gathers pace. If risk communication is to avoid becoming the ‘Titanic’ of contemporary public communication it must develop a strategy that makes best use of the full range of possibilities opened up by this movement, by developing web sites that offer relevant information attractively presented, provide new points of contact and exchange between lay publics and experts, and create new fora for public debate.

Indeed, the present groundswell of demand for greater openness and popular participation in debates on risks suggests that the difficulties of communicating with the public on a basis of trust may be less to do with the unwanted media ‘amplification’ emphasised by the SARF model, and more to do with the ‘attenuation’ generated by seeing audiences simply as ‘targets’ to be reached (at the appropriate time) rather than as citizens to be consulted and involved on a continuing basis.

5.6 INFLUENCE

Overall, the evidence collected offers little support for the dominant image of the audience promoted by the SARF model. Firstly, it suggests that rather than thinking about the influence of ‘the media’ on ‘the public’ it is more useful to think of a plurality of publics (distinguished by their social location and their differential access to grounded knowledge, formal education and social networks) interacting with a diversity of media (segmented by market and presentational style).

Second, it suggests that rather than thinking of people as ‘receiving’ media ‘messages’, we need to see them as actively interpreting and judging media materials, drawing on a range of experience and knowledge and mobilising established symbolic frames and evaluative criteria.

Third, we have argued that people may be less susceptible to media ‘suggestion’ than many commentators imagine. They often display a high degree of scepticism and even cynicism towards what they are told and are adept at spotting and dismissing ‘sensationalism’ when they see it. However, as we noted earlier, accepting that media audiences are more active, critical and media-savvy than many observers have allowed, does not mean that media representations have no influence.

The overall structure of media attention that is reproduced over time in the routine daily coverage given to risk issues may play an important role in setting agendas for public awareness and concern, giving areas that fit the criteria of newsworthiness or popular drama particular salience and rendering those that do not ‘invisible’. This pattern of selective attention is particularly important in areas where people are unlikely to have first-hand experience. As one working class housewife noted in relation to the Channel 4 news story on recent experiments relevant to the GM foods debate:

“... it showed you what is going on behind the scenes...which you don't know in everyday life do you? Until somebody shows you on a programme or whatever, you don't know. I mean I wouldn't have known anything about that unless they'd put it on that sort of programme.”

Showing what is ‘going on behind the scenes’ is one of the principal tasks of documentary and current affairs programming on television and investigative reporting in the press. This is why the vitality and diversity of these areas has such wide-ranging implications for the state of public knowledge.

The dominant frameworks of interpretation are often ‘anchored’ as much by the associations carried by central images as by arguments over the status of the relevant evidence. As we have noted, in mobilising these associative meanings news reporting continually draws on images taken from popular fiction and drama as well as past news coverage. We have also argued that once established key images may prove difficult to displace, which suggests that effective risk communication needs to pay much more attention to the dynamics of visual presentation and to see images a central feature of future initiatives.

Finally, in areas where people have little or no access to experiential knowledge, incomplete or fragmented media coverage can reinforce popular uncertainty and anxiety, as in this conversation between three women about GM foods:

F1: “...I mean that's not natural...if they're introducing bits of insect or whatever it is. I mean that is naughty.”

F2: “I think that's the most worrying thing isn't it? What it's going to do to the natural order of things.”

F3: “If it can make plants and animals sterile, can't it make people sterile you know?”

5.7 SUMMARY

Our participants displayed a sophisticated understanding of the media – i.e. they were ‘media savvy’. They would not support a SARF view of the media as a ‘black box’, drawing clear distinctions between press and television, the tabloids and broadsheets, and drawing upon the diverse media for their information. There was strong evidence of social differences, with broadsheet readers often passing disparaging remarks about the tabloids (although they were not entirely alone in doing this), and people from lower socio-economic groups having little regard for ‘the suits’ as communicators. Just as the media are ‘plural’ so are the lay public.

Lay publics interpret, interrogate and question information provided by the media. They are active media users. They have strong views about what is acceptable to them in terms of style of presentation and also about the types of presenters they prefer. They have clear views about what and who they trust in the media. The impact of the changing style of the media and also of the opportunities provided by the Internet was evident in their preferences. Combined these findings provide strong pointers to best practice risk communication.

6. IMPLICATIONS FOR RISK COMMUNICATION

6.1 MAKING SENSE OF RISK ISSUES

6.1.1 Interpreting Risk

The focus of our study of lay public perceptions of a range of different risk issues has been upon how people reconcile different sources of information about risks, and make sense of them in terms of their everyday lives. We examined the types of issue about which people expressed concern, the shared patterns of understanding displayed in their collective talk about risks, and the relative importance to them of direct and mediated experiences, as displayed in the form of the accounts they provided whilst participating in that talk.

As discussed in Chapter 3, the ‘worries’ analysis indicated that the risk issues people were concerned about tended to be those that were either directly affecting their everyday lives, or appeared to present a real threat of doing so. There were some apparent differences between male and female ‘talk’ and sense-making which warrant further attention. For example, women with children were more likely to express concern about issues relating to family or children, the elderly and health. As we hypothesised many of the worries were not simply a function of ‘objective’ assessment of potential physical harm, but related to societal and personal adverse effects.

The key question is: what is it about the characteristics of certain risk issues that lends them a sense of tangible threat or, for that matter, tends to diminish their importance as a source of worry? This question lies at the heart of trying to understand processes that, within the terms of SARF, are termed ‘amplification’ or ‘attenuation’ phenomena.

Our work suggests that an understanding of these processes necessitates a fine-grained appreciation of how people reconcile direct and mediated experiences that are relevant for them in making sense of a given risk issue. The dynamics of such sense-making practices may not be immediately apparent *a priori*. Of particular importance here is an understanding of the ‘patterns of relevance’, which relate to entities which people associate with the risk issue, and which are implied by it.

In practice, sense-making about risk issues, as displayed in talk, is embedded in collective processes of interrogation of direct and mediated experiences. People contribute evidence to these processes typically in the form of narrative. In this way, multiple meaningful associations are built into the resulting understanding. As we have observed, the processes of interrogation utilise shared sense-making devices or ‘lay logics’.

These findings are characteristic of ‘lay epidemiology’, and are indicative of the active, and contextualised, ways in which people process risk information. People actively search for explanations of different but potentially related phenomena which they observe (such as increased rates of asthma, increased traffic and air pollution). Where direct evidence is lacking (as in relation to GM food) people try to make sense of diverse mediated knowledge. Sometimes this is just too difficult for them, and they rely on the inherent trust which they have in different sources of information and their developed responses to existing risks which appear to have similar characteristics (such as BSE and vCJD).

Overall, our evidence leads us to refute any suggestion that lay publics are passive recipients of expert risk knowledge. People want to feel that the risks that are meaningful to them are being attended to, and this may mean taking personal control – where control may be being able to make decisions about whether to buy certain foods or not, or to use certain modes of transport or not. This necessitates that they rationalise information in a way meaningful to them to enhance their coping mechanisms. It is inevitable that this process of rationalisation requires them to draw upon multiple information sources and understandings.

6.1.2 Risk Signatures

Our analysis (Chapter 3) of patterns of talk and of the structure of accounts used leads us to the conclusion that risks issues possess specific ‘signatures’. In other words, different risk issues have different ‘images’ in terms of their capacity to engender certain patterns of understanding by lay publics. These patterns are dependent upon structures of relevance that are utilised in lay interpretive practice. There is not a simple relationship between scientific accounts of risk issues and the meaning that lay audiences will find in these accounts. Rather, lay audiences find meaning in risk issues by means of interpretive work that draws upon collective resources derived from direct and mediated experience.

Table 6.1 sets out the comparative structure of accounts corresponding to perceptions of our five risk issues. We found that air pollution, an issue firmly grounded in everyday experience, was, on the whole, regarded as most credible and threatening. GM food was sufficiently grounded in direct experience to present a possible threat, however insufficiently so for a consensus to emerge over the competing ‘expert’ mediated accounts. There was resulting instability between optimism and ‘playing safe’. Neither the Millennium Bug nor rail accidents, although very different in nature, were truly credible as tangible threats because, it seems, both were poorly grounded in personal experiences. Rail travel presented far greater ‘risks’ to people than crashes resulting in death or serious injury, however, it also was often the ‘lesser of two evils’ as a transport mode. Finally, Radon, in one sense a null result, presented a risk issue about which there was considerable ignorance. When people tried to come to terms with finding out about this ‘new’ potential hazard, they had difficulty relating the mediated knowledge provided by the moderator to their everyday lives.

Table 6.1
Comparative risk accounts

Risk	Account Characteristics
Air Pollution	Grounded
GM food	Mediated and slightly grounded
Millennium Bug	Mediated and poorly grounded
Rail accidents	Mediated and poorly grounded
Radon	Ignorance and poorly grounded response to mediated knowledge

A comparative analysis of the risk issues about which we had most data, namely air pollution and GM foods, provided additional insights into the factors that serve to generate specific risk signatures. These key factors were: specificity of ill effects, concern for others, secrecy, and moral considerations. A brief comparative examination of these factors relative to our five risk issues is presented in Table 6.2.

Thus, the capacity of a risk issue to generate a tangible threat appears to be closely related to its ‘signature’. That, in turn, depends on certain ‘risky’ capacities it possesses, amounting to a description of the nature of the potential threat it poses. Of central importance, however, is its capacity for people to find meaning about it in their everyday experiences. These two dimensions combine and interact to constitute its risk signature.

However, as we expected there is another dimension which underpins the risk signature – that of trust. Our data strongly define lay public distrust in risk management institutions as a matter of concern about vested interests: either personal – e.g., politicians only interested in themselves –, or group – e.g. companies only interested in profit or government departments which are perceived to be too close to Ministers or too close to industry. A second component of this dimension is concern about lack of scientific knowledge coupled with perceptions that nothing is being done to improve the situation. Distrust in risk management institutions can emerge as a result of discord between some mediated risk information and the direct experiences or value commitments of lay audiences.

Table 6.2
Riskiness factors

Risk	Effects/Harm	Concern for others	Secrecy	Moral considerations
Air pollution	Specific health & amenity	Families	Cover-up	Few
GM foods	Unspecified but emotive	Families	Cover-up	Concerns
Millennium bug	Possible food shortages and loss of services	Little expressed	Hyped by media and companies	None
Train accidents	Threat of death & serious injury	Little expressed mainly personal	Corporate secrecy	None
Radon	Unknown	None expressed	Why weren't we told?	Who's responsible?

There is still a need to know more about the component parts of this framework: for example, a more detailed understanding of lay interpretive practices, the importance of different ways of life and material circumstances in influencing patterns of relevance, and the exact dynamics of how lay logics operate. Nevertheless, we feel this novel explanatory framework has potentially important implications for risk communication research and practice.

6.2 THE MEDIA AS DYNAMIC MEDIATORS

6.2.1 The Media on the Risk Communication 'Field of Play'

In Chapter 1 we presented a number of previous research findings related to the media. In particular, we were drawn to the considerable existing understanding of the media's routine practices and journalists' news values which structure the way in which competition around the issues of control, legitimacy, trust and precedence is organised. We were also drawn to questions about the nature of the dual media system – i.e. the division between the broadsheets and tabloids -, and about the impact of rapidly broadening television services and the new horizontal information networks based on the world-wide web.

The extensive database on the media reporting of risk which has been generated has contributed to the conclusions presented in Chapter 4. These have significant implications for risk communication practice because they reveal the media as complex, divergent and diverse, but partly predictable mediators between government, institutional and corporate interests and the public. There is a strong broadsheet/tabloid divide which is reflected also in the divide between the main terrestrial television news channels and the other channels (particularly Channel 5).

Importantly the results show:

- Media organisations shifting to address people as consumers with certain rights to personal safety and well being, rather than as citizens with shared obligations.
- The populist orientation of certain segments of both the press and the television news which emphasise lay experiences and initiatives and give precedence to lay voices. This resonates directly with the lay public's need to make risk perceptions 'real' and serves to shift attention from formal and 'expert' accounts;

- The importance of local news particularly as popularists, circulating local knowledge and resonating with people's grounded experience.
- The dearth of news presented or written by specialist reporters in either science or the environment in large sections of the media.
- The tendency to personalisation of explanations of risk events, looking for individuals as the cause.
- The frequent assignment of responsibility to risk managers.
- The powerful use of visual images which in the tabloids tend to focus on the consequences of risks for individuals and groups, as opposed to the questioning of causation more common in the broadsheets.
- A preference for reporting of risk issues which are already familiar and the anchoring of them in the deep-seated fears and anxieties which are part of popular expression and images.

The media are not transmitters of official information on risk, but active interpreters and mediators, middle-men on the field of play, who seek to resonate with social preferences and concerns and in so doing stake and maintain their position. They are entrepreneurs of meaning converting the raw material of official information and events into products which bear their particular market 'badges' and presentational styles.

6.2.2 The Media and SARF

To address SARF's proposition that the media are important in amplifying (and possibly attenuating) lay public risk responses we needed to examine what happens when people read newspapers or watch television news. Most importantly what happens when they try to make sense of events and issues by integrating the media's diverse and divergent arguments and anchors with their own interpretative grids underpinned by direct and local knowledge, experience and formal education (discussed particularly in Chapter 5).

Our results lead us to the following conclusions in relation to SARF and the media:

- (i) the media are not a 'single black box' as suggested by SARF;
- (ii) the media can only amplify or attenuate risk if they capture or resonate with an existing public mood, and even then the media are not alone in this function;
- (iii) we are not dealing with a message system, but a symbolic information system which is responsive to public framings and interpretation of issues;
- (iv) visual communication has a central role to play in constructing meanings;
- (v) the media are not negative influences on risk perceptions, although elements of the media are viewed negatively by the lay public;
- (vi) the lay public are not passive recipients of media messages but sophisticated and 'media-savvy' users; they understand hype and sensationalism when they see it; they recognise the 'badges' and styles of the media which they consume and the impact of these on the information being presented to them; they have clear criteria for evaluating utility, credibility and responsibility;
- (vii) the lay public are plural media consumers and they extend their range of consumption when stories interest them;
- (viii) lay public's responses to the media are continually negotiated and refined through everyday conversation and argument;
- (ix) where lay publics have little direct experience or grounded information then the media are more important in this process of interpretation and refinement;
- (x) the media do set agendas for public concerns, but this selective attention is most important in relation to risks where people do not have first-hand experience, and

- (xi) when fragmented media coverage corresponds with no experiential knowledge then this can reinforce lay publics' uncertainty.

The lay public as mediated information consumers display a number of characteristics which the media are inherently aware of and respond to, and so should official risk communicators. Firstly, for many people their media consumption is fragmented, snatched and continually squeezed into a busy day. Images, pictures and headlines become important. This is not to contradict our assertion that people are plural consumers of the media, but to reinforce the importance of providing communication modes and styles which respond to these consumption needs and habits.

Secondly, for large sections of the lay public the 'suits' – i.e. the risk managers (politicians, government officials, corporate managers) – are not perceived to be working in their interests nor to be in tune with their worlds. Mediated messages from 'the suits' are a 'turn-off' for some people. This social divide is important because it leads people to select the media and the communicators which 'are like us', and to prefer listening to 'the ordinary man in the street'. This provides an important underpinning of responses to risk information and has significant implications for who should communicate. It suggests the need for participation in, not derision of, a populist mode and style of communication.

Thirdly, despite this concern about the 'suits' this is not a label applied to independent scientists. Indeed, people will proactively engage with science as presented on television, for example, as long as it is conveyed in terms which they can understand. They are interested in science, particularly that which relates to issues directly affecting them – such as health.

Fourthly, lay publics have an inherent belief that television is a regulated media (unlike the newspapers) and therefore is more likely to be presenting factual and correct information (particularly on the news). They prefer information from the main news channels as traditional public sector broadcasters when significant and serious events occur, perceiving them as trustworthy and reliable. Individual presenters and reporters attract considerable allegiance for the same reason.

Finally, the lay public are not passive absorbers of media information, but collectors of information to inform their desire to 'make up their own minds', something they are inherently aware that they have to do in relation to many risk issues subject to significant uncertainty.

In summary, SARF, in being based on a series of metaphors, at best provides a highly simplistic understanding of the role and influence of the media in the amplification and attenuation of risk. At worst it could serve merely to aggravate tensions between risk experts and managers and lay publics through its failure to provide a coherent and full understanding of the impact and operations of these plural and symbolic information systems and their relationships with their consumers. We understand that it is not helpful to merely say that the argument is more complex than SARF suggests. SARF has been useful in at least raising important research questions. However, considering the media-lay public relationship we need to move beyond SARF to execute more effective risk communication.

This report has only been able, in the space available, to present some of the analyses arising from our data. In particular we have not been able to present in Chapter 4 all of the quantitative data arising from the coded news items, including non-UK stories, nor to present the full qualitative analysis of the range of television programmes (particularly documentaries) which addressed our risk issues. These analyses will be presented in future publications. Our aim here was to select the key findings relevant to our remit to draw-out lessons for best practice risk communication.

6.3 BEST PRACTICE RISK COMMUNICATION

6.3.1 Design-Based and User-Centred Communication

The way that lay publics make sense of risk issues combined with the signatures of specific risks, point directly to the importance of a hazard-specific approach to communication. Specifically a ‘design-based’ (Horlick-Jones, 2000) and ‘user-centred’ approach (Petts et al, 2000) that takes into account multiple audiences and lay interpretive practices, the specificity of risk images and the role of language and imagery. Generic guidance on risk communication, particularly that which has advocated best practice in terms of style and communication process (e.g. be transparent; be honest and open, etc) is important but only provides partial assistance. Indeed, there could be an argument that more than sufficient generic guidance exists. **There is a need to address the substance or content of communication in terms of what is required to respond to existing lay knowledge, beliefs and interpretation of specific issues, as well as the complexity and diversity of the media.** The latter are highly effective at tapping into existing public anxieties and framing stories in terms of already familiar events and scenarios. Official risk communication must do the same.

Risk communication must be based on a sound understanding of how different lay publics talk about and respond to specific risk issues. A key question for any communicator must be – do we know what lay publics know and want to know, rather than what we want to tell them? The interviews with press officers suggested that in some government departments subject to direct ministerial influence there may be less opportunity or flexibility to prepare user-oriented information. If correct, this must be regarded as a communication problem.

Communication which is user-centred demands an understanding of lay public’s developing interpretive practices and of the relative roles of mediated and grounded information. **This requires ongoing mapping and monitoring of lay public’s concerns and knowledge and their media preferences and how these change over time** (see 6.4 for research needs). Such mapping will require risk and audience-specific practical and qualitative research approaches to allow a suitable process of targeting to take place. It is possible that some anticipatory work may be done to identify risk signatures and potential ‘explosive’ contexts.

Mapping must take into account multiple audiences, including specific or traditionally excluded groups in society – e.g. the ethnic minorities and the young. Communication must be designed to meet the needs of such groups. These needs may relate not only to language in the case of people for whom English is not their first language, but also in full recognition of the evidently different social values and concerns amongst different cultures. Even the relatively small element of this research which was able to identify interests and concerns of young Muslims suggests significant differences with the majority population. Our findings also suggest within group differences including within gender differences (e.g. not all women are concerned about children).

6.3.2 Accepting Lay Rationality

Lay public’s interpretive practices are based on well-grounded reasoning. People draw on history; existing experience of the hazard effects and of the credibility of expert knowledge; direct sensory evidence; informal social communication; accepted moral codes; emotion, and the whole range of mediated information which is available to them. Their patterns of talk demonstrate significant proactive attempts to rationalise information and to make sense of new, uncertain and complex information when it is presented to them.

Lay public’s display great rationality in their responses to risks. This should not be surprising as rationalism supports people’s ability to be in personal control and their general coping mechanisms. **Risk communicators must accept the rationality of lay publics’ responses to risk.** Communication

which sees a different rationality (or rather different perception to that of the expert) as irrational, and sets out to change a belief without recognition of the rational basis of that belief is doomed to failure.

6.3.3 Using Lay Imagery and Language

Communications from government departments are sometimes based on an assumption that a 'single message will fit all'. In part this is, of course, an issue of resourcing and efficiency, particularly in the mass production of public information leaflets. The 'single message will fit all' approach in relation to the media might be appropriate if we were dealing with a message system. However, we are dealing with a 'symbolic' system.

Risk communicators should use to their advantage the populist tools of the media, particularly when communicating with the tabloid media – i.e. the domestication and personalisation of risk consequences, storytelling and visuals. Such approaches should not be viewed as downplaying scientific knowledge, or even of 'misrepresenting the truth'.

Analogy and examples from real life are important to people's sense-making devices. **Given the tabloid press's preference for people-focused stories, there is potential advantage in risk communicators preparing material which responds to this need.** Journalists may be happy to print or present material if it is in a style that fits their medium, because it will save time. Importantly because the majority of mediated information is presented by non-specialists, information which is prepared to suit specific media's styles and 'badges' is more likely to survive editorial licence.

Assumptions about a common expert/lay language are often made. For example, an assumption that everyone would interpret the phrase 'long-term risk' in the same way. While attempts may be made to turn communications into 'plain English' this is still often based in expert narratives rather than those of lay publics. There is a need to understand that even a seemingly simple and also important expert concept such as an 'objective assessment' does not have the same meaning to lay people. There are evidently large differences of basic scientific knowledge, or risk literacy, amongst the lay public. **A design-based and user-centred approach to communication must employ the language of the user, which is not only 'plain english', but requires proactive steps to understand how people interpret key phrases and concepts and what they know of science.** Risk communicators could learn some lessons from the media's effective use of framing and anchoring devices.

However, this is not to ignore the fact that there are people who have expert/technical knowledge, often from their occupational responsibilities and experience. Echoing Walker et al's (1998) conclusions, **this means that there is a need for simple, lay descriptions to be backed by more detailed information – perhaps on a web-site or made available to the scientific media.**

An important finding relates to the **value of graphics, pictures, and diagrams, particularly to explain complex or unfamiliar concepts.** It was noticeable, for example, that some people who on the one-hand expressed concerns about science presented by 'suits' and their personal feelings of inadequacy in terms of scientific understanding were quick to respond positively to visual stimuli. The value of television in this respect is important. However, expert-generated graphics closely linked to explanatory text will be important in ensuring accurate presentations. **Risk communicators should proactively use the images and symbols which are important to, and resonate with, lay publics,** not only to respond to lay interpretive practices but to the increasingly image-intensive media environment. **Risk communication needs to mobilise the full range of available visual resources to express key points.**

Imagery importance will vary with culture. Images of a 'green and pleasant' English countryside, for example, are likely to stir different responses amongst those from different ethnic backgrounds. **There is a need for further work to understand what interpretations people from different cultural backgrounds and also children place upon images which may resonate with 'white adults'.**

Finally, this discussion of lay imagery and language serves to raise questions over the relevance of risk comparisons, or the concept of the Richter scale of risk which has been proposed as a means of conveying small probabilities of significant consequences in a meaningful way to the public. Although we encountered a few examples of lay risk comparisons in the patterns of talk, these had personal relevance to the individual using them and to the specific risk signature. **Risk comparisons must be used with caution**, as they can have no universal appeal in the context of the interpretive practices of lay risk reasoning which we have identified.

6.3.4 Understanding the Lay Public's Media Involvement

Risk communicators must understand how lay public's get involved with the media system. This involvement is sophisticated, discerning and selective, not only because of time constraints but because people prefer media whose style seems relevant to them. The print media is declining in importance as the visual media increases. The latter in providing information much faster than the former is often providing a different story – for example, they are the 'first on the scene' in relation to accidents able to suggest cause and to record the scale of a disaster, but it may be the newspapers the following day which will provide the 'human' stories – of the casualties, the rescuers etc.

90% of the focus group participants said that they read or bought a local newspaper. **Risk communicators must examine their strategies for talking with, and providing material to, the local media.** Some of these have significant catchment areas, including newspapers – e.g. the Metro, a free newspaper within the Midlands extending in availability to the Manchester area – and TV – e.g. Central News which has a population catchment which incorporates the East and West Midlands.

Although we were not able to explore the Internet in detail, nevertheless it is clear that this medium is of growing importance as a source of additional information on a story once started. The Internet is going to become a significant source of mediated information for the lay public, already available in the homes of about 20% of the population. Elements of the media, such as the Guardian, already link stories and news items to their web pages.

Risk communicators will have to follow their target audiences onto the web. The use of the Internet to provide more detailed information on a particular issue and to make links to other sources of information is important. Government departments need to regularly revisit their Internet strategies to ensure that they are responding to public information needs

6.3.5 Using the Media Appropriately

Possibly the most important conclusion to draw is that **risk communicators must view the media as an opportunity rather than a problem.** The media are powerful interpreters and mediators central in the information system between government and the public.

Risk communicators should ask themselves: do we have media-specific communications plans as opposed to a media communications plan? These plans must provide for different modes and forms of contact and engagement with different media to reflect a particular medium's style and mode of engagement with the public.

Television is a particularly important medium for people, not least because they view it (or at least parts of it) as potentially a more trustworthy source than the newspapers. **Risk communicators need to proactively use television. They need to understand the programmes which resonate with people when they require particular information.** Newsnight, for example, as a programme which analyses important news stories in depth and in a challenging and revealing way, but also chat shows which allow the 'ordinary' person a voice. **Risk communicators should engage in programme formats which allow for lay testimonies and opinions to be aired alongside those of officials and experts.**

How risk information is presented plays a pivotal role in securing attention and trust. The ‘suits’ are a turn-off for significant sections of the population, science in action is less likely to be. **Risk communicators need to take opportunities to show their science in action not merely opportunities to formally present their findings. Risk communicators’ relationship with the media needs to be ongoing, diverse, responsive to lay interests and engaging.** Communicating when you want to, as opposed to taking opportunities to respond to media interests is likely to be counterproductive, it is certainly less likely to engage your audience in a way that meets their time resources and reporting preferences. **Risk communicators need to be there at the start of a story when lay public’s major frameworks of interpretation will be established, particularly where risk issues have little personal grounding, and people need mediated sources.**

6.3.6 Using the Right Communicators

Scientists have a pivotal role to play in meeting lay public demands for reliable information and open debate on risks. However, they need to be independent of both governmental and business interests, and their presentation still needs to be in a readily consumable form (i.e. use of lay language, visuals, etc), appropriate to the lay public but also to the non-specialists who will be reporting.

Some media presenters are trusted names – e.g. MacDonald, Paxman, Dimbleby. They fundamentally influence how people respond to a risk message. **Risk communicators should proactively consider opportunities to engage and work with such key presenters.**

Finally, **risk communicators themselves must be trained to understand the complexity, diversity and role of the media in society.** To do this effectively there is likely to be a need to understand internal departmental cultures and structures which are affecting the presentation of risk issues and relationships with the media.

6.4 WHAT DO WE STILL NEED TO KNOW?

The gaps in this project combined with the questions raised by its findings point to a number of key research needs:

- (i) To support the recommendation that there is a need for ongoing monitoring and mapping of lay publics’ responses to risk and use of the media there would be value in a project which could do this through a dynamic, real time, analysis. Research using a panel of the lay public could be appropriate, mapping their responses, talk and sense-making practices over a relatively long period (say several years).
- (ii) There is a need for further work on interpretative practices across all class, gender and ethnic dimensions. Certainly, a similar method to that used here should be applied with the traditionally excluded – the ethnic minorities, unemployed and low wage earners, and young people. Our results with the small numbers of people from these groups do suggest different patterns which require further investigation
- (iii) There is a need to extend media analysis to consider the role and influence of radio, popular drama, and also consumer and popular magazines in terms of presentations and interpretations of risk issues.
- (iv) Our database of news items suggests a growth in media reporting of natural hazards. Some of our directed reading with individuals of newspapers revealed a considerable interest in such stories. The method employed in this research should be used to understand the risk signatures related to natural hazards.
- (v) Following from our model of risk communication and the ‘field of play’ analogy there is a need to understand how other key players relate to and use the media and how they negotiate risk issues - particularly the pressure groups.
- (vi) While we undertook a few interviews with press officers in some government departments these can only provide a partial picture of the relation of press offices with the media. A

more useful project would be to undertake action research with press officers to understand how they respond to, use and negotiate with the media. This means research which engages with real, 'live' situations where press officers are having to design and implement their responses to, and engagement with, the media. A comparative study within ILGRA's group of departments/agencies could be beneficially revealing.

Finally, we do believe that there is a need to support recent calls for a properly catalogued and continuous national archive of all national news bulletins transmitted on the major terrestrial, cable and satellite television and radio services. This would serve as a practical resource for communicators and scholars wishing to examine the way that risk-related issues have been covered.

7.CONCLUSIONS

7.1 THE MEDIA, RISK AND THE PUBLIC

We have presented the findings of a project to examine the role of the media in the amplification of risk issues amongst the lay public. The project has generated a unique database of UK newspaper and television reporting of risk issues during the first half of 1999. We have presented new findings in relation to how the lay public interpret risk issues and respond to the media, as well as relating to how the media report risk issues.

Our starting point was the social amplification of risk framework (SARF) suggested by researchers in the late 1980s. We drew upon the large existing media literature as well as social analyses of public responses to risk to present hypotheses for our work that (i) the media are not amplifiers of risk but rather dynamic interpreters and mediators of risk information arising from political, campaigning, corporate and scientific sources, and (ii) the lay public are not passive recipients of mediated information but active interpreters. Furthermore, we took the view that risk issues are different in their impact on the lay public and upon their information needs. This led us to select five different risk issues as the basis for the work. Our findings have supported our approach and our hypotheses.

Our research methods have proved effective in understanding what concerns people and in drawing out how lay people reconcile different sources of information about risk issues. A 'worries' analysis indicated that the risk issues people were concerned about tended to be those that were either directly affecting their everyday lives, or appeared to present a real threat of doing so. Interestingly the media themselves were more frequently mentioned as a worry than our case study risk issues.

In practice, sense-making about risk issues was embedded in processes of interrogation of direct and mediated experiences. People contributed evidence typically in the form of narrative. The processes of interrogation utilised shared sense-making devices or 'lay logics'.

People actively searched for explanations of different but potentially related phenomena which they observed (such as increased rates of asthma, increased traffic and air pollution). Where direct evidence was lacking (as in relation to GM food) people tried to make sense of diverse mediated knowledge. Sometimes this was just too difficult for them, and they relied on the inherent trust which they had in different sources of information and their developed responses to existing risks which appeared to have similar characteristics (such as BSE and vCJD).

For some risk issues people relied relatively little on mediated information – e.g. air pollution. For others mediated information was important. For example, it underpinned 100% of the lay accounts of the Millennium Bug, 72% of accounts of train accidents and 56% of accounts of GM food. However, this reliance on mediated information did not result in any amplification of risk concerns.

Our evidence leads us to refute any suggestion that lay publics are passive recipients of expert risk knowledge. People want to feel that the risks that are meaningful to them are being attended to, and this may mean taking personal control. This necessitates that they rationalise information in a way meaningful to them to enhance their coping mechanisms. It is inevitable that this process of rationalisation requires them to draw upon multiple information sources and understandings, not just mediated information.

From our analyses we conclude that risk issues possess specific 'signatures'. In other words, different risk issues have different 'images' in terms of their capacity to engender certain patterns of understanding by lay publics. There is not a simple relationship between scientific accounts of risk issues and the meaning that lay audiences find in these accounts.

In relation to the media reporting of risk our findings may not appear new to media researchers, but are new to the risk community. In particular, we found media organisations shifting to address people as consumers with certain rights to personal safety and well being. There was a strong populist orientation of certain segments of the news media, emphasising lay experiences and initiatives and giving precedence to lay voices. There was a tendency to personalisation of explanations of risk events, looking for individuals as the cause.

There was frequent assignment of responsibility to risk managers. Through the powerful use of visual images, the tabloids tended to focus on the consequences of risks for individuals and groups, whereas the broadsheets questioned causation. There was a preference for reporting of risk issues which were already familiar and the anchoring of them in the deep-seated fears and anxieties which are part of popular expression and images. However, much of this reporting displayed a dearth of input by specialist reporters in either science or the environment.

7.3 THE MEDIA AND SARF

Our results lead us to conclude that the media are not a ‘single black box’ as suggested by SARF. The media can only amplify or attenuate risk if they capture or resonate with an existing public mood, and even then the media are not alone in this function. Importantly, we are not dealing with a message system, but a symbolic information system which is responsive to public framings and interpretation of issues, and one where visual communication has an important role to play.

The lay public are not passive recipients of media messages but sophisticated and ‘media-savvy’ users; they understand hype and sensationalism when they see it; they recognise the ‘badges’ and styles of the media which they consume and the impact of these on the information being presented to them. They are plural media consumers and they extend their range of consumption when stories interest them.

Finally, lay public’s responses to the media are continually negotiated and refined through everyday conversation and argument. Where lay publics have little direct experience or grounded information then the media are more important in this process of interpretation and refinement.

The lay public displayed a number of characteristics which the media are inherently aware of and respond to. Firstly, for many people their media consumption was fragmented, snatched and continually squeezed into a busy day. Images, pictures and headlines became important. Second, for many in the lower socio-economic groups, the ‘suits’ – i.e. the risk managers (politicians, government officials, corporate managers) – were not perceived to be working in their interests nor to be in tune with their worlds. Third, they had an inherent belief that television is a regulated media (unlike the newspapers) and therefore is more likely to be presenting factual and correct information (particularly on the news). Fourth, individual presenters and reporters attracted considerable allegiance as trusted communicators in tune with lay concerns. Finally, the public were not passive absorbers of media information, but collectors of information to inform their desire to ‘make up their own minds’.

We conclude that SARF at best provides a highly simplistic understanding of the role and influence of the media in the amplification and attenuation of risk. At worst it could serve merely to aggravate tensions between risk experts and managers and lay publics through its failure to provide a coherent and full understanding of the impact and operations of these plural and symbolic information systems and their relationships with their consumers. We understand that it is not helpful to merely say that the argument is more complex than SARF suggests. SARF has been useful in raising important research questions. However, considering the media-lay public relationship we need to move beyond SARF to execute more effective risk communication.

7.3 RECOMMENDATIONS FOR BEST PRACTICE RISK COMMUNICATION

We have presented (Chapter 6.3) recommendations for best practice in risk communication aimed at risk communicators in the Government departments and agencies. These are summarised in terms of the need for:

- A design-based and user-centred approach to communication.
- A sound understanding of how different lay publics talk about and respond to specific risk issues.
- Ongoing mapping and monitoring of lay public's concerns and knowledge and their media preferences and how these change over time.
- Appreciation in this mapping of the multiple audiences, including specific or traditionally excluded groups in society – e.g. the ethnic minorities and the young.
- Acceptance of the rationality of lay publics' responses to risk.
- Use of the popularist tools of the media, particularly when communicating with the tabloid media.
- Use of the language of the user, which is not only 'plain English', but requires proactive steps to understand how people interpret key phrases and concepts and what they know of science.
- Simple, lay descriptions to be backed by more detailed information – perhaps on a web-site or made available to the scientific media.
- Proactive use of the images and symbols which are important to, and resonate with, lay publics.
- Mobilisation of the full range of available visual resources to express key points.
- Understanding of how lay publics get involved with the media system.
- Examination of strategies for talking with, and providing material to, the local media.
- The use of the Internet to provide more detailed information on a particular issue and to make links to other sources of information.
- Adoption of media-specific communications plans as opposed to a media communications plan
- Proactive use of television, based on understanding of the programmes which resonate with people when they require particular information.
- Engagement in programme formats which allow for lay testimonies and opinions to be aired alongside those of officials and experts.
- Science in action to be shown.
- A relationship with the media which is ongoing, diverse, responsive to lay interests and engaging.
- Engagement at the start of a story when lay public's major frameworks of interpretation will be established
- Proactive consideration of opportunities to engage and work with such key presenters.
- Training of communicators to understand the complexity, diversity and role of the media in society.

Our most important conclusion is that the media must be regarded as an opportunity rather than a problem.

7.4 FURTHER RESEARCH NEEDS

The gaps in this project combined with the questions raised by its findings point to a number of key research needs:

- A need for ongoing monitoring and mapping of lay publics' responses to risk and use of the media through a dynamic, real time, analysis.
- Further work on interpretative practices across all class, gender and ethnic dimensions.
- Extension of media analysis to consider the role and influence of radio, popular drama, and also consumer and popular magazines.

- Application of the research methods used here to understanding of the risk signatures related to natural hazards.
- Understanding of how other key players relate to and use the media and how they negotiate risk issues - particularly the pressure groups.
- 'Action' research with press officers to understand how they respond to, use and negotiate with the media.
- A properly catalogued and continuous national archive of all national news bulletins which would serve as a practical resource for communicators and scholars wishing to examine the way that risk-related issues are covered.

ACKNOWLEDGEMENTS

A project of this scale would not have been possible without the support of a large number of people. Firstly, the authors would like to acknowledge the hard work of primary data gathering undertaken by Diana Hargreaves and Shelley McLachlan as members of the research team. Ragnar Löfstedt was involved in the project at its inception, however, a sabbatical in the US meant that he took a reduced role from August 1999. Secondly, we wish to thank all of the members of the public who took part in the focus groups, television groups and newspaper directed reading. They all gave generously of their time and made our work so much easier by their enthusiasm for the discussion.

Thirdly, we would to thank all of those who attended the project Workshop held at the University of Birmingham in May 2000 (report on www.bham.ac.uk/CERT), particularly Professor Ortwin Renn and Professor Roger Kasperson who contributed and who have provided advice during the project. Finally, but not least, we thank the members of the Project Board for their enthusiasm for the topic and the research.

REFERENCES

- Allan, S et al (eds) (2000) *Environmental Risks and the Media*. Routledge, London
- Anderson, A (1997) *Media, Culture and the Environment*. UCL Press, London
- Arlidge, J (2000) 'TV Today: Dumb and Getting Dumber' *The Observer*, 16 April, p5.
- Barbour, R. & Kitzinger, J. (eds) (1999) *Developing Focus Group Research: Politics, Theory and Practice* Sage, London
- Bastide, S., Moatti, J.P., Pages, J.P. & Fagnani, F. (1989) Risk perception and the social acceptability of technologies. *Risk Analysis*, 9, 215-233
- Beck, U. (1992) *The Risk Society: Towards a New Modernity*. Sage, London
- Bennett, J. (1999) Science on Television: A coming of Age? In: E.Scanlon, E. Whitelegg & S Yates (eds) *Communicating Science: Contexts and Channels*. The Open University, London
- Bloor, M. (1995) *The Sociology of HIV Transmission* Sage, London
- Boden, D. (1992) Reinventing the Global Village: Communications and the Revolutions of 1989. In: A.A. Giddens (ed) *Human Societies*. Polity Press, Cambridge
- Boden, D. & Molotch, H. (1994) The Compulsion of Proximity. In: R. Friedland & D. Boden (eds) *NowHere: Space, Time and Modernity* University of California Press, Berkeley pp.257-286
- Bourdieu, P. (1990) *The Logic of Practice* Polity Press, Cambridge
- Bourdieu, P (1998) *On Television and Journalism*. Pluto, London
- Brown, P. (1992) Popular epidemiology and toxic waste contamination. *Journal of Health & Social Behaviour*, 33, 267-281
- Burgess, J. (1990) The production and consumption of environmental meanings in the mass media: a research agenda for the 1990s. *Transactions, Institute of British Geographers*, NS15, 139-61
- Burgess, J., Harrison, C. & Maiteny, P. (1991) Contested meanings: the consumption of news about nature conservation. *Media, Culture and Society* , 13, 499-519
- Burns, W., Slovic, P., Kasperson, R.E., Kasperson, J.X., Renn, O. & Emani, S. (1993) Incorporating structural models into research on social amplification of risk: implications for theory construction. *Risk Analysis*, 13(6), 611-623
- Campbell, F (1998) *The Construction of Environmental News: A Study of Scottish Journalism*. Asgate, Aldershot
- Clarke, L. & Short, J.F. (1993) Social organisation and risk: some current controversies. *Annual Review of Sociology*, 19, 375-399
- Cohen, B. (1983) Nuclear journalism: lies, dammed lies and new reports. *Policy Review*, 26, 70-74
- Cottle, S. (2000) TV News, lay voices and the visualisation of the environment. In: S. Allen et al (eds) *Environmental Risks and The Media*, Routledge, London pp 29-44.
- Cvetkovich, G & Löfstedt, R. (eds) (1999) *Social Trust and the Management of Risk*. Earthscan, London
- Deacon, D et al (1999) *Researching Communications: A Practical Guide to Methods in Media and Cultural Analysis*. Arnold, London
- DETR (1998) *Digest of Environmental Protection Statistics* no.20. HMSO, London
- Douglas, J. (1971) *Understanding Everyday Life* Routledge & Kegan Paul, London
- Dunbar, R. (1995) *The Trouble with Science*. Faber & Faber, London
- Durant, J & Lindsey, N (1999) *The Great GM Food Debate: A Report to the House of Lords Select Committee on Science and Technology Sub-Committee on Science and Society*. The Science Museum, London
- Earle, T & Cvetkovich, G (1995) *Social Trust: Toward a Cosmopolitan Society*. Praeger, Westport.
- Ekstrom, M (2000) 'Information, storytelling and attractions: TV Journalism in Three Modes of Communication' *Media, Culture and Society*, 22(4), 465-492
- Eldridge, J. et al, (1998) The re-emergence of BSE: the impact on public beliefs and behaviour. *Risk & Human Behaviour Newsletter*, 3, 6-10
- Eldridge, J & Reilly, J (1999) *Risk and Relativity: the Case of BSE*. Paper presented to the Social Amplification of Risk Workshop, Cumberland Lodge, September 1999, Windsor.
- Farago, K., Vari, A. & Vecsenyi, J. (1989) Not in my town: conflicting views on the siting of a hazardous waste incinerator. *Risk Analysis*, 9(4) , 463-471

- Fischhoff, B. (1995) Risk perception and communication unplugged: twenty years of process. *Risk Analysis*, 15, 137-145
- Flynn, J., Slovic, P & Metz, C.K. (1993) The Nevada initiative – a risk communication fiasco. *Risk Analysis*, 13(6), 643-648
- Freudenburg, W.R. (1993) Risk and recreancy: Weber, the division of labor and the rationality of risk perceptions. *Social Forces*, 71(4), 909-932
- Freudenburg, W.R., Coleman, C.L, Gonzales, J & Helgeland, C. (1996) Media coverage of hazards events: analyzing the assumptions. *Risk Analysis*, 16(1), 31-42
- Frewer, L.J., Howard, C., Hedderely & Shepherd, R. (1996) What determines trust in information about food-related risks? Underlying psychological constructs. *Risk Analysis*, 16(4), 473-485
- Friedman, S.M., Dunwoody, S., & Rogers, C (eds) (1986) *Scientists and Journalists: Reporting Science as News*. Free Press, New York.
- Friedman, S.M., Corney, C.M. & Egolf, B.P. (1987) Reporting on radiation: a content analysis of Chernobyl coverage. *Communication*, 37; 58-67
- Gilbert, G.N. & Mulkay, M. (1984) *Opening Pandora's Box: a Sociological Analysis of Scientist's Discourse*. Cambridge University Press, Cambridge
- Glaser, B. & Strauss, A. (1967) *The Discovery of Grounded Theory* Aldine De Gruyter, New York
- Golding, D., Krinsky, S. & Plough, A. (1992) "Evaluating risk communication: narrative versus technical presentations of information about radon" *Risk Analysis* 12(1) pp.27-35
- Gray, P. (1995) "Waste incineration: controversy and risk communication" *European Review of Applied Psychology* 45(1) pp.29-34
- Grove-White, R., Macnaghten, P., Mayer, S & Wynne, B. (1997) *Uncertain World: Genetically Modified Organisms, Food and Public Attitudes in Britain*. Centre for the Study of Environmental Change, University of Lancaster, Lancaster
- Gunter, B & Wober, M. (1983) Television viewing and public perceptions of risks to life. *Journal of Environmental Psychology*, 3, 325-335
- Hammersley, M. & Atkinson, P. (1995) *Ethnography: Principles in Practice*. Second edition Routledge, London
- Hansen, A (ed) (1993) *The Mass Media and Environmental Issues*. Leicester University Press, Leicester.
- Hansen, A (2000) Claims –making and framing in the British newspaper coverage of the ‘Brent Spar’ controversy. In: S.Allan, et al (eds) *op.cit.*, pp 55-72.
- Hargreaves, I & Ferguson, G (2000) *Whose Misunderstanding Whom? Bridging the Gulf of Understanding Between the Public, the Media and Science*. Economic and Social Research Council. <http://www.esrc.ac.uk/whom/>
- Harrison, J (2000) *Terrestrial TV News in Britain: The Culture of Production*. Manchester University Press.
- Herrera, S. (2000) ‘Reversal of Fortune’ *Red Herring: The Business of Technology* March, pp 154-164.
- Horlick-Jones, T. (1998a) Science: language of the powerful? *Journal of Risk Research* 1(4) pp.321-325
- Horlick-Jones, T. (1998b) Meaning and contextualisation in risk assessment. *Reliability Engineering & System Safety*, 59, 79-89
- Horlick-Jones, T. (2000) On taking the real world into account in risk research. Keynote presentation to the *ESRC Risk & Human Behaviour Conference* 11-12th September London
- Horlick-Jones, T., De Marchi, B., Prades Lopez, A., Pidgeon, N. *et al* (1998) *The Social Dynamics of Environmental Risk Perception: A Cross-Cultural Study* Final Report to the European Commission University of Surrey, Guildford
- Horlick-Jones, T., Pidgeon, N. & Sime, J. (in press) The social dynamics of risk perception: implications for risk communication research and practice. In: N, Pidgeon, R. Kasperson, & P. Slovic, (eds) *Social Amplification of Risk and Risk Communication* Cambridge University Press, Cambridge
- Hornig, S. (1993) Reading risk: public response to print media accounts of technological risk. *Public Understanding of Science* 2 pp.95-109
- House of Lords (2000) *Science and Society*. Third Report of the House of Lords Select Committee on Science and Technology The Stationery Office, London
- HSE (1998) *Risk Communication: A Guide to Regulatory Practice*. HSE Books, Sudbury

- Hunt, S., Frewer, L. & Shepherd, R. (1999) Public trust in source of information about radiation risks in the UK. *Journal of Risk Research*, 2(2), 167-180
- ILGRA (1998a) *Risk Assessment and Risk Management: Improving Policy and Practice within Government Departments*. Second Report. Interdepartmental Liaison Group on Risk Assessment, Health & Safety Executive, London
- ILGRA (1998b) *Risk Communication: A Guide to Regulatory Practice*. Interdepartmental Liaison Group on Risk Assessment, Health & Safety Executive, London
- Irwin, A. (1996) *Citizen Science*. Routledge, London
- Irwin, A., Dale, A. & Smith, D. (1996) Science and Hell's kitchen: The local understanding of hazard issues. In: A Irwin, & B Wynne (eds) *Misunderstanding Science*. Cambridge University Press, Cambridge
- Irwin, A. & Wynne, B. (eds) (1996) *Misunderstanding Science*. Cambridge University Press, Cambridge
- Johnson, D.E. (1995) Transactions in symbolic resources: a resource dependence model of Congressional deliberation. *Sociological Perspectives* 38(2) pp.151-173
- Kasperson, R.E. (1992) The Social Amplification of Risk: Progress in Developing an Integrative Framework. In: S.Krimsky & D. Golding (eds) *Social Theories of Risk*. Praeger, Westport, CT.
- Kasperson, R.E. & Kasperson, J.X. (1996) The social amplification and attenuation of risk. *The Annals of the American Academy of Political and Social Science*, 545, 95-106
- Kasperson, R.E., Golding, D & Tuler, P (1992) Social distrust as a factor in siting hazardous facilities and communicating risks. *Journal of Social Issues*, 48, 161-187
- Kasperson, R.E., Renn, O. & Slovic P et al (1988) Social amplification of risk: a conceptual framework. *Risk Analysis*, 8, 177-187
- Kasperson, R.E. Kasperson, J.X., Pidgeon, N. & Slovic, P (1999) *The Social Amplification of Risk: Assessing a Decade of Research*. Paper prepared for the Workshop on Social Amplification of Risk, Cumberland Lodge, September, 1999
- Kaufman, D.Q., Stasson, M.F., & Hart, J.W. (1999) Are the tabloids always wrong or is that just what we think? Need for cognition and perceptions of articles in print media. *Journal of Applied Social Psychology*, 29(9), 1984-87
- Kitzinger, J. (1994) The methodology of focus groups: the importance of interaction between research participants. *Sociology of Health & Illness* 16(1) pp.103-121
- Kitzinger, J (1999) A Sociology of Media Power: Key Issues in Audience Reception Research. In: G Philo (ed) *Message Received: Glasgow Media Group Research 1993-1998*. London. Longman, pp 3-20.
- Krueger, R. (1994) *Focus Groups: a Practical Guide for Applied Research* Second Edition. Sage, Thousand Oaks, California
- Langer, J. (1998) *Tabloid Television: Popular Journalism and the 'Other' News*. Routledge, London
- Lascoumes, P., Moreau-Capdeville, G. & Vignaux, G. (1978) Il y a parmi nous des monstres. *Communications* 28 pp.127-163
- Lash, S & Urry, J (1994) *Economies of Signs and Space*. Sage, Canada
- Lasswell, H. (1948) The structure and function of communication in society. In: L Bryson (ed) *The Communication of Ideas*. Institute for Religious and Social Studies, New York
- Leiss, W. (1996) Three phases in the evolution of risk communication practice. *Annals of the American Academy of Political and Social Science*, 545, 85-94
- Lewenstein, B.V. (1995) From fax to facts: communication in the cold fusion saga. *Social Studies of Science*, 25, 403-36
- Lichtenberg, J & MacLean, D. (1988) The Role of the Media in Risk Communication. In: H.. Jungermann, R.E. Kasperson, & P Wiedemann (eds) *Risk Communication*. KFA Julich, Germany
- Löfstedt, R & Horlick-Jones, T. (1999) Environmental Regulation in the UK: Politics, Institutional Change and Public Trust. In: G. Cvetkovich, & R. Löfstedt, R. (eds) (1999) *Social Trust and the Management of Risk*. Earthscan, London
- Löfstedt, R & Renn, O. (1997) The Brent Spar controversy: an example of risk communication gone wrong. *Risk Analysis*, 17(2), 131-136
- Lubon, J.H. & Boice, J.D. (1997) Lung cancer risk from residential radon: meta-analysis of eight epidemiological studies. *Journal of National Cancer Institute*, 89, 49-57

- MacGregor, D.G. (1999) Public Perception of Y2K: Application of a Social Amplification Framework. Paper Presented at Workshop *Social Amplification of Risk*, Cumberland Lodge 2-5 September 1999.
- Machlis, G.E. & Rosa, E.A. (1989) Desired risk and the social amplification of risk framework. *Risk Analysis*, 10, 161-168
- Marris, C (1999) *The Emergence of a Public Controversy about Transgenic Crops in France in the Period 1996-1999: Identifying the Signals* Paper Presented at Workshop *Social Amplification of Risk*, Cumberland Lodge 2-5 September 1999.
- Marris, C., Langford, I. & O’Riordan, T (1996) *Integrating Sociological and Psychological Approaches to Public Perceptions of Risk: Detailed Results from a Questionnaire Survey*. CSERGE Working paper GEC 96-07. Centre for Social and Economic Research into the Global Environment, University of East Anglia, Norwich
- Mazur, A. (1981) *The Dynamics of Technical Controversy*. Communications Press, Washington DC
- Mazur, A. (1984) Media influences upon public attitudes toward nuclear power. In W.R. Freudenburg & E.A.Rosa (eds) *Public Reactions to Nuclear Power: Are there Critical Masses?* AAAS, Westview Boulder, Colorado
- Mazur, A & Lee, J (1993) Sounding the global alarm: environmental issues in the US national news. *Social Studies of Science*, 23, 681-720
- McKechnie, R (1996) Insiders and outsiders: identifying experts on home ground. In: A Irwin & B. Wynne (eds) *Misunderstanding Science*. Cambridge University Press, Cambridge
- McNair, B (1994) *News and Journalism in the UK*. Routledge, London
- Metz, W.C. (1996) Historical application of a social amplification of risk model: economic impacts of risk events at nuclear weapon facilities. *Risk Analysis*, 16, 185-193
- Michael, M. (1992) Lay discourses of science: science-in-general, science-in-particular, and self. *Science, Technology & Human Values* 17(3) pp.313-333
- Michael, M. (1996) *Constructing Identities: the Social, the Nonhuman and Change* Sage, London
- Task Force
- Miller, D & Dinan, W (2000) The Rise of the PR Industry in Britain, 1979-98. *European Journal of Communication*, 15(1), 5-35
- Miller, D & Reilly, J. (1995) Making an Issue of Food Safety: the Media, Pressure groups and the Public Sphere. In: D Maurer & J Sobal (eds) *Eating Agendas: Food and Nutrition as Social Problems*. Aldine de Gruyter, New York
- Miller, D., Kitzinger, J., Williams, K. & Beharrell, P. (1998) *The Circuit of Mass Communication* Sage, London
- Misztal, B.A. (1996) *Trust in Modern Societies*. Polity Press, Cambridge
- Molotch, H. & Lester, M. (1974) "News as purposeful behaviour: on the strategic use of routine events, accidents and scandals" *American Sociological Review* 39(February) pp.101-113
- Moore, S. (1993) *Interpreting Audiences: The Ethnography of Media Consumption*. Sage Publications, London
- Morgan, D. (1996) "Focus groups" *Annual Review of Sociology* 22, 129-152
- Morgan, D. (1997) *Focus Groups as Qualitative Research* Sage, Thousand Oaks Cal.
- Morgan, D. & Spanish, M. (1985) "Social interaction and the cognitive organisation of health-relevant knowledge" *Sociology of Health & Illness* 7(3) , 401-422
- MORI (1999) *Public Attitudes to Risk*. Survey commissioned by the Cabinet Office Better Regulation Unit Task Force
- Morley, D. (1989) Changing paradigms in audience studies. In: E Seiter, H. Borchert G Kreutzner & E Warth (eds) *Remote Control: Television, Audiences and Cultural Power*. Routledge, London
- Morley, D. (1993) *Television Audiences and Cultural Studies*. Routledge, London
- Murdock, G. (1989) 'Critical Inquiry and Audience Activity' In: B. Dervin et al (eds) *Rethinking Communication. Volume 2: Paradigm Exemplars*. Sage Publications, London pp 226-249
- Murdock, G. (2000) Talk Shows: Democratic Debates and Tabloid Tales. In: J. Weiten et al (eds) *Television Across Europe: A Comparative Introduction* Sage Publications, London pp 198-220.
- Myers, G. (1998) "Displaying opinions, topics and disagreement in focus groups" *Language in Society* 27, 85-111

- Naylor, S & Keogh, B. (1999) Science on the underground: an initial evaluation. *Public Understanding of Science*, 8, 105-22
- Nightingale, V. (1996) *Studying Audiences: The Shock of the Real World*. Routledge, London
- Peltu, M (1985) The role of communications media. In: H Otway & M Peltu (eds) *Regulating Industrial Risks*. Butterworths, London
- Peters, R.G., Covello, V.T. & McCallum, D.B. (1997) The determinants of trust and credibility in environmental risk communication: an empirical study. *Risk Analysis*, 17, 43-54
- Petts, J (1992) Incineration risk perceptions and public concerns: experience in the UK improving risk communication. *Waste Management & Research*, 10, 169-182
- Petts, J (1995) Waste management strategy development: a case study of community involvement and consensus building in Hampshire. *Journal of Environmental Planning and Management*, 38(4), 520-536
- Petts, J (1997) The public-expert interface in local waste management decisions: expertise, credibility and process. *Public Understanding of Science*, 6, 359-381
- Petts, J. (1998) Trust and waste management information: expectation versus observation. *Journal of Risk Research*, 1(4), 307-321
- Petts, J (2000) Evaluating the effectiveness of deliberative processes: waste management case studies. *Journal of Environmental Planning & Management*, in press
- Petts, J., McAlpine, S., Sadhra, S., Pattison, H, & MacRae, S. (2000) *Development of a Methodology to Design and Evaluate Effective Risk Messages: Electroplating Case Study*. Report to HSE. The University of Birmingham
- Pidgeon, N. (1999) Risk communication and the social amplification of risk: theory, evidence and policy implications. *Risk, Decision and Policy*, 4(2), 145-159
- Pidgeon, N., Hood, C., Jones, D., Turner, B., & Gibson, R. (1992) Risk Perception. Chapter 5 of *Risk: Analysis, Perception and Management*. Report of a Royal Society Study Group. Royal Society, London
- Phillips, L. (2000) Mediated Communication and the Privatization of Public Problems: Discourse on Ecological Risks and Political Action. *European Journal of Communication*, 15(2), 171-207
- Radley, A. and Billig, M. (1996) "Accounts of health and illness: dilemmas and representations" *Sociology of Health & Illness* 18(2) pp.220-240
- Rayner, S. (1988) Muddling through metaphors to maturity: a commentary of Kasperson et al, 'The Social Amplification of Risk'. *Risk Analysis*, 8, 201-204
- RCEP (1998) *Setting Environmental Standards*, 21st Report, Royal Commission on Environmental Pollution, London
- Renn, O. (1991) Risk communication and the social amplification of risk. In: R.E. Kasperson & P.M.Stallen (eds) *Communicating Risks to the Public: International Perspectives*. Kluwer, Dordrecht.
- Renn, O. (1992) Risk communication: towards a rationale discourse with the public, *Journal of Hazardous Materials*, 29, 465-519
- Renn, O & Levine, D. (1991) Credibility and trust in risk communication. In: *Communicating Risks to the Public*, R.E. Kasperson & P.J.M.Stallen (eds). Kluwer Academic, Dordrecht,
- Renn, O., Burns, W.J., Kasperson, J.X., Kasperson, R.E. & Slovic, P. (1992) The social amplification of risk: theoretical foundations and empirical applications. *Journal of Social Issues*, 48, 137-160
- Renn, O., Weber, T & Wiedemann, P (eds) (1995) *Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse*. Kluwer, Dordrecht
- Rowe, G., Frewer, L. & Sjoberg, L. (2000) Newspaper reporting of hazards in the UK and Sweden. *Public Understanding of Science*, 9, 59-78
- Royal Society (1985) *Public Understanding of Science*. Royal Society, London
- Ryan, C. (1991) *Prime Time Activism : Media Strategies for Grassroots Organizing*. South End Press, Boston MA.
- Sacks, H. (1992) *Lectures on Conversation Volumes 1 and 2* (Lectures 1964-68) Blackwell, Oxford
- Sacks, H., Schegloff, E. & Jefferson, G. (1974) A simplest systematics for the organization of turn-taking for conversation. *Language* 50 pp.696-735
- Sandman, P. M. (1997) Mass Media and Environmental Risks: Seven Principles. In: R. Bate (ed) *What Risk? Science, Politics and Public Health*. Butterworth-Heinemann, London

- Schanne, M. & Meier, W. (1992) Media Coverage of Risk. In: J Durant (ed) *Biotechnology in Public: A Review of Recent Research*. Science Museum, London
- Shannon, C.E. & Weaver, W (1949) *The Mathematical Theory of Communication*. University of Illinois Press, Urbana, IL
- Silverman, D. (1987) *Communication and Medical Practice* Sage, London
- Silverman, D. (1993) *Interpreting Qualitative Data* Sage, London
- Singer, E. & Endreny, P.M. (1996) *Reporting on Risk: How the Mass Media Portray Accidents, Diseases, Disasters and other Hazards*. Russell Sage, New York
- Slovic, P. (1993) Perceived risk, trust and democracy. *Risk Analysis*, 13, 675-682
- Sparks, C & Tulloch, J (eds) (2000) *Tabloid Tales : Global Debates over Media Standards*, Rowman and Littlefield Publishers, Inc, Oxford.
- Stern, P.C. & Fineberg, H (1996) *Understanding Risk: Informing Decisions in a Democratic Society*. National Academy Press, Washington DC
- Taggart, P. (2000) *Populism*. Open University Press, Buckingham
- Thompson, J. (1990) *Ideology and Modern Culture* Polity, Cambridge
- Thompson, J. (1995) *The Media and Modernity* Polity, Cambridge
- Thompson, K. (1998) *Moral Panics*. Routledge, London
- Thrift, N. (1985) Flies and germs: a geography of knowledge. In: D. Gregory & J. Urry (eds) *Social Relations and Spatial Structures* Macmillan, Basingstoke pp.366-403
- Toulmin, S. (1958) *The Uses of Argument* Cambridge University Press, Cambridge
- UKCEED (1999) Consensus Conference on Radioactive Waste Management. www.ukceed.org
- Wahlberg, A.A.F & Sjoberg, L. (2000) Risk perception and the media. *Journal of Risk Research*, 3(1), 31-50
- Walker, G. & Simmons, P & Wynne, B & Irwin, A. (1998) *Public Perception of Risks Associated with Major Accident Hazards*. Report 194/1998. HSE Books, Sudbury
- Wiegmann, O., Gutteling, J.M., Boer, H & Houwen, R.J. (1989) Newspaper coverage of hazards and the reaction of readers. *Journalism Quarterly*, 66, 846-852
- Wilkins, L & Paterson, P (1987) Risk analysis and the construction of news. *Communication*, 37, 80-92
- Wilkins, L. & Paterson, P. (1990) The political amplification of risk: media coverage of disasters and hazards. In: J, Handmer & E. Penning-Rowsell (eds) *Hazards and the Communication of Risk* Gower Technical, Aldershot pp.79-94
- Williams, G. (1984) The genesis of chronic illness: narrative re-construction. *Sociology of Health & Illness* 6(2) pp175-200
- Williams, Raymond (1976) *Keywords: A Vocabulary of Culture and Society*. Fontana, London
- Williams, Rory (1981) Logical analysis as a qualitative method: Parts 1 and 2. *Sociology of Health & Illness* 3(2) pp.140-187
- Williams, Rory. (1983) Concepts of health: an analysis of lay logic" *Sociology* 17(2) pp.185-205
- Wooffit, R. (1992) *Telling Tales of the Unexpected: The Organization of Factual Discourse* Harvester Wheatsheaf, Hemel Hempstead
- Whiteley, P. (2000) 'Paper Chase' *The Guardian*, May 9, p 17.
- Worcester, R. (1995) The public's view of waste and environmental matters. *Waste Management*, December, 35-38
- Wynne, B. (1991) Knowledges in context. *Science, Technology & Human Values*, 16, 111-121
- Wynne, B., Grove-White, R. and Waterton, C. (1993) *Public Perceptions of the Nuclear Industry in West Cumbria* Centre for the Study of Environmental Change, University of Lancaster
- Yearley, S. (1994) Social movements and environmental change. In M, Redclift & T. Benton (eds) *Social Theory and the Global Environment* Routledge, London, pp.150-168
- Zonabend, F. (1993) *The Nuclear Peninsula*. Cambridge University Press/Editions de la Maison des Sciences de l'Homme, Cambridge/Paris



MAIL ORDER

HSE priced and free
publications are
available from:
HSE Books
PO Box 1999
Sudbury
Suffolk CO10 2WA
Tel: 01787 881165
Fax: 01787 313995
Website: www.hsebooks.co.uk

RETAIL

HSE priced publications
are available from booksellers

HEALTH AND SAFETY INFORMATION

HSE InfoLine
Tel: 08701 545500
Fax: 02920 859260
e-mail: hseinformationservices@natbrit.com
or write to:
HSE Information Services
Caerphilly Business Park
Caerphilly CF83 3GG

HSE website: www.hse.gov.uk

CRR 329

£20.00

ISBN 0-7176-1983-4



9 780717 619832