

Risk Actors and Public Risk: the media

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Risk Actors and Public Risk: the mediaⁱ

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1. Introduction

The government recognises that policy-making could benefit from a more rounded consideration of public risk, including consideration of the role of the media alongside other key risk actors.

Media coverage is often seen as problematic. This is partly because the media do not prioritise the most 'realistic' threats as defined by traditional risk assessment experts; they operate according to an entirely different logic. TV news, radio reports and the press, for example, do not cover 'risk' as formally defined (as a multiple of likelihood and impact), they cover *stories*: disasters, crises, controversies and Inquiries. Sometimes they 'uncover' stories that some policy makers might prefer to remain out of the public domain, sometimes they report 'scares' in ways that policy makers consider inaccurate and irresponsible, at other times the media ignore threats that policy makers would like to see taken seriously.

This can result in a frustrating culture clash between policy makers/experts and journalists. However, rather than simply seeing news coverage as 'irrational' or dismissing it as 'sensationalist' it is important to try to understand the factors which shape such coverage and the different priorities that guide different stakeholders in debates about public risk. For example, although risk *can* be calculated in terms of probability and magnitude, much more is at stake than such a simple formula might suggest. Unlike ideas of 'fate' or 'misfortune', modern ideas of 'risk' involve discussion of controllability and preventability. This inevitably places risk in the social and political arena, raising issues of accountability and fairness and associated ideas about trust and justice. It is these social and political dimensions that often seem to contribute to unexpected or 'disproportionate' responses to risk once the issue enters the public domain.

A range of existing research has examined the media's role in the UK in relation to risks ranging from BSE to the MMR vaccine, from paedophiles-in-the-community to terrorism. This report provides an overview of how risk reporting operates and why the media amplify (or 'play down') risks in certain circumstances and how this shifts over time. It also summarises how media personnel interact with other key players (e.g. their 'expert' sources and their audiences) and reflects on levers for change.

2. A brief introduction to the range of actors

This report is primarily concerned with the *news* media. The news media in the UK encompasses diverse outlets (e.g. TV, radio and newspapers) and different types of journalist (e.g. the science specialist, the political correspondent, the general reporter). The news media can also be subdivided in many different ways including by political leaning (e.g. the *Guardian* vs. the *Daily Mail*), funding stream and remit (e.g. the Public Service commitments of the BBC) and audience demographics (e.g. 'Broadsheet', 'mid-market', 'tabloid'). The different ways in which this may impact on coverage are discussed in Appendix 1.

Here it is simply important to note that the news is conveyed to the public via multiple channels of communication and that, in addition, each news report is produced through the interaction of diverse actors:

- 'Back stage' media actors include proprietors and regulators who help to frame coverage, as well as audiences themselves (who, for example, may impact on reporting through the letters and emails that they send in).
- 'Front stage' actors include the individual journalists who produce reports, but also other key individuals such as: editors, headline writers and 'sources'. The later category includes the scientists/ NGOs/ companies/policy makers launching a story, the press officers drafting the press release or organising the news conference, and the complementary or competing sources who offer additional comment. 'Risk stories' often involve fraught contests over the true level of threat or questions of blame/responsibility. In this context relations with sources (who journalists turn to, and who they consider credible) become key and this is explored in section 5.3.

The human actors identified above are also operating within a broader context involving issues such as resources, technological opportunities/obstacles, professional routines and norms and surrounding cultural assumptions. All of these help frame the way in which the media attend to risk – the next section summarises evidence about how and why the news media report risk in the way that they do; this is followed by a section addressing interaction with sources.

3. What the media want out of involvement

Journalists do not usually see it as their job to simply echo policy makers' advice about risk. Not do they see it as their job to become health educators or to champion scientists. There are some examples of significant cooperation between sections of the media and such stakeholders (e.g. in the AIDS crisis, see Miller et al, 1998, and in relation to stem cell research see Haran et al., 2008). However, the media, on the whole, have other motivations.

A primary concern for journalists is to communicate in such a way as to attract audiences and ensure their interest and loyalty so as to keep up viewing/circulation figures (and, for commercial outlets, hence be able to market advertising space). Any news medium tries to maintain its distinct identity and reputation and encourage audience identification. It also strives to be seen to represent its audiences (e.g. a local newspaper's role in a 'paedophile-in-the-community protest'). It may also want to be seen to influence policy (e.g. through campaigns) or act as 'watchdogs' (e.g. exposing scandals and holding politicians to account). Individual editors/journalists may also bring their own commitments and beliefs to the job (which can include a 'public education' belief or a 'promotion of science' mission) and this can influence the type of story they pursue and the way they try to represent risk. (See Appendix for how different media may prioritise different goals). However, above all journalists are acutely aware of the need to attract audiences and engage their interest - and this includes the interest of their editor who could 'spike' a story, as well as the interest of readers/viewers for whose attention they are competing.

4. How the media report risk: the circumstances in which they amplify or diminish risk, why they become involved, why they focus on some risks rather than others.

The pursuit of audiences, and the nature of journalistic practices and news values, lead to some clear patterns in how the media cover risk. Key factors impacting on media involvement include the 'body count' (how many people are killed at once) and who is at risk (is it someone audiences care about?). Journalists will also consider whether the threat can be given a 'human interest angle', how it can be made personally relevant to their audiences and *where* a threat occurs or disaster strikes. In addition coverage is influenced by the availability of striking visuals, a bias towards reporting evidence of harm, the events or official procedures which provide news hooks for stories and the themes of conflict and blame. Finally it is important to note the ways in which the media feeds on itself in a self-perpetuating cycle of interest. Each of these issues, and the implications for risk reporting, is unpacked below.

4.1. Body counts and 'whose body counts'

- The news media will tend to focus on risks which kill, injure, or threaten many people at one time, rather than have a cumulative effect over the years (e.g. Singer and Endreny, 1987; Hansen, 1994). This makes for a more dramatic story and is one reason why incidents involving aeroplanes, for example, gain much more attention per accident/death than car crashes.
- Unusual risks are more attractive than common risks. In general 'man bites dog' is a news story, vice versa is not (Dunwoody and Peters, 1992: 205).

- The ‘celebrity culture’ of the media/society means that media interest in a particular risk will often be stimulated by the death (or diagnosis) of one famous individual rather than the overall ‘body count’ (Rogers and Chang, 1991). E.g. note the attention given to a young pop star such as Kylie Minogue getting breast cancer – and how this can impact on uptake of screening (Chapman et al., 2005).
- Threats to ‘people like us’ (as identified with by journalist, or as assumed to be identified with by their readers) gain more attention than threats to ‘the other’ (e.g. those in the ‘3rd world’).
- The ‘attractiveness’ of the victim influence the extent of coverage (e.g. the disappearance of a pretty blond child) (Jewell, 2008).
- The unattractiveness of the source of threat will also influence how a risk is covered (‘hoodies’ with knives, ‘thugs’ with dangerous dogs).
- Social movements can influence risk coverage e.g. the role of gay men in responding to HIV, or the women’s health movement in highlighting attention to breast cancer. Coverage can also be encouraged by other types of ‘Risk entrepreneurs’ such as those selling risk management solutions (insurance etc.).
- Media coverage of risk is refracted through ideas about national interest and national boundaries (e.g. an interest in the risk to UK nationals abroad). Interest is also filtered through ideas about values and identity of the nation (e.g. notions about ‘Britishness’ in the BSE crisis or beliefs about the unique ‘English countryside’ being threatened by foreign imports of GM) (Hughes, 2007).
- Other elements come into play extraneous to the risk including issues of social taboo, stigma or acceptability and blame. This impacts on why, for example, more attention is given to breast cancer than bowel cancer or lung cancer (Henderson and Kitzinger, 1999).

4.2. Human interest angles and ‘relevance’

Identification from readers/audiences and ideas about relevance are crucial both to the media’s decision to cover a story, and the nature of the responses from audiences (e.g. journalists will observe that their readers have to decide whether to immunise their child/grandchild).

- Journalists seek out the ‘human face’ of science and of risk (Hansen, 1994) and the ‘popular’ orientation of some sections of the news media gives prominence to lay voices and perspectives (Petts et al., 2001).
- The emphasis on ‘the victim’s story’ can mean that
 - Personal accounts may allow a risk to enter the media in spite of official denials (e.g. parents of an autistic child who believe damage was caused by the MMR vaccine).

- The absence of existing 'victims' may make a story less newsworthy; prospective or hypothetical victims are not enough to guarantee coverage (see the lapse in media attention to BSE prior to the officially declared link with vCJD, Kitzinger and Reilly, 1997).
- Proactive preventative measures which pre-empt risk (and hence avoid victims) may gain less attention than reactive responses (Harrabin et al, 2003, 32).

4.3. Location

- A geographically bounded event - such as a flood - will provide a more media friendly crisis than one without a 'news centre'.
- The 'type' of place in which a risk has made itself visible will influence the type of coverage. The poignancy of honeymoon couple shot dead on paradise island makes the news, everyday problems of violence affecting those who live there does not. An attack in a rural idyll makes for a different framing than a similar attack in the inner city. Suggestions of sexual abuse on an isolated island are framed differently from stories of sexual abuse on the UK mainland (Kitzinger, 2004).
- Geographical or social distance between journalists and their assumed audience impacts on coverage. A risk within the UK makes headlines in the UK, the same risk abroad may be ignored. Even with a city, the postcode of the centre of media operations (and place of habitation of journalists) may be echoed in the pattern of coverage (e.g. of damaged houses after an earthquake) – creating a disproportionate impression of who is at risk, and where help is needed.

4.4. Visuals

- The media, especially television, are attracted by the 'spectacular spectacle'. The existence of strong visual images increases the chances of television (and press) reporting of a risk (e.g. scenes of a melting edge of an iceberg crashing into the sea make 'good telly').
- Visuals from 'citizen journalists (e.g. people using mobile phones) are becoming increasingly important in crisis reporting (e.g. footage used in reporting on 7/7 London bombings).
- Such visuals also often have a very powerful impact on audiences. These may be 'created images' (e.g. white suited protesters tearing up crops), images of caution (people wearing face masks to protect against infectious diseases such as SARS) or scenes from disaster (collapsing buildings, or helicopter shots of bodies floating in flood water).
- Visuals can convey *unintended* messages of threat (e.g. an image of a steaming pond outside nuclear power station) (Corner et al., 1990) (see section 5).

4.5. The emphasis on positive findings of harm

- Systematic reviews of which types of risk are reported in the media suggest that there is some truth in the cliché that 'Bad news is good news'. Research which identifies positive evidence of 'harm' is usually more newsworthy than evidence of 'benefits' or lack of harm.
- Journalists are more likely to pick up on research reports which have *positive* findings of risk, rather than research which reports no evidence of risk (e.g. Korn and Klein cited in Chapman and Lupton, 1994: 34). This also is reinforced by the bias towards the publication of such studies in the key journals.
- Exceptions to this are when reports of 'safety' or 'lack of danger' go against received wisdom or when there are other reasons for a particular media outlet to oppose central government declarations of danger. Examples of this would include the 1980s *Sun's* headline 'Straight sex cannot give you AIDS - Official' (based on statement by a member of the House of Lords) (17 November 1989) and the 1990s *Sunday Telegraph's* headline 'Passive smoking doesn't cause cancer - official' (8 March 1998). Examples of 'reassuring' headlines in more recent years include: 'Chocolate's good for you - official' (*Daily Mail*, 16 December 2006); 'Official: drinking Guinness is good for your health' (*The Mirror*, 15 April 2004) and 'It's official: stilettos are good for you' (*Daily Star*, 5 October 2003). (Note how the declared use of an 'official' source warrants such potentially controversial claims - see section 5.1).

4.6. The importance of events

The cycle of news production, organisation of news beats and routines of journalists impact on how issues are covered. One key issue is that news reporting tends to be event orientated rather than issue orientated (Kristiansen, 1988). This has important implications for how risk is framed.

- The emphasis on reporting news events means, for example, that a leak will make a news story but background pollution/radiation is less likely to be included in the 'news of the day'. (Allan et al., 2000, 8). Similarly, a crisis such as a famine or a flood will attract attention; the process which leads up to this crisis has little media value.
- Long-term and continuous developments (such as environmental degradation) have less chance to manifest themselves within the production cycles of the media – at least in *advance* of crisis. (Hansen, 1991). Attention to issues such as global warming has to be generated by linking to political/media events (e.g. Al Gore movie, controversy about 'the Great Global Warming swindle' debate) or crises close to home (flooding in US or UK) which can be linked to that risk.

- This emphasis on events can make it hard to engage the media (and hence publics) in proactive discussion about how to prevent disasters as opposed to merely offering emergency responses after the event.

The emphasis on events can also militate against engaging the media (and hence publics) in discussion of the appropriate risk/benefit balance in developing emerging technologies. Journalists and editors interviewed in the early to mid 1990s, for example, commented that genetics was not a 'big news story' because of the lack of legislation or key events. When Dolly the cloned sheep was introduced to the public in 1997 this then seemed to come as a surprise which had been 'sprung' on the public by scientists working behind closed doors (Kitzinger and Reilly, 1997, Haran et al., 2008).

- It is important to note, however, that not all 'risk events' become signifiers of risk. A 'one-off' incident can be isolated from having relevance in other circumstances or to future risk. The Chernobyl nuclear power plant disaster, for example, was arguably isolated as a problem 'over there' in Russian nuclear power plants, not a general risk issue (see Luke, 1987 for discussion of how this was achieved, cited in Allan et al., 2000).

4.7. Official procedures

In the absence of a 'disaster event', the news media will often examine a 'risk' through official procedures such as permit application, regulatory decisions or an inquiry. This helps influence when coverage is received, it can also influence what type of risk gains attention, and how it is framed as a story.

- Policy action (e.g. response to perceived risk) can generate coverage. The interaction between the media and policy makers can contribute to a spiral of interest. The King's Fund, for example, highlights a media focus on issues such as waiting lists at the expense of what they identify as a much more serious public risk issues such as health inequalities. The problem is fed by the fact that the media highlight waiting lists, the government respond with targets, and the media then have another wave of stories on which to focus reporting (Harrabin et al., 2003, 4).
- Policy *inaction* while it may initially attract critical coverage, often eventually leads to a decline in coverage - at least until a crisis hits. This dynamic can be illustrated by the lull in coverage of BSE before the official announcement of a link with vCJD. As one journalist commented it was very hard to get any story about BSE accepted during that time because: 'nothing was being done' and journalists needed either action or 'dead bodies' before they could revive the story (Kitzinger and Reilly, 1997).
- The emphasis on policy action or procedures not only influences when, and what type, of risk gains attention; it may also influence the way the problems, and solutions, are framed. In particular, the focus on bureaucratic procedures may advantage some questions over others. For

example, it may privilege a question such as: ‘has standard procedure been followed in setting up this new power plant?’ over questions such as: ‘could conservation eliminate the need for this new facility?’ (Kunreuther et al. cited in Freudenburg et al, 1996: 34).

4.8. The impact of conflict, ‘cover-ups’ and blame

In the absence of a clear disaster prompting risk coverage, then conflict and blame are often key criteria in stimulating media attention to risk:

- Media interest will be stimulated by overt conflict between stakeholders (Peters, 1980).
- Media interest will be prompted by perceived government vested interests and secrecy (Miller and Reilly, 1995) and any whiff of a cover-up (especially post BSE and Weapons of Mass Destruction debacles in the UK) (Harrabin et al., 2003).
- Scientific uncertainty is not necessarily attractive to journalists – controversy *is* (Kitzinger and Reilly, 1997).
- Sources (scientists, lobby groups etc.) who express tentative or qualified positions or say ‘we don’t know’ are less likely to be cited than those who express firm opinions one way or the other (Sandman, 1987: 100).
- The ability to blame someone (an individual official, an institution, the government) may be an important criterion in attracting the media to a risk story (Sandman et al, 1987).
- There is a tendency to look for individuals to blame for risk events, personalising the causes (Petts et al., 2001, viii).
- Crucially, it depends who (or what) is to blame. A story may be resolved and disappear from the media once blame is seen to lie at the door of ordinary individuals. For example, the salmonella in eggs story was ‘resolved’ once *consumers* rather than *producers* were seen to be at fault – and newspapers simply advised the ‘housewife’ to make sure eggs were well cooked (Miller and Reilly, 1995).

4.9. The spiral of concern

The media can create a self-perpetuating spiral of concern.

- A risk story will grow once it enters diverse pages (e.g. becomes not just a science story, but also a political story) – this leads to increased carrying capacity (discussed in Kitzinger, 1999).

- One part of the media can help to keep the story on the agenda of other parts of the media. The *Daily Mail* campaign against the combined MMR vaccine, for example, helped to keep the issue live across the media, including on TV news (Harrabin et al., 2003, 31).
- Policy responses to the agenda set by the media can help keep an issue in the headlines (see Section 5).
- Audience reaction (e.g. via the internet) may help keep an item on the news agenda as editors/journalists respond to public outrage. Stories about 'scares and scandals' can forge links between journalists and their outraged public. As one study concluded: 'public response, measured in letters, emails and phone calls, provided a powerful affirmation to some editors that they had touched their audiences, and motivated them to seek other examples of the types of stories that could create this level of response' (Harrabin et al, 2003, 33).ⁱⁱ

5. How the media interact with experts and government

The above section focused on the news values and practices which help shape reporting of risk. This section focuses on how journalists interact with expert, government and other sources and the implications of this for risk reporting. Sources, and their relations with journalists, have a major impact on which risks gain attention, how the stories play out over time and how stories are defined or 'framed'. Key factors include the resources and strategies of diverse sources and the routines of journalist-source relations.

5.1. The resources and strategies of sources

- Government and corporate sources have bigger budgets for dedicated PR activities. This enables them to stay in the definitional contest to frame issues for longer. In the first phase of US press coverage of silicone breast implants in the 1990s for example, coverage focused on the health risks and featured testimony from women who alleged that their health had been compromised by implants. Following a major public relations campaign by the leading manufacturer, Dow Corning, however, later coverage was dominated by industry assurances that implants were safe (Powers and Andsager 1999).
- Governments on the other hand often have less room for manoeuvre than corporations and the efficacy of official sources may be undermined by bureaucratic and political restrictions (inhibiting them from providing a quick and 'quotable' response to journalists' enquiries).
- Alternative sources may have 'better' resources in terms of being able to process requests quickly, provide vivid quotes and produce 'human interest' stories or dramatic demonstrations that make for good pictures (Kitzinger, 1998: Miller et al,1998). This has been a prominent feature in

the MMR controversy where parents convinced that their children's autism had been caused by the vaccine made powerful advocates for the argument that the MMR vaccine was risky. (Boyce, 2008)

- There is evidence, however, that some sections of the scientific community in the UK are learning to operate more like such pressure groups. This has been very notable, for example, in the media strategies adopted by those wishing to promote a liberal UK policy towards issues such as embryo stem cell research or work with 'hybrid embryos'. This has involved scientists liaising closely with charities (e.g. Parkinson's Society), mobilising human interest stories, and proactively campaigning to promote their point of view that the 'real risk' lies in blocking such research. (See Haran et al., 2008).

5.2. Routines of journalist-source relations

The resources mobilised by different sources play out against a more general background of journalistic routines. Research into news reporting reveals some common patterns such as the following.

- Official sources are routinely privileged (Stallings, 1990; Scahne and Meier, 1992).
- Press releases and announcements of policy initiatives are a key source of news stories about risk, as are the main science journals (e.g. science correspondents routinely examine the journals '*Nature*' and '*Science*').
- Releasing information at pre-arranged press conferences with carefully arranged deadlines consolidates the power of official voices.
- Information that can be attributed to an 'official' source is less likely to be scrutinised for validity than information from 'alternative' sources.
- The recent decline in profits for UK media organisations has led to cutting costs (e.g. shedding staff) and an increase in journalist's work loads. This, in turn has increased dependency not only on copy provided by news agency, but also on PR sources. Research by the Cardiff School of Journalism, Media and Cultural Studies found that one in five newspaper stories were verifiably derived 'mainly or wholly from PR material or activity' (Lewis et al., 2006, 17) and this was particularly true for stories about health – accounting for 37% of stories in this category (Lewis et al, 2006, 21). (See also Lewis et al., 2008a and b)
- An isolated 'maverick' voice (such as Richard Lacey's in the early 1990s) highlighting a risk may gain some initial attention. A maverick voice has novelty value and makes for an interesting and often dramatic story. However, maverick voices tend to lose credibility and news value over time until, or unless, something else occurs to support pronouncements of doom.

However, once a crisis occurs, or a story is redefined as being 'about risk' some of these journalistic routines can shift allowing prominent space for certain types of 'alternative' voices.

5.3. Shifting rules for 'risk stories'

Once a story becomes framed as a scandal specific questions may be raised that shift the initiative and power away from official definers of public risk or the policy makers. These include:

- **The question of 'What Went Wrong?'** A crisis (whether it is a terrible flood or the collapse of financial markets) raises the question of failed risk predictions or safety measures. This, in turn, opens the door for alternative voices critical of those with power and responsibility (under whose watch the crisis has occurred). Journalists may then become more critical of official sources, concerned about motives and open to treating different positions as legitimate (Dunwoody and Peters, 1992). This may still, however, be confined within certain boundaries – reporting of a financial crisis may for example, question the risk of certain kinds of financial dealings, but not 'the risks' of the capitalist system.
- **The question: What is being hidden?** Journalists will question if, for example, government sources are seeking to manipulate statistics (e.g. about knife crime)
- **The journalistic principle of 'balance'.** Once a contest about risk has been raised successfully then a 'balanced' approach to the debate may be interpreted by journalists as an obligation to give a platform to 'both sides'. This was evident, for example, in the MMR crisis in which the minority scientific voice questioning the safety of MMR was given an equivalent platform to the majority voice asserting its relative safety (Boyce, 2008).
- **Absence of 'proof' of safety.** The negative frame around GM in the UK press partly gained ground because there was no settled scientific consensus on the long term impacts of GM crops/foods. Since the evidence was itself at issue (Hargreaves and Ferguson 2000) demands from the government and the established scientific community for factual accuracy in reporting made little headway and the way was left open for critical and oppositional voices to set the agenda. (see Understanding Risk Team 2004).
- **The risk agenda of the risk story.** If the story is 'about risk', then those arguing that something is 'safe' are inevitably put on the back foot. For example, those defending the safety of the MMR vaccine were put on the defensive in reporting which was 'about' its potential dangers (Boyce, 2007)
- **A 'risk story' frame raises questions beyond the technical.** Media (and 'public') interest in a risk story goes beyond the merely technical.

Journalists will take more account, for example, of the speaker's willingness to go beyond formal risk assessment statements to comment on political problems and solutions. Sources on different sides of a debate may differ in their willingness to do this. If official sources are seen to 'hold back' on journalists, they will be more prepared to seek out alternative opinions and give a platform to 'mavericks' (Kitzinger and Reilly, 1997). Seeing a story as simply being about 'risk' may limit understanding of the wide range of interests and concerns that story generates – including broader questions about priorities, democracy, freedom of expression etc.

- **The power of historical risk templates.** Historical analogies or 'templates' are routinely used by journalists to make sense of unfolding events, and these have taken particular forms in the UK reporting of risk. One scandal around children being taken into care in Orkney in the 1990s, for example, was routinely framed through references to an earlier scandal in Cleveland in the 1980s and this led to a powerful framing of risk which identified social workers and the State as a threat to families (Kitzinger, 2004). Similarly the routine linking of GM foods and crops to the earlier BSE (Mad Cow disease) crisis 'invited readers to look for a repeat of the government's prevarication, deception and perceived lack of concern with public health. (Murdock, 2004).

6. A (very) short history of how coverage has evolved

As the last point above makes clear journalists are influenced by the history of interaction between the media and experts/the government. The framing of debates about public risk in the UK is influenced by the history of BSE (which prompts comments along the lines of 'we were told it was safe and it was dangerous') and of the Weapons of Mass Destruction debacle ('they tried to scare us into compliance'). In both cases forces were seen to manipulate the scientific evidence of risk – leaving journalists (and their audiences) wary. New initiatives including public engagement efforts, public consultations and self-conscious transparency are one way in which this history is trying to be 'un-done'.

7. The regulatory context

The reporting of risk, as of any other topic, is influenced by regulations and guidelines about accuracy and impartiality. For example, the BBC news is committed to 'impartiality' and the BBC have also developed their own guidelines about risk reporting– see bbc.co.uk/guidelines/editorialguidelines/advice/riskreporting

However, the applicability of such guidelines varies depending on the media and, in general, the informal structures discussed above are more significant in shaping news.

Some formal codes may also have unintended effects, for example, Harrabin et al argue that, at least in the past ironically, the BBC news may feel that obligations to be 'objective' tie it into following a conventional news agenda (even where that news agenda has been set by the *Daily Mail's* attack on the safety of the MMR vaccine) (see Harrabin et al., 2003, 36). They conclude: 'To avoid accusations of bias or campaigning, BBC news programmes often feel obliged to stick with the mainstream news agenda – an agenda partly constructed by newspapers that may have strong campaigning interests of their own' (Harrabin et al., 2003, 3).

8. How the media interact with publics, intended and unintended consequences

Media coverage can contribute to cycles of risk debate. It can expose risks and provoke action resulting in the positive reduction of risk. However, it can also set up the public for 'irrational' self-protective measures (e.g. making people scared of their children being abducted, contributing to a rise in childhood obesity as kids are driven to school or worrying women about using the contraceptive pill, exposing them to increased health risks linked to abortion and childbirth). Clear impacts are sometimes evident as in a decline (at least temporarily) in egg or beef consumption (Kitzinger and Reilly, 1997) or a change in the number of parents accepting the MMR vaccine for their children (Boyce, 2007). However media influence is not necessarily the most important factor (e.g. simply blaming media coverage for obese children would sidestep other issues ranging from the sale of school sports grounds or the cutting of bus services, to issues of urban design etc.) In addition, media influence is not always powerful, and does not affect everyone in the same way. The 'impact' of the media on audiences therefore needs to be unpacked and contextualised.

8.1. Types of media influence

Research evidence suggests that media influence *can* operate at several levels.

- The media can 'set the agenda' about what is important e.g. with the attention it gives to global warming or financial (in)stability (See Agenda-setting theory, and examples such as Newell, 2000).
- Media coverage can have immediate (albeit often short term) impact through 'scares'
- It can also cultivate a general, long term sense of danger over time. See, for example, the way in which the media covers violence against women locating it in dark alleyways, rather than reflecting the true statistics about who is responsible and where women are attacked - this, in turn, has

been shown to feed into women's concerns and avoidance behaviour (Weaver et al. 2000)

- Media coverage can also cultivate a general sense of what is a 'good thing' (e.g. where solutions to risk lie, or whether some risks are worth taking because of the benefits they may bring). For example, the aura around stem cell research that it will lead to cures, and that the 'risks' are therefore justified by the 'opportunities' (Hughes and Kitzinger, 2008)
- Media 'frames' can help define problems and imply ideas for causes and solutions

8.2. How people interact with the media and 'take messages home'

Research into how people interact with media messages suggests that some features of media may have more impact than others. 'Information' about risk may be the least relevant part. For example, key features include

- **Images:** e.g. an image of people in white protective suits is the most memorable image from the GM media coverage and conveys a powerful image of threat (Hughes and Kitzinger, 2008). Images may even undermine the spoken message: e.g. a shot of a steaming pond next to a power plant may leave audiences of a documentary with a powerful impression of threat even if the overall message of the programme is more reassuring (Corner et al., 1990)
- **Narrative structure:** e.g. the narrative structure used to present an account (e.g. of a family tackling childhood leukaemia) may have a greater impact than an explicit message about a statistical lack of association between nuclear power plants and cancer (Corner et al., 1990)
- **Identification and imaginary engagement bringing the risk home:** media messages which engage people imaginatively may be particularly powerful and memorable, and provoke dissemination through interpersonal discussion. For example, this was demonstrated in the power of dramatisations about 'inherited breast cancer' risks which engaged women in thinking about what they would do if faced with choices about gene testing and prophylactic mastectomy (Henderson and Kitzinger, 1999).
- **Associations:** The repeated association of references to 'the hole in the ozone' and 'global warming' leads many people to assume that the two are linked (Hargreaves et al., 2003).
- **Historical 'analogies' or 'templates':** Journalists frequently link present, unfolding events, to past 'case proven events' (the Vietnam War, The Second World War, the BSE debacle) (Hughes et al, 2008; Mairal, 2008). This seems particularly common in risk stories where the uncertainties of the present/future are interpreted through the lens of the past. The templates mobilised by the media have been shown to have a powerful impact, not only on how journalists frame their stories, but on how people recall and interpret emerging risk debates (Kitzinger, 2000).

- **What are the implications for me?** Similarly media consumers may feel less engaged by complex economic theory (e.g. in the current financial crisis) but be very interested in knowing whether their savings are safe, and what they should do about their mortgage. If they have to actually make a decision then the raising of an uncertainty may be particularly important (e.g. when the MMR coverage turned a previously routine act – accepting vaccination for your child- into an active area of decision making by raising the shadow of doubt - see Boyce, 2007)
- **‘Who’ and ‘Why’ rather than ‘What’ and ‘How’:** Not everybody is interested in every aspect of a risk problem in equal measure. With many complex risks people do not think they will ever be able to understand the ‘what’ and ‘how’ of the technical dimensions, however they are still interested in the ‘who’ and ‘why’. For example, in discussions of developing new science and technologies research participants often state that only the ‘experts’ will truly understand the technical details, but they as citizens want to understand and address the motivations of those developing the technology (e.g. is it industry or government and is it for ‘profit’ or ‘the common good’) (Kitzinger et al., 2008).

8.3. The mediation of media effects by external factors

Media impact on people is mediated by many factors beyond the actual media text too:

- Media messages can have unexpected effects on people’s risk assessments or behaviour depending on their social context (e.g. advice to use condoms unless you are ‘100% sure of your partner, may be interpreted as a reason to stop using condoms as a demonstration of trust) (Miller et al., 1998).
- People consciously resist/negotiate with media information (e.g. rejecting risk messages as media ‘scare mongering’ or the ‘nanny state’).
- People do not just passively accept static cultural norms, they work with them and are flexible negotiators of meaning. For example Nature’ may be seen as an absolute virtue (e.g. appealing to ‘the balance of nature’) in discussion of the genetic modification of crops ‘). However, a different image of Nature may be invoked in discussion of genetic modification for the treatment of disease (e.g. a ‘flawed nature’ which needs correcting, or ‘nature red in tooth and claw’) (Hughes and Kitzinger, 2008).
- Different groups of audience may have different reactions depending on their demographic/social characteristics.

- Media information also interacts with what people know from other sources (their work place encounters, their family and friends, their religious leader, their GP etc). This is one reason why, for example, most parents were worried by the media coverage of MMR, but most still continued to accept MMR vaccinations (Boyce, 2007).
- People will interpret the proposed risk and benefits through the lens of their experience of citizenship. For example, in one study most research participants knew little about the risks or benefits about nanotechnology. However, most responded to the potential of such technology positively (associating it with minaturized consumer goods such as the 'nano ipod' or positive medical advances). A group of Muslim research participants, however, expressed concern that nanotechnology might be used in surveillance and to erode civil liberties. (Kitzinger and Hughes, 2008).
- Messages from the media about risk interact with other dimensions of the risk which may address fundamental psychological, social or cultural issues (ranging from the importance of whether or not the risk is chosen, to the symbolic status of food (in the GM debate), or the utility of a mobile phone (in the discussion of risks from mobile phone technology) (See BERR paper on 'Publics').ⁱⁱⁱ
- Crucially people's ability to *act* on risk information received from the media will be circumscribed by a wide range of social circumstances (e.g. responding to health advice about using condoms or eating more healthily may be inhibited by social stigma, social relations, or access to shops selling fresh fruit and vegetables).

9. Levers for change

Quite what counts as 'good coverage' of risk is open to debate. Many of the factors outlined above are also intractable to change. However, given the dynamics and interactions outlined in this report there are four areas where change might be pursued:

Dialogue between the media and policy makers: e.g. input into training and guidelines, and opportunities for secondments (e.g. journalists working with risk policy makers and vice versa) as well as developing innovative web-based communication tools.

Working with sources: This again could include training, guidelines, resources and opportunities for scientists and policy makers presenting risk issues to the media, and opportunities to reflect on their assumptions and strategies.

Publics: 'media literacy' helps people to make sense of media representations and their own responses, 'risk literacy' might also be a fruitful way of engaging publics in the debate (as long as this goes beyond the

technical and addresses people's own concerns about the framing of risk and includes discussion of the broader debates).

Context: More fundamentally the impact of the media in debates about public risk depends on wider issues such as the transparency and reputation of advice-giving bodies, and the relationship between scientific advisers and policy makers, citizens and the State. It is not simply a question of 'communicating the facts', but includes questions about institutional body language and trust, and issues about how social problems are framed. Media actors are not operating in a vacuum that can somehow be changed without addressing wider issues.

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Appendix 1: Unpacking generalisations

An overview of patterns in the reporting of risk inevitably carries its own ‘risks’: the danger of unhelpful generalisation. It is crucial, therefore, to acknowledge explicitly some of the cross-cutting variables that come into play.^{iv} This appendix briefly highlights some variables

A1.1. Differences between diverse risk topics:

Each risk story covered by the media will have its own patterns of actors, associations series of events, or characteristics. As Petts et al argue (2001): ‘issues may have different ‘risk signatures’ including diverse dimensions such as whether, for example, people trust the institutions seen as responsible for managing the risk and whether or not it raises moral considerations (Petts et al., 2001, viii). ‘The existence of these risk signatures means that communication about risks requires issue-specific attention. There can be no single risk communication ‘recipe’ (Petts et al., 2001: viii) It is not even possible to generalise about how the media cover a risk ‘area’. For example, a study of media coverage of ‘the risks of emerging science and technology’ compared 3 topics: GM crops, Stem cell research and nanotechnology and found very different profiles for each – ranging from the very cautious (the predominant coverage of GM) to the more supportive (the more prevalent type of coverage for stem cell research in most news outlets) (Hughes and Kitzinger, 2008).

A1.2. Differences between diverse news media:

The summary of risk reporting in the main body of this report has, of necessity, presented a short general overview. However it is important to recognise differences between diverse news outlets in the way they report risk including how they source stories, who they quote, who they blame, and the type of solutions for which they call. Such differences are often evident to the casual observer who can see a difference in how *The Daily Mail*, for example, treats a story compared to *The Guardian*. Such differences have also been systematically mapped by research comparing diverse risk stories in the UK which have found the following:

- *Differences between tabloid and broadsheets:* For example, broadsheets are more likely to carry risk stories prompted by government/political action, whereas papers such as the *Sun* are more likely to present stories based on personal experience (Petts et al, 2001, 59). The visuals in the Tabloids tend to focus on the victims, highlighting *consequences* of risks as opposed to questioning causation (Petts et al., 2001, viii). Broadsheets were more likely to call for more research to address a risk problem, whereas papers such as the *Sun* called for immediate action or redress. Tabloids also often adopt a populist framework which distinguishes between ‘us’ and ‘them’ (e.g. the Fat Cats) (Petts et al., 2001, 57) – and some papers particularly promote discourses about the ‘Nanny State’. *Daily Mail* headlines, for example, include: ‘Nationalising of childhood; . . .or the final proof the Nanny State really has gone gaga’ (March 15, 2007) and ‘Parents must

say 'no' and not let the Nanny State say it for them; The answer to obesity in our children lies with families and not with a prohibition on adverts for junk food' (*Daily Mail*, November 21, 2006).

- *Differences between TV channels with a public service remit, and those without:* BBC1 and Channel 4 were more likely to carry quotes from established political actors, ITV and Channel 5 used more vox pops from members of the public to comment on risk stories (Petts et al., 2001).
- *Differences between individual papers:* This will lead to clear examples of how a story may be framed in any particular instance. Hansen, for example, examined Greenpeace's occupation of the redundant Brent Spar oil platform designed to prevent Shell from sinking it in the North Sea. His work shows that while critical voices can command news attention for their claims through dramatic, highly visual, actions they have much more difficulty controlling the way their claims are framed and inflected by individual newspapers. Whereas the left of centre tabloid, the *Daily Mirror*, hailed Shell's decision not to sink the rig as a 'Victory For the People', the conservative broadsheet, the *Daily Telegraph*, attacked it as 'A Triumph for the Forces of Ignorance' (Hansen 2000). Systematic differences in use of sources in diverse newspapers are also detectable through quantitative analysis across a range of risk stories. For example, pressure groups gain most attention in the *Guardian* while corporate spokespeople are most likely to be quoted in the *Telegraph* (Petts et al., 2001, 62).
- *Differences between local and national media:* many studies focus on National UK media. However local newspapers are widely read and can have a key influence on community debate (Petts et al., 2001, vii). This in turn can impact on national understandings of risk and risk policy/management (see 'Paedophiles in the Community' issue – Kitzinger, 2004). Local media also have distinct conditions under which they operate. A local paper reporting about pollution from a local factory, for example, may balance its concerns about pollution causing asthma in children, with its concerns to keep local jobs.
- *Differences between different formats within newspapers:* For example one study found that although all formats 'under report' risks posed by smoking or obesity, there are differences by format. The 'softer' inside pages feature more coverage addressing health risks such as alcohol, obesity or smoking, whereas the hard news pages (such as the front page) cover stories more influenced by mainstream news values (Harrabin et al., 2003, 15).
- *Differences between TV news and newspaper reporting:* Similarly TV news reports are more bound by mainstream 'hard news' values than papers in general – thus offering even less attention to the risks of smoking, alcohol use or obesity than the press (Harrabin et al., 2003, 15).

Appendix 2: A post-script on the 'new media'

The bulk of the discussion in this report has focussed on the 'traditional' media such as TV and newspapers. However, it is important to reflect on issues that may be raised by the 'new' and 'emerging' media enabled by technology such as the internet and mobile phone. The generic term 'new media' is often used to include phenomena such as blogging, social networking on the web, use of Google for information searchers, the new forms of information and dialogue evident on sites such as 'Wikipedia', and the emergence of 'user generated content' such as mobile phone video footage. Claims for the new media include that they could:

- broaden the range of sources contributing to the debate (e.g. anyone with access to the technology can circulate their ideas or experiences),
- broaden the range of discourses and widen understanding (e.g. the role of the 'Baghdad blogger' in the course of the American invasion of Iraq)
- expand opportunities for citizens to learn about complex problems (Krimsky, 2007)
- allow internet organizing to circumvent the filters and obstacles normally encountered in trying to publicise a risk through conventional print and broadcast media (e.g. via the chain mail principle) (Rodrigue, 2002)
- increase the *two-way* flow of communication (allowing for a record of dialogue about any statement)
- increasingly mean that the mass media may be resourced by powerful, eye witness accounts (e.g. videos from the site of a disaster taken on mobile phones – as we saw in the London bombings of 7/7)
- allow people to access information and representations across national boundaries (e.g. turning to Al Jazeera as well as BBC on line), and expose users to competing versions of reality
- speed up information exchange (contributors can comment at any point without deadlines)
- allow for greater depth of information (through links and the lack of limitations on length of any piece) and
- facilitate the creation of virtual communities of interest around risk, or support networks in times of crisis (e.g. role of internet during and after Hurricane Katrina in New Orleans) (Mythen, 2007) .

From one point of view the internet potentially is a positive 'democratisation' of the information sphere and 'cyber-optimists' celebrate the impact of such changes. From another perspective, the more 'cyber-pessimist' view point, such changes introduce many problems including not only unequal access to the new media, but also problems such as:

- the degradation of information (through rampant rumour mongering and lack of source accreditation)
- a decline in the quality of 'disaster reporting' with an increased emphasis on material from untrained but on-the-spot 'citizen reporters' with powerful images and personal accounts but a lack of analysis
- empowering 'inappropriate' risk entrepreneurs to mobilise fear and resistance (e.g. the use of websites highlighting the dangers of vaccination – see Calandrillo, 2004 cited in Krimsky, 2007)

- the fragmentation of the audience (into ghettos of interest and self-confirming circles of information exchange)
- and the erosion of traditional media (as internet use may have an economic impact on how conventional journalism is resourced and marketed) .

Empirical research into the impact of the internet on risk debates in general is still relatively sparse. Research suggests that, on a day to day level, (i.e. if not facing a crisis), most people still rely on traditional branded news sources even if delivered via the internet e.g. BBC online (Petts et al., 2001). The crucial point to bear in mind is that while the internet may provide endless sources of information and links, people still have limited resources of their own time for information seeking and processing. The potential impact of the internet, for example, is mediated by people's access to the medium (e.g. do they have internet access at home? Are they allowed to make use of it at work?). It is also influenced by their motivation to use it. Understanding what motivates people to make more intensive use of new media is therefore key to understanding how the potential of new technologies and platforms are realised in any particular case. Existing research suggests that individuals will turn to the internet for risk information if they:

- 1) Want up-to-date or supplementary risk news because of a perceived threat to their personal safety/well-being or the safety/well-being of loved ones (e.g. after a cancer diagnosis) or are prompted by a major event covered in the news (e.g. the Tsunami)
- 2) Require more detailed information than is available through traditional media because they have decisions to make (e.g. going on-line to get information about the risks of a particular drug that has been prescribed to them, to research the impact of a phone mast going up near their home or going on-line to seek financial information in response to a perceived threat to their savings or investments)
- 3) Feel that the mainstream media or their existing social context does not provide the information and support they require (see, the emergence of on-line communities of interest)
- 4) Lose trust in the mainstream national media or wish to be exposed to other perspectives (e.g. some people's distrust of western media reporting on 9/11 and accessing of media from other countries, or accessing of specific sites discussing different theories about 9/11).

Research after the 9/11 attack on the twin towers in New York illustrates how the internet may come into play in crises. There was a dramatic increase in internet traffic after 9/11 (Bucher, 2002). The internet was widely used as a source of secondary information, as well as acting as a site for hoaxes and rumours, displays of public grieving and anxiety (Anderson, 2003). The internet also allowed people to access widely diverging accounts to 'explain' 9/11 and this often took on international dimensions. Traffic to US sites from other countries doubled after the attack, and there was also a dramatic increase in traffic to sites for newspapers in Pakistan and Israel as well as sites such as 'Afghanistan Online' (Bucher, 2002).

Such research into the new media has crucial implications not only for having an on-line presence in risk debates (especially during crises) but also highlights the significance of the reputation of sources as accessible, informative, interesting and unbiased as well as its potential to provide in-depth or background information tailored to the needs/interests of different audiences/users. Predicted changes in the skills levels of the population and their familiarity with the internet as well as technological changes (e.g. convergence and increased portability and access) suggest an on-going need to understand developments in the role of new media.

Endnotes

ⁱ This report was commissioned by the Department for Business, Enterprise and Regulatory Reform. It draw on previous reviews on the media coverage of risk (Kitzinger, 1999; Hughes et al., 2007) and research conducted for the ESRC 'SCARR' network for the study of Social, Context and Responses to Risk. Thanks are also due to key writers whose work informs this report especially Boyce (2007), Petts et al (2001), Haran et al (2008) and Harrabin et al (2003).

ⁱⁱ The rise of interactivity (e.g. audiences being invited to text in comment) may increase this role of audience response in shaping future reporting. However, a recent study found that only 4% of participants had contacted news related websites and that those who did were from a small sub-section of the population in terms of socio-economic status (Wardle et al., 2008).

ⁱⁱⁱ There is a vast body of work in this area ranging from psychological theories about how people relate to risk (e.g. risk is more acceptable if it is voluntary) to theories about how different societies approach risk (e.g. cultures may be 'fatalists' and this will impact on how people within that culture react to risk collectively (e.g. See Beck, 1995, Kasperson, et al., 1988; Douglas and Wildavsky, 1982). This literature is beyond the scope of this review focussed on media but provides an important complementary body of work.

^{iv} Wherever possible this review has highlighted research in the UK. Cultural differences are highlighted by cross-cultural studies of media. For example, that there is a greater emphasis on risk in some countries than others (Rowe et al, 2000) and the risk profile presented in the media varies by country. For example, reactions to GM crops differs between the UK and the US, and detailed studies of particular risk debates highlight different media framings (e.g. health risks associated with farmed salmon were linked, in the UK press to the more general critique of industrialised farming) (Hoijet et al., 2006).