18 Risk communication: the relationships between the media, public beliefs, and policy-making

David Miller and Sally Macintyre

Stirling Media Research Institute, Stirling University and
Director, MRC Medical Sociology Unit, Glasgow University

Introduction

Risk communication is a complex phenomenon which involves a large number of contending and cooperating institutions and corporations, media organizations, and a range of publics and policy, cultural and political outcomes. However, communicating risk is often examined from the vantage point of only one part of the 'circuit of communication' (Miller *et al.* 1998). Thus we find discussions of the mediation of specific risks (either in scientific/ bureaucratic fora or in the press and broadcast media), examinations of 'lay perspectives' or public opinion on risk, or attempts to evaluate risk communication to internal and external audiences of a particular organization. There are also discussions of risk communication in general. Some of the cruder arguments in either of these approaches tend to identify the 'problem' of risk communication as either poor communication skills on the part of experts, media sensationalism and irresponsibility, or public ignorance or hysteria. Such views do seem to have been somewhat discredited in recent years although they retain something of a foothold in academic, public, and policy debate (Miller 1995; Miller and Reilly 1995). Even more sophisticated arguments often tend to deal with differing parts of the circuit of communication in isolation or have unduly one-dimensional perspectives on particular moments in the circuit. We are thinking here of approaches which accept that the media cannot be wished away, but nevertheless tend to see the mass media in predominantly negative terms. Alternatively, some of the more sympathetic approaches to public or lay perceptions also suffer from

an inability to understand the way in which information is assimilated by the public.

Our suggestion is that a wider view of the processes of risk communication is useful. We cannot understand the actual behaviour of experts, the media, or the public in isolation from each other. Instead these need to be examined in the context of their interactions. We suggest that we should look at the communication of public health risks in a more complex fashion, as the product of an interaction between four sets of actors:

1. Social and political institutions (including natural and social scientific research).
2. Media organizations.
3. The public.
4. Decision-makers.

The interaction between these actors constitutes what we call the circuit of communication. Our argument is firstly that each of the different elements of the circuit needs sustained analysis which is sensitive to variation as well as similarity (e.g. not an assumption that media coverage or public opinion is homogenous). There is a need to trace the differing pathways between different elements of the circuit. We need to ask not just what is said by risk communicators or the media or believed by the public, but why. In other words, there is a need to understand the dynamic relations between different elements of the circuit, as well as to study the content of the different moments of the circuit in order to build up a better picture.

If we see the relationship between these elements of the circuit as interactive and dynamic we can begin to understand the way in which issues rise and fall on the public agenda. Public issues emerge when there are political disputes about risk information, very often informed by disputes at the level of science (e.g. BSE, *Salmonella*, HIV/AIDS).

This way of examining risk communication also has a methodological implication, which is that the circuit of communication needs to be examined in a holistic way. Examining only part of the circuit directly runs the risk of over- or underplaying the importance of the area studied, or of other areas. Thus, to examine only public perceptions or the genesis of scientific advice, or the preparation of communication campaigns, misses the relations between the various moments of communication.

The size, scope, and length of issues on the public agenda do not mirror their objective severity measured in terms of human misery or death. But rather than bemoan this fact, it seems more productive to try and understand why this is the case.

Social and political institutions

Without sources of information, there would be no news. Social and political institutions have a fundamental role in risk communication. This is true both in the sense that large bureaucracies produce significant amounts of information every day for use by a wide variety of audiences, (including the mass media), and in the sense that risk communication campaigns can involve direct communication with particular publics through the production of leaflets, posters, and advertizing materials. In both cases there are a number of factors that influence (a) the planning, and (b) the execution of risk communication strategies.

Planning risk communication

There are a number of potential problems in putting together risk communication campaigns.

Science

Getting to grips with the complexity of the science in relation to certain risks is always potentially tricky. Divisions between scientists can make unambiguous statements difficult. In practice there is a system of expert advisory committees but, as the case of BSE shows, the way in which scientific advice is extracted can be subject to claims and counter-claims about the massaging of science (Miller, 1999). It is also clear that the remit of scientific investigations and membership of committees can direct the kinds of answers that are reached (for example, an animal health versus a public health approach to BSE).

Communicating science

Perhaps more importantly, the process of translating scientific advice into official reports, press releases, and health education campaigns is also potentially tricky since it brings all sorts of calculations about communication effectiveness into play. This can work in two ways. First, calculations about what the media or the public might make of particular statements are necessarily involved in risk communication, but this can be at the expense of accuracy, or of denying uncertainty, as in absolute statements between 1990 and 1995 about the lack of risk from BSE. Secondly, calculations about what is politically possible can also impinge on government attempts at risk communication. Perhaps the best known example here is the agonizing in the Department of Health (and wider in government) in 1985–7 about whether explicit AIDS information was politically, as well as medically, desirable (Miller et al. 1998).

Such problems are given greater complexity with the involvement of a wide range of different professionals in the production of risk information. This applies to media relations but can be even more crucial to health education material. For example, in the AIDS campaign a wide range of professional groupings were centrally involved (ministers, administrative civil servants, medical civil servants, information officers, market researchers, advertizers, health educators, expert advisors, etc.). Many of these groups had opposed conceptions of communication planning and effectiveness, as well as differing sensitivities as to what was politically possible. For example, some ministers were concerned about the explicitness of AIDS advertizing (as has been confirmed by the former Chief Medical Officer, Sir Donald Acheson (1992)). Furthermore, professional communicators who favoured fear-arousal campaigns and 'impact' in advertizing often clashed with health educators who favoured sensitivity and recommending positive alternatives to penetrative sex. Government officials and ministers tend to present risk communication as a technical process (Miller *et al.* 1998; Miller 1999). In practice it can involve a complex web of interlocking disputes and alliances, which sometimes results in the communication of messages that, as a result of compromises and political interventions, are contradictory, vague, or contain little useful information and with which none of those involved are satisfied (Miller *et al.* 1998). Similar professional conflicts have also been noted in the somewhat less politically sensitive area of communication on coronary heart disease (Farrant and Russell 1986).

Executing risk communication strategies

Once the message is agreed, there are all sorts of further obstacles to surmount. These include competition with opposing interests in government, as well as with the wide range of other perspectives on offer in the media, and cooperation with other interests and the formation of alliances

Competition within government

Risk communication strategies may be hampered by conflicting interests inside government, either within or between departments. This is especially the case if such interests 'go public' even in the minimal sense of 'off the record briefings'. We can point to the controversy over *Salmonella* enteritidis PT4 in 1988–1989 as such a case. This is not only important in that it indicates conflict in government, but because this in itself will become an added reason for media interest.

Competition with other interests

The strategies formulated by social institutions for influencing the media

and decision-making are forced to compete with those of other organizations (whether they be scientific establishments, government departments, business ventures, or pressure groups). This is important for two reasons. First, there can be a wide range of information available to the public with which risk communication activities have to compete. Health educators sometimes refer to this as 'background noise' to their own campaigns. But given the large amounts of money spent on commercial advertizing and the omnipresence of the news and entertainment media, the converse is more accurate. Furthermore, there is a variety of organizations engaged in risk communication, which may have diverging reasons for and interests in managing risk (e.g. to protect corporate reputation, increase sales, further campaigning demands, etc.). This is an inevitable part of our culture, and there is no intrinsic reason why information emanating from government should be believed above that provided by competing interests. One implication of this is that government is itself a player in competition for media space and public sympathy, rather than a neutral arbiter.

Cooperation

Cooperation and the building of coalitions are also important in that a broad consensus in a particular policy arena makes risk communication much more likely to succeed. The coalition built around public health interests on AIDS in 1985–1989 is a key example of such effective cooperation (Miller *et al.* 1998).

The consequence of the discussion in this section is to suggest that many of the problems of risk communication are not simply attributable to the poor communicative skills of officials (although these exist), the reporting of the media, or public response. Instead, we would want to argue that sometimes these problems are attributable to government actions. However, it is in the context of the interaction of government with the other actors set out here that risk communication has its impact.

Media organizations

Much discussion of risk communication tends to see the role of the media as a predominantly negative one. 'The media' are dismissed as an homogeneous bloc whose penchant for sensation and irresponsibility is an obstacle to rational risk communication. We would suggest that the media are neither uniform nor consistently negative. This latter point can be made in relation to both the particular interests of risk communicators in having their messages carried and in relation to the democratic role of the media.

Media institutions do pursue readers with a variety of crude and not so crude techniques. However, there are clear differences in the types of material that appear both within and between media. For example, specialist correspondents have a distinctive role on both broadsheet and mid-market tabloid papers. Medical and scientific reporters tend to be very knowledgeable about their areas of responsibility. This can mean both that they adopt an advocate role for key sources in the medical and scientific community and that they can spot news management activities by their sources more quickly than their non-specialist colleagues. Accordingly, their coverage will tend to differ from that of freelances or of political correspondents who are drafted in when the story becomes a bigger public issue. On occasions, specialists can be regarded as performing a positive role for the risk communicator. This role might also (coincidentally) be regarded as positive for the public interest. One key area in which the bulk of the broadcast media and many newspapers (especially their specialists in medicine, science, and health) operated in a positive way from the point of view of government risk communicators was AIDS. Here the official message on heterosexual transmission was overwhelmingly supported (notwithstanding an active campaign against this by some newspapers) by the bulk of the media (especially broadcasting) and was very effective in convincing the public (Miller et al. 1998).

However, the public interest and the interest of the risk communicator are not always the same thing and there may be occasions where specialist reporters are perceived as promoting the sectional interests of their sources. Mediating such issues is the editorial hierarchy, which can on occasion result in conflict between the editorial priorities of the paper and those of the specialist.

Science tends to make front-page news when scientific advances are made or disputes in science emerge. However, stories on risk rarely become major public issues, dominating headlines for days or weeks unless they involve 'matters of state'—that is major political involvement. This can be seen by comparing the profile of coronary heart disease (CHD) with food safety, remembering that CHD kills many more people each year than food poisoning. Between January 1988 and the end of 1992 BBC television network news broadcast 128 items on food safety and between 1973 and 1991 food safety stories made the front page of the Times and Sunday Times 90 times. By contrast, CHD appeared only 25 times on BBC TV news and on the front page of the Times and Sunday Times on only ten occasions (Macintyre et al. 1999).

It is now commonplace for sections of the news media to report on the real and perceived motives of government communication, as in the fixation on 'spin doctors'. Here perceived divisions or excessive secrecy within

government departments are very important. In the case of Patulin in apple juice, secrecy was a key element in the 'news value' of the story. There were a total of 41 items in the British national press on Patulin. Thirty of these were chiefly about government secrecy. In relation to *Salmonella* infection in 1988–1989 the key issue was the perceived division between MAFF and the Department of Health.

News values across the media tend to attach a high importance to controversy, division within government or between the experts, and secrecy. Plainly this is all rather galling to the prospective risk communicator, who may have little control over the wider environment within which s/he is situated. It can also be argued that the importance attached to such news values inhibits rational discussion of the communication of risk. However, there are two points that can be made here in relation to the public interest. First the self-interested pursuit of such news values as a means to maximize audiences may sometimes coincide with the public interest in making government more transparent, even if in an unintentional, distorted, or sensationalist way. Secondly, notwithstanding the pressures of the market and the tendency towards commercialism, some sections of the media retain something of a public service ethos, which may at times be helpful to government as well as on occasion obstructing its risk communication activities. However, it is clearly possible for there to be conflicting assessments of the role of the media. From the point of view of some risk communicators much media treatment of BSE in 1996 was irresponsible. However, it could equally be argued that pointing up the apparent contradiction between previous and present ministerial statements on the risks of BSE represented not so much media misbehaviour, as previous risk communication mistakes coming back to haunt the present.

We can conclude this section by noting the close interaction of the media with their sources in the production of news.

The public

Sources of belief

In risk analysis 'scientific' knowledge or belief is often counterposed with public or 'lay' knowledge or belief. More often the terminology used is 'scientific fact' versus public 'perception'. The problem is then located as a lack of public knowledge or understanding. This is due in some versions to 'human intellectual limitations' (Covello 1983). Curiously though, scientists, social scientists, and risk analysts (or sometimes just 'experts') are not thought to be subject to such limitations. As is clear from the rest of this

volume, this type of public deficit approach has been increasingly discredited in recent years and it is certainly not supported by our own research work (Kitzinger 1990, 1993; Miller *et al.* 1998; Macintyre *et al.* 1998).

Public views are not formed from thin air. Equally they are not simply dictated by the media or ministerial pronouncements or by lay 'perspectives' or 'cultures'. Judgements are made according to the information available from the media, education, friends and family, and other sources and evaluated against previous experience and information. Experience is patterned by class, ethnicity, gender, nationality, region, and age, as well as by personal experience, and evaluated by means of logical processes. It is misleading to try to redeem public perceptions as rational without an analysis of how and why people make judgements. Trust in government is not a stable or uniform filter through which new information is strained, but varies. Although polls show trust in government as low, in fact there are times when people (even those who say they distrust the government or the media) do believe what the government tells them. It seems likely that trust is related to the specifics of the information content and the other sources that make it credible. The extent to which political disputes about risk are at the centre of public debate is important here. We can compare the public response to AIDS and BSE in this context. The significant loss of public trust over BSE was not paralleled in the case of AIDS, where a significant consensus developed that HIV was a serious threat to heterosexuals and where discrimination against so called 'high-risk groups' was discouraged. Both of these messages were widely accepted by the public. Stated trust in government may, therefore, not be a reliable indicator of public belief and response. An example from our research on food scares might illustrate the point. The respondent started by saying she didn't know much about *Salmonella* but then proceeded to rattle off the official advice about cooking eggs. When asked how she knew, she responded:

> 'I don't know really, I suppose it just seems like common sense. But ...
> I must have got it from somewhere ... I suppose I picked up a lot of things
> from the magazines that I read and there were a lot of people saying things
> on TV about how to cook eggs ... Isn't that funny, I just thought I'd always
> done that naturally' (Macintyre *et al.*, in press).

Public views are formed from a melange of influences. The media are certainly important here, but other factors also intervene in the process of opinion formation. Media information is evaluated against personal experience, according to processes of logic and against alternative information. This means that those approaches that attempt to analyse risk perception in terms of psychological tendencies such as 'optimistic bias' tend to overestimate the significance of 'public factors' in risk communication.

There is a need to examine where information and ideas come from and how these are processed, rather than assuming that events in the world are transparently available to human perception. Equally, some approaches that focus on 'lay perspectives' tend not to examine them in the context of the circulation of information and values in society. Approaches of this kind can tend towards the pessimistic in concluding that risk communication could not be much improved.

Listening to the public

One consequence of our argument for practical improvements to risk communication is the increasing involvement of the public in setting priorities for risk management and communication. This type of procedure has already been codified in government policy in relation to the NHS aim of listening to 'local voices' (NHS Management Executive 1992) and is being tried in other areas of policy. Citizens' juries, consumer panels, consensus conferences, and their ilk are all ways of trying to incorporate public views and concerns into policy-making (and have recently been tried out in the field of 'the new genetics' and human health). Such approaches could also usefully be taken in relation to risk communication. However, there is a need to be clear about the reasons and rationale for such approaches. There is a danger that they can be used as a means of reaching and justifying a preconceived end, as has been alleged in relation to health care decisions, rather than as an open ended means of incorporating public views into decision-making (for a discussion, see Miller and Philo 1995).

Decision-makers

The media have a clear, indirect influence on policy-making in that they can influence public beliefs and behaviour to which decision-makers then have to respond. The clearest examples are the changes in purchasing behaviour following media coverage. We are thinking here of the effect of the *Salmonella* and BSE crises in prompting a sharp drop in egg and beef sales. But we can also think of changes in behaviour over the longer term which have been intentionally prompted by government risk communication, such as the increase in sales of semi-skimmed milk and the decrease in consumption of sugar from the bowl, that were prompted by health education advice on the risks of dietary fats and sugars. Public opinion (or crucially *perceptions* of public opinion) can drive policy and decision-making and nudge decision-makers or ministers into decisions they would not otherwise

have made, e.g. in the response to media coverage of shoddy slaughterhouse practice that had been ignored when raised privately by environmental health officers (Miller 1999). But policy-makers do ignore public concern on some issues, particularly if opposition is not mobilized.

Risk communicators, scientists, decision-makers, and other policy actors are members of the general public and themselves routinely consume media representations. However, the media do not just communicate with the public en masse; information is targeted by both risk communicators and journalists. There is a sense in which much political debate in the media is debate between elites, to which the rest of the public can listen in if it wishes. But there are stories in the media that are intended by those who disclose them to reach very small numbers of people, such as senior members of a particular government committee or a particular permanent secretary. Thinking about the media in this way should make it apparent that the media can play an intimate and direct role in policy-making. Moreover, policy-makers and experts have differing interests in media coverage that can have different influences on different areas. There are a number of occasions in recent history where proposed cut-backs and redundancies in scientific funding or in the staffing of government bodies have been put on hold or reversed following news coverage of particular risks (e.g. issues such as AIDS and the 'flesh-eating bug', both of which had consequences for risk assessment and surveillance personnel at, for example, the Public Health Laboratory Service). Holding onto staff who would otherwise have been made redundant can even occur when the organization has done its best to play down the significance of a particular scare, such as in the case of the flesh-eating bug.

The resolution of public issues

Public issues decline when there is some sort of resolution of the perceived problem in the public arena. This does not mean that the problem itself is necessarily addressed, simply that the contradictions which made the story news are resolved. Thus, in relation to *Salmonella*, the departure of Edwina Currie and the compensation granted to producers, together with a reorientation in the media which blamed consumers rather than producers, killed the story. *Salmonella* Enteritidis PT4 poisoning, however, has continued to rise. By contrast, the first emergence of BSE as a public issue in 1990 was only partially resolved with the result that it returned to the public agenda periodically between 1990 and 1995, and then spectacularly in March 1996.

Concluding remarks

At the methodological level, risk communication research needs to do more than simply examine the media or the public. It needs to examine the activities of all the actors engaged in the circuit of risk communication and crucially the relations between them. At present there is a rather heavy concentration on investigating public 'perceptions', 'attitudes', or 'perspectives'. This needs to be complemented by a much greater investment in the other parts of the circuit and in examining the relations between public beliefs and the rest of the circuit of communication. One of the most neglected areas of research in our view is the process by which risk communication campaigns are planned and executed. It seems to us that this would repay serious investigation by social scientists.

How risks are communicated depends on the relationships between the four sets of actors outlined in this paper, and not on the objective severity of any given risk. The relationship is unstable and in flux, so it is not possible to predict exactly which risks will be taken up on the public agenda and given extensive exposure. Nor are public reactions straightforwardly predictable. However, it is possible to understand the factors that lead to the emergence and decline of particular types of issue. This means that some measure of 'foresight' may be attainable. Furthermore, given that there are identifiable factors that influence the emergence of public issues, it is possible, though likely to be very difficult, to change the ways in which science, policy, the media, and the public interact.

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