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The Battle for Hearts and Minds? Evolutions in Organisational Approaches to Environmental Risk Communication

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Abstract

In recent years there has been a great deal of discussion on the potential for a shift away from modernistic or technocratic approaches to decision-making on risk towards more open, inclusive and deliberative approaches. This paper adopts an approach which analyses not the social but the private costs and benefits of such a transition, and the influence that various institutional factors such as the presence of trust amongst stakeholders can have on these. With these factors in mind, the paper considers the reasons why some organisations have taken the first step in this transition by exploring the potential of what the paper terms more communicative approaches to environmental risk management. It then goes on to evaluate the early experiences with such approaches. The analysis finds that at the organisational level the pros and cons of opening up and engaging are quite finely balanced. For the organisations surveyed, the nature of their activities, the significance of formative events and the failure of more traditional forms of risk communication impelled them to experiment with new approaches to risk communication. Such experiments had mixed effects – in some contexts they enhanced the legitimacy of the organisations and built trust amongst stakeholders, whilst in others they did the opposite. The paper concludes by suggesting that in the long run a broader opening up of decision-making processes may result in what might be termed a reverse Pyrrhic victory: in some cases battles will be lost, but in the long run the war will be won.

Introduction

Opening up decision-making processes to external scrutiny or wider public involvement is a recurrent theme within broader debates on issues such as modernising government, rethinking regulation and changing the context for corporate governance. Calls for more open and inclusive approaches to decision-making stem particularly from the fact that the scientific and technical evidence and opinion used to support particular decisions is often contested by different social groups, particularly where the assessments include an element of uncertainty. The results of science-based risk assessments tend to be greeted with scepticism or antagonism where they are perceived to reflect the ‘worldview’ of the assessors or the objectives of the developers rather than the concerns of the public or other stakeholders that might be affected by the risk in question (Todt 2003).

This introduces important issues relating to the wider context for risk management. If, as commentators such as Giddens (1990) or Beck (1992) have suggested, modern society is increasingly anxious about the risks associated with continued industrial development and sceptical about the ability of government and industry to recognise and manage these risks, can organisations make decisions on their future activities in a way that will reflect the concerns and retain the confidence of their stakeholders? If so, how should they approach the decision-making process as it relates to the assessment and management of risk? Numerous research projects and policy documents have argued that the best way to do this is to open up the risk assessment and management process to greater public scrutiny and to wider public involvement (see for example ESRC/GEC 2000, Glicken 2000, Irwin 1995, Jones 2002, Krücken 1997, Owens 2000).

However, the implications of more open and participatory approaches to decision-making are themselves hotly debated. Despite the possible social benefits, the actors who are being asked to open up and engage sometimes claim that requirements for inclusion are likely to create decision-making processes that are costly and time-consuming, and that may not lead to a competent decision. Instead, they argue that they may lead to conflict, as hostile stakeholders gain access to information and influence, and to compromise, as decision-makers seek to balance the competing concerns of a diverse range of stakeholders. Thus, there seems to be some mismatch between the projected social benefits of more open and inclusive approaches to decision-making and the associated private costs.

Although these concerns have been voiced for some years now, to date the implications of more open and inclusive approaches to risk management remain scantily researched and poorly understood. This is mainly because such changes have yet to be widely adopted in many countries. One exception to this relates to the management of certain environmental risks. In this area, some regions and countries have introduced a variety of requirements that have been designed to ensure that the risk assessment process is made more inclusive and the risk management process and its outcomes made more transparent. Thus, participatory forms have – with considerable range and variation – started to be adopted, which means that it is possible today to gain knowledge from these experiences.

Empirically, the paper presents findings from a study of six organisations in Britain and Sweden. The cases selected consist of organisations that deal with complex risks and have developed pro-active risk communication programmes. Thus, the paper responds to Spash's (2001: 478) recent call for empirical research into the context within which deliberative and inclusive processes can operate effectively by evaluating the practical experience of more inclusive approaches to risk management. To do this, an approach is adopted which combines perspectives from sociology and management with aspects of new institutional economics (see Hodgson 1988; North 1990), it considers the institutional basis for more open communication between organisations and their stakeholders, and the degree to which the costs and benefits of such forms of communication, as perceived by the managers of those organisations, shape behaviour over time. In so doing, the analysis considers how feedback from one period is likely to shape behaviour in the next. This is useful because the paper is concerned with the question of whether early experiences with more open or communicative approaches might encourage organisations to move further toward more deliberative approaches in the future.

The paper comprises five parts, this introduction being the first. The second part discusses changes in risk communication theory, as well as changes in legislation and policy-making

which also emphasise the right for the public to access information and to get involved in decision-making processes. In the third part, six organisations' views on and experiences with more open approaches to risk communication are analysed. In the fourth part of the paper, the empirical results are discussed and in the fifth and concluding part some tentative conclusions are drawn concerning the character, role and importance of more inclusive approaches to risk management and risk communication.

Conceptual Discussion

The Modernistic Framework for Risk Management and Communication

During the last three decades or so we have witnessed massive structural changes in society, where cultural and economical forces have restructured the fabric of social life (Beck 1992, Giddens 1990, Hobsbawn 1994, Irwin 1995, Young 1999). A transition from modernity to late modernity has taken place, where the ground rules of certainty have become contested and debated. Through processes of de-traditionalisation, individualisation and reflexivity, old beliefs, values and institutions are being challenged.

This has great consequences for risk management and communication, because the traditional risk concepts have been developed within a modernistic framework. Within this framework, risk is technically defined. It means to anticipate potential physical (or social or economic) harm to human beings, cultural artifacts and ecosystems, to average these events over time and space, and to use relative frequencies (observed or modelled) as a means to specify probabilities (Renn 1998a: 53). The measurement of risk is therefore possible through science. As the superior source of knowledge, the modernistic framework holds that the experts and their view on risk should guide the risk management process. However, counter to this approach, risk regulators and others responsible for the management of risk have gradually recognised that the public's perception of risk was very different from the view held by the experts.

The modernistic solution to this clash between experts' and lay peoples' views on risk was risk communication as social resistance tended to be understood as a result of lack of knowledge on the side of the citizen (Irwin & Wynne 1996, Levinson & Thomas 1997). By informing – and sometimes even educating – them about the 'real' risk, there was a belief that the public would correct their judgment and accept risks that experts and regulators had found to be acceptable. However, when companies and agencies started to communicate about risks, it became clear that the public was anything but a homogenous category and that it had divergent views on risks. As a result, risk communication had to contend with the complexities of risk perception.

Much psychological and sociological research has during the past 30 years been devoted to finding out how different groups and individuals perceive risks (for an overview, see Gutteling & Wiegman 1996, Renn 1998b). It is found that factors such as novelty (how new a risk is), dread (how feared the risk is), and if the cause of the risk is seen as something that is tampering with nature, are significant factors shaping risk perception (Sjöberg 2000, Slovic 1987). Perceived influence and power are also important factors, as is cultural belonging, which explains why actors from social groups that are often represented in the decision-making process (ie white middle-class men) often have different views from those that are less frequently represented (Finucane, Slovic & Mertz 2000; Dake 1992, Douglas & Wildavsky 1983, Slovic & Peters 1998). Lastly, there is a growing emphasis on the

importance of the specific situation in which people make judgments, implying that there might not be a uniform concept of risk in people's mind, but rather that context is important (Brehmer 1987, Brown 1988, Freudenburg 1992, Otway & Wynne 1989, Palmer 1996).

Thus, we can see that the modernistic framework and its understanding of risk creates a particular view of risk management and risk communication. Risk management is something to be guided by objective analysis, while at its core risk communication is about the distribution/transmission of factual knowledge to the public. To make risk communication effective, it is important to understand how different segments of the public understand risks to be able to effectively inform them about risks.

A New Framework for Risk Management and Communication

In recent decades, a number of social theories have emerged which focus on the restructuring of society. One of the most well-known is Ulrich Beck's theory on reflexive modernisation (Beck 1992). According to him, science was initially applied to a 'given' world of nature, people and society, and scientific scepticism de-mystified the social and natural worlds. However, science's own claim of rationality was itself spared from the application of scientific scepticism. According to Beck, a process of 'reflexive scientisation' is gradually replacing this former view. To emphasise the reflexive character of science means that scientific scepticism is extended to consider the inherent foundations and external consequences of science itself. A process of de-mystification and de-traditionalisation of science is then started, which involves introducing historical consciousness to the understanding of science. This de-mystification opens up new possibilities for questioning science and its foundations of rationality. The unbinding of scepticism under the condition of reflexive scientisation means that no scientific statement is 'true' in the old sense, that is where there is an unquestionable, eternal truth, where 'to know' means to be certain (cf. also Giddens 1990: 40, 1994).

Such sociological insights are of great relevance to discussions on risk communication. In many settings, it is apparent that a tendency has arisen among the public to question – at least partially – science-based risk assessment (Todt 1993). This has happened because science is no longer clearly demarcated from other social practices. Indeed, a number of studies emphasise that knowledge production and risk assessment have become more inclusive (Gibbons et al. 1994, Nowotny et al. 2000, Funtowics & Ravetz 1990). Broader trends in both society and science – not least the rapidly increasing of level of education – have created more open systems of knowledge production, where stakeholders are involved, not only for democratic reasons but also so that they can enrich the process of knowledge production. This process does not only imply an increase in the number of participants, it also affects the setting of research priorities and the emergence of new criteria for evaluating science such as transparency, communication, dialogue and inclusion.

Together with the tendencies of individualisation and de-traditionalisation of modern society, this constitutes a radical new condition for risk management and risk communication (Jones 2002). The opportunity structure for action has changed. To a large extent, all organisations have to create credibility in a situation characterised by contingency, complexity and uncertainty. When the public sees science as having no privileged access to truth (Giddens 1994, Yearley 1991) and risk assessment as resting on many questionable conventions, a space is opened up for discursively defining risk. Instead of making a clear distinction between objective and subjective risk, therefore, there exist a number of actors with different

understanding of risk, all claiming that their understanding is superior or more legitimate. This situation attaches a new meaning to risk communication.

To become relevant in this new situation, it is reasonable to believe that risk communication should not be organised as a discrete activity, separated from risk assessment and risk management and aiming at a one-way transfer of knowledge from the company to the public as under the modernistic model discussed above. Instead, risk communication is to be seen as a long-term framework for maintaining and strengthening the profile of the company or its products, creating trust within its stakeholders and the local community and preventing processes that generate bad-will from emerging. Thus, inclusion, participation, deliberation and transparency seem to be key words.

The Policy Relevance of Emerging Debates on Risk Communication

Within the realms of social scientific risk research, there seems to be a consensus that greater involvement by non-experts in risk assessment, management and communication processes is needed (Belzer 2001, Freudenberg 2001, Owens 2000, Renn 2001, Sjöberg 2001, Spash 2001). However, as recent policy developments relating to the environment at the international, European and national levels suggest, these views are not confined to the realms of theory. At the international level, the United Nations Economic Commission for Europe (UNECE, 1998) has recently adopted a convention which states that:

In order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being, each Party shall guarantee the rights of access to information, public participation in decision-making, and access to justice in environmental matters in accordance with the provisions of this Convention.

Similarly, the recent European Union white paper on governance (EC 2001: 11) emphasises the importance that citizens get more involved in the policy process:

The need to increase transparency and bring Community policy closer to the citizen is well recognized. Regular, accurate information on Community policy is essential in order to increase public trust. As well as helping citizens to feel more involved, such information also allows the public to influence policy being made in their name.

At the national level, influential bodies such as the UK Royal Commission on Environmental Pollution (RCEP) have expressed strong support for more open and inclusive decision-making processes in the field of the environment. Indeed, in its report on environmental standard setting, the RCEP stated (1998) that the public's trust in governmental and industrial standard setting on the environment had been eroded and that:

Better ways need to be developed for ensuring that social values are reflected in what have tended to be relatively technocratic decision-making procedures; that decision-making processes should attempt to recognise the different perceptions of different social groups, the meaning that different risks have for them and their views on the tolerability of different risks; and that the public should be involved in the formulation of strategies and in the framing of the questions to be addressed by scientific analysis rather than merely being consulted on proposals that have already been drafted, analysis that has already been completed or even on decisions that have already been taken.

Thus, there seems to be a trend – at least rhetorically – for moving beyond the old dichotomies of objective vs. subjective risk and expert vs. lay knowledge in risk assessment and management. Instead, more open and integrated approaches to risk assessment and risk

communication are suggested, and new relationships between experts and lay people are required.

While this might be taken to imply that there will be a shift from technocratic to deliberative decision-making procedures, as Oxley Green and Hunton-Clarke (2003) and numerous other authors before them have recognised, it may be that there is not so much a switch from one approach to another but a phased transition between the two. If so, then decision-making processes may become gradually more open, inclusive and deliberative over time. However, practice in this field is still relatively immature, and the implications of such a process of opening up have not been evaluated. Focusing on the roles that might be played by organisations in the public and private sectors, the next section of this paper seeks to provide information on this issue.

The Empirical Study

Extending through 2002 to early 2004, empirical investigations took place which were based on semi-structured interviews with six case study organisations, three from Britain and three from Sweden. These organisations were selected for two reasons: first, because their activities involve managing complex risks with a significant environmental dimension that has been the focus of controversy and contestation; and second, because they have attempted to develop pro-active risk communication programmes based on open dialogue with their stakeholders. From this perspective, they are relatively unusual and may be seen as ‘front-runners’ with experiences that will be of much greater relevance when new requirements for more open and inclusive approaches to risk-related decision-making take effect.

The cases differ in the sense that they belong to different sectors (petrochemical production, waste management and transport infrastructure production), the degree to which public participation programs have been conducted and the extent to which the operations of the companies are trusted by the public. Four of the six cases (BP Grangemouth, Huntsman Chemicals, SKB and Casco Products) are private companies, one (London Waste) is a private company jointly owned by the public and private sectors and the sixth (The Swedish Railroad Administration) is a public agency. We have chosen to include the sixth case even though it is a public agency because in recent years it has experienced a great loss in legitimacy that made it develop an ambitious risk communication programme. Also, the organisation and activities of the agency are very similar to those of a company. In slightly more detail, the organisations that have been studied are the following:

The Swedish railroad administration (Banverket) is a public agency with 6,400 people employed. The agency is responsible for construction of rails roads in Sweden. In autumn of 1997, it was responsible for the single biggest environmental catastrophe, with regard to media attention, in Swedish history (Boholm 2000, Lidskog 2001). When constructing a tunnel through the Hallandsås ridge, it used the chemical Rohca Gil, composed of acrylamide. This substance did not polymerise but leaked into the fresh water, badly affecting animals and the agricultural activities in the area. This event triggered the agency’s work with risk communication.

The Swedish Nuclear Waste Company (SKB) is jointly owned by the nuclear power companies, and 160 people are employed. The company is responsible for the management of radioactive waste (low, intermediate and high level wastes). In its work to find a suitable place for the high-level waste, it has experienced strong public outrage as well as relaxed

relations with the local population. Since 1992, it has gradually developed programmes for risk communication and public participation.

Casco Products is a company owned by the transnational company Akzo Nobel. Casco employs 2,300 people and operates in the field of impregnated papers, adhesives, polymers, expandable microspheres and calcium carbide. It has established seven goals, one of which is responsible care for health, safety and the environment and another is openness, cooperation and respect. In our contact with the Swedish trade association for the manufacturers and suppliers of chemicals, Akzo Nobel was pinpointed as one of its forerunners with regard to risk communication and its active participation in the 'Responsible care' programme. In our contacts with Akzo Nobel, they identified Casco Products as a relevant case for us to study.

BP Grangemouth is a major petrochemicals complex owned by BP which creates direct employment for 2,000 people on a 700 hectare site in the East of Scotland. The site receives oil and gas from the North Sea, and combines a refinery and a petrochemicals plant that makes a wide range of oil-based products. Site managers have sought to adopt pro-active approaches to risk management, environmental reporting and stakeholder engagement for around a decade. However, two major incidents in June 2000, which led to the imposition of a £1 million fine in January 2002, have placed great strain upon the relationship between the site's management and the local community.

London Waste runs a major waste-to-energy incinerator in North London. Jointly owned by seven local authorities and a private waste management firm, it takes waste from around 1.5m people and generates 35MW of energy. As such, it is the largest waste incinerator in the UK. After four years of planning, consultation and pro-active engagement with stakeholders, recent proposals to extend the capacity of the incinerator were rejected by national government on political grounds, even after they had been approved by the planning authorities and the Environment Agency. The site has been the focus of a sustained Greenpeace campaign against incineration which is largely based on concerns about dioxin emissions.

Huntsman Petro-Chemicals Teesside is part of a family-owned, American chemicals firm. Employing 1,000 people directly, the Teesside operations manufacture a wide range of chemicals that are feedstocks for other companies and their chemical processes. Whenever the plant is shut down for maintenance, the site generates highly visible and noisy flares. These have been a source of local concern and complaints in the past, and the company felt that such controversies damaged its reputation. Consequently, for the last plant shut-down, the company adopted a pro-active communications programme to ensure that information on its activities reached all of its local stakeholders. This reduced the number of complaints dramatically and was seen by the company, the regulators and some community groups to be an example of good practice.

The interviews were conducted with representatives that were responsible for health, safety and environment and corporate communications/stakeholder liaison. In seeking to examine the ways in which perceptions and practices in the fields of risk management and communication have evolved, the interviews were thematically structured around three questions in the evolution of new approaches to risk communication:

- What perceptions do risk managers within the organisations studied have of the changing context for risk management and of associated public perceptions?

- What perspectives do they have on the reasons for and against the adoption of more open and inclusive approaches to risk communication?
- What have been their early experiences with the adoption of such approaches and do they plan to go further by exploring the application of more deliberative approaches?

The data upon which the empirical analysis below is based was drawn from elite interviews, which implies that the interviews might have been seen by the interviewees as a strategic event. Thus, the issue of validity is central; have the respondents given their view of the companies risk communication programmes, the view that they wish to spread to external actors or the view that they believe the interviewer would find appropriate? Evidently, there is no simple way to establish validity in this kind of empirical material. However, as interviewers we understood in advance that we were going to conduct elite interviews, and that this means that we tried to approach the three questions from different angles.

Obviously, when conducting comparative case-based research, great attention has to be paid to the different regulatory regimes that surround the companies as the political cultures in Britain and Sweden differ in some important respects. However, the purpose of the empirical study is not to compare the cases as such, but to take a first step in evaluating the practical experience that organisations have when they attempt to engage with their stakeholders and enter into dialogue on issues relating to environmental risk. With this objective, the discussion below draws out key trends and begins to relate them back to the conceptual arguments outlined above.

Perceptions of the Changing Context for Risk Management

When asked about their own perceptions of risk, it became clear that the managers of the different organisations saw risk to be a complex combination of ‘real’ elements that were amenable to assessment and management within the organisation, and ‘perceived’ elements that were shaped by a wider range of social processes. Although aspects of the modernistic approach described above remained – for example there was a strong belief that many ‘real’ risks could be effectively managed through technical assessments and technological and managerial solutions – there was also an acknowledgement that technical risk management approaches needed to be ‘softened’ so that they were seen to fit with emerging agendas and changing public perceptions. Hence, the need for new (or at least slightly altered) approaches to risk management and communication had clearly started to enter into the consciousness of the risk managers.

Despite their recognition that they needed to adopt more open and inclusive approaches, there was a strong sense that the managers would have been happier if they had been able to continue with a technical approach to risk management and an education-based approach to risk communication. Indeed, commonly there was a degree of bemusement and frustration that the broader public did not share what they saw to be their objective understanding of the evidence or their faith in the efficacy of technical approaches to risk management. There was also a perception that engagement with other actors would lead to some loss of autonomy, enabling stakeholders with poorly supported or even irrational perceptions of risk to gain greater influence in the decision-making process. There were also doubts about the democratic value of opening up as the companies had no way of evaluating whether those stakeholders who got involved represented larger segments of the public or only vocal

minorities. Thus, despite their recognition of the need for change, there was also some reluctance to move beyond education-based approaches to risk communication.

This inertia had been overcome in all of the organisations included in the study, but to differing degrees and for a combination of different reasons. In some, sustained social concern and stakeholder pressure had gradually led the managers to the realisation that education-based approaches to risk communication had failed to convince the public that their existing or planned operations were safe. In others, the realisation that existing approaches were no longer tenable came after major incidents or events or when they needed to gain public support for proposed activities. In either case, interest in new approaches to risk management and communication was triggered by a perceived lack of legitimacy.

In the case of SKB, for example, the company had realised that risk perceptions were based on issues of an existential nature that involved ideology, values and personal experience. Traditional approaches to risk communication had done little to address these issues, and public anxiety about and, in some cases, antagonism towards their activities remained. In the case of BP, a policy of openness had been adopted at the corporate level in the early 1990s in an attempt to enhance its reputation and to maintain its 'license to operate'. Indeed, a strong reputation for social and environmental responsibility was thought to be necessary if BP was to be seen as the 'partner of first resort' when decisions were being taken on whether to allow risky and contentious activities to take place in sensitive areas. Recognising that traditional modes of communication may not build such a reputation, at times the company had actively sought to engage its stakeholders in open dialogue on matters relating to environmental risk. As well as illustrating the relevance of new approaches to risk communication, these cases lend support to Gunningham and Sinclair's (2002: 164) notion of a 'social license' where society is somehow able to grant or withhold 'permission' for corporate activities.

Thus, we can say that managerial perceptions of risk had changed, and that when faced with sustained social pressure, the companies were forced to let go of modernistic approaches to risk management and to engage with and talk to actors whose concerns they may previously have either ignored, dismissed or subjected to education-based approaches to risk communication. We can also say that this process of transition was not always an easy one as it implied abandoning some of the certainties associated with objective evidence based decision-making, and engaging in discursive struggles with actors who, without recourse to evidence, had some ability to challenge their authority and question their legitimacy.

The Motives for and Against the Adoption of More Open and Inclusive Approaches

Having decided that there was a need to explore the potential of new approaches to risk communication, there was some uncertainty amongst the managers about who to engage with and on what basis. A common concern was that they tended to encounter a range of groups and individuals, each claiming to speak on behalf of a different constituency. In the case of Casco for example, customers and competing industries were identified as main stakeholders and these were seen as the most important partners in discussing environmental risks. However, since stakeholder involvement and dialogue were not identified as issues to be addressed at a higher managerial level, potential conflicts were to be solved through interaction between the company and its stakeholders at the local level.

More generally, most managers expressed some suspicion that the most active and vocal members of the public only presented the views of a minority of the community, and that the

majority of the public either did not feel strongly enough about the issues to mobilise or felt that their opportunities to engage had been crowded out by the activists. In response, some of the managers chose to focus their attentions on what they took to be the most significant or the most legitimate or in some cases just reasonable public interest groups, for example by developing links with the local community groups that were most directly affected by their operations. In contrast, other managers recognised that it was important to engage with and talk to the broader range of actors, and with this in mind they actively sought out groups that had not mobilised or that were not so vocal. Aside from the broader public, the companies generally sought to engage and to build good working relations with other authorities such as local authorities, regulatory agencies and local or national rescue services.

In some instances, legislation had created the structures through which the organisations could engage with their stakeholders. For example, frameworks for environmental impact assessment established a basis for dialogue and debate on the prospective impacts of new developments. They also assigned roles and responsibilities and, as they were normally controlled by public authorities, they established a basis for mediation between the competing interest groups. However, as has been widely discussed, the legitimacy of these processes and their outcomes is not universally accepted (see for example Wood 1995). In the case of London Waste for example, Greenpeace suggested that decisions on the future of waste incineration should not be taken on a case-by-case basis at the local level, but at a strategic level by national government. By politicising the case and making it an issue of national precedent, it could be argued that Greenpeace, and other interests, succeeded in blocking the development proposed by London Waste.

While legislation sometimes created the institutions for engagement between the organisations and their stakeholders, in other instances the institutions needed to facilitate engagement were entirely absent. While some of the managers had attempted to create different fora for engagement, for example by establishing community liaison groups or holding open days, they were aware that some of their stakeholders saw these not as an opportunity for meaningful dialogue but as an opportunity for the organisations to attempt to convince them of the legitimacy of their actions by issuing information on their own terms. To a lesser degree, the same was true for those fora that had been created by government or regulatory agencies. However, where institutions for open engagement had emerged 'organically' on the basis of informal interactions between the different interests, the institutions tended to have broader support, as had those that had been instituted by the community.

Whatever the institutional context for engagement and dialogue, the managers were aware that information on complex risks can be difficult to communicate, particularly to a broad range of stakeholders with different interests and concerns. As a result, some of them were concerned that information could be taken out of context and misinterpreted or misapplied. More broadly, tensions between the responsibilities of the organisations and the expectations of their stakeholders were apparent. Perhaps naturally, the managers were concerned only with the risks for which they were directly responsible. However, they also acknowledged that some of their stakeholders viewed these risks as being connected to or somehow even symptomatic of broader trends in modern industrial life. Thus, the worldviews of the risk managers and their stakeholders were incommensurate: the risk managers adopted a reductionist and managerialist approach, whilst the stakeholders adopted a much more holistic or systemic view.

As a result of these different perspectives, the managers felt that by opening up they might in some way be held accountable for some of the broader range of issues that gave rise to social concerns or anxieties about risk. In other words, by taking responsibility for the risks that their organisations did generate, the managers were afraid that they would have to take the blame for risks that were not entirely their responsibility. This phenomena – described by some as the ‘lightening rod’ effect - was particularly apparent in the case of BP Grangemouth. Within the larger cluster of the chemicals sector located in Grangemouth, BP was the largest and the highest profile firm. As most of the other firms in the area had not adopted programmes of open engagement, they almost hid in the shadow of BP and let it take the blame for some of the risks that they helped to create. For BP, it was an unhappy coincidence that although it was generally seen to be the most progressive firm in the cluster, it was also responsible for the highest profile incidents of recent years, incidents that by association have impacted on the reputation of the other firms in the cluster.

As stated above, the managers were aware of the purported benefits of opening up and engaging. However, these benefits were seen to be uncertain and long-term, and there was a common perception amongst the managers that opening up could lead to some deterioration in relations with stakeholders in the short to medium term, particularly if they opened up in a context of anxiety and mistrust. In such contexts, the managers were aware that any positive or reassuring information that they supplied could lack credibility and be rapidly dismissed by sceptical stakeholders, whilst any negative information that they revealed could be seized upon by actors who would use it to justify their view that the companies could not be trusted. Thus, rather than addressing anxieties and enhancing public confidence, there was a feeling that in the short term at least opening up might fuel conflict and lead to a further deterioration in relations with stakeholders. However, the feeling that pre-existing approaches were no longer tenable and the prospect of longer-term benefits encouraged the companies to try alternative approaches.

Thus, in examining the factors that might encourage or discourage managers from opening up and engaging with stakeholders, a range of conceptual issues became apparent. Decisions on whether to open up were pervaded by uncertainties about who to engage with, how to communicate with them and with what effect. In relation to the last point, certain theoretical elements relating to the social psychology of risk came to the fore, in particular issues relating to ways in which different actors filter and either internalise or reject information depending upon the extent to which they trust the source. Paradoxically, whilst the potential of new approaches to risk communication is most pronounced in those contexts where trust has been lost, opening up in such contexts might lead to a further loss of trust and to a polarisation of the debate. Consequently, the prospective benefits of opening up have to be adjusted to take into account the uncertainties and the risks associated with doing so. One of the distinguishing features of the organisations included in the study was that, in the face of these factors, they had decided that the benefits of opening up and engaging with their stakeholders outweighed the costs and the risks associated with doing so.

Early Experiences with the Adoption of More Open and Inclusive Approaches

Having taken the decision to engage in open dialogue with their stakeholders on matters relating to environmental risk, the managers sought to develop a fuller understanding of the ways in which their organisation and the risks with which it was associated were perceived by their various stakeholders. Some of them had gathered information through attitude and opinion surveys designed around specific questions. Examples of this are the Swedish

national railroad administration and the Swedish nuclear waste company (SKB), both of which investigated attitudes towards risk amongst the broader public, as well as more specific issues that affected stakeholders within a particular area. These surveys gave the risk managers some insight into the perceptions of the different actors and enabled them to learn about their perceptions and concerns. To some extent then the organisations moved beyond an education-based approach with its uni-directional flows of information towards a more discursive approach based on mutual learning.

The managers also used the media both to get a feel for public opinion and as a way of getting their message out to the broader public. In relation to the former, the organisations regularly scanned the media to see how they were portrayed. In so doing, most had learnt that it was better to pre-empt any bad publicity by putting their side of the story out first. This was particularly evident in the case of Huntsman Petrochemicals on Teesside where the company had launched a concerted campaign to get information on their plant shut-down and the associated flaring into the local media to ensure that local concerns were ameliorated. By raising awareness in this way, the number of complaints about flaring during shut-down dropped dramatically and the damage to the company's reputation was substantially reduced.

More generally, the various organisations had developed environmental reports, issued press releases and given media briefings on a regular basis. Even so, media coverage of environmental issues was very patchy. Although some high profile incidents received a great deal of coverage, many of the less visible or less controversial issues were not covered at all, and it was difficult to secure coverage on the preventative or anticipatory aspects of risk management. As public concern was seen to relate closely to media coverage, concerns about highly visible risks that were given media attention were amplified while those that were ignored by the media were attenuated (Rothstein 2003). An ability to influence the media, and thereby to shape the agenda for the discursive struggle about risk and reputation, was therefore an important resource for the organisations.

Despite their initial interest in learning about the concerns of their stakeholders, in the early phases of engagement the strategies adopted by most of the organisations focused on information dissemination rather than two-way dialogue. At this stage, most of the information that was given to the public revolved around specific projects, with public meetings, open days or exhibits being developed in connection with different projects running alongside attempts to influence media coverage. This education and persuasion based approach to risk communication fits more closely with the modernistic approach to risk management outlined above. However, in time the managers recognised that they needed to engage in meaningful dialogue and to build inter-personal relationships that would allow the development of trust and mutual understanding. By doing so, the organisations could present a human face to their activities at the local level rather than being a distant, abstract and bureaucratic institution. SKB in particular had engaged in far-reaching dialogue. Within its feasibility study programme (1993-2001), conducted in eight municipalities, it developed local dialogue with stakeholders, and through this it has gained a lot of experience on how local dialogue and stakeholder interaction can be organised (cf. Lidskog & Sundqvist 2003).

Even where the managers had put a great deal of time and effort into developing new risk communication programmes, there was an awareness that these had not necessarily led to a positive change in risk perception among the interested groups. On the contrary, some managers suggested that some forms of engagement had made people more committed to their original view. Reflecting aspects of the discussion above, in some instances the negative

predisposition of some actors had led to them to reject any good information and to internalise any bad information, drawing upon it to reinforce their view that the company could not be trusted. Thus, in some settings, open engagement had led to a deterioration in relations with some stakeholders. However, while the attitudes and beliefs of some stakeholders had been impossible to change through new forms of communication, for others open communication had gradually convinced them that the company had nothing to hide and that it was genuinely concerned with hearing and responding to their views.

These differences in the influence of new approaches to risk communication depended upon the specific context and the character of the stakeholder in question. For example, in some instances national pressure groups and local community groups tended to have slightly different perspectives: the former were characterised by some managers, as single issue campaigners with strongly held beliefs who campaigned on points of principle, the latter as pragmatists concerned not only with environmental risk but also with the social and economic benefits generated by the firms and accrued by the community. In the case of BP Grangemouth and Huntsman on Teesside, the two views coincided: the pressure groups felt that it was wrong in principle to generate environmental risks that might influence local residents, while the local community felt that they should not be expected to tolerate any risk from these sites because, in recent years at least, they had received very little economic benefit.

By making a sustained commitment to meaningful engagement, some organisations had been able to develop an amount of trust or social capital in their relations with some stakeholders. However, the managers recognised that the organisations must build trust through actions rather than words. Since it is believed that most conflicts stem from a sense of distrust, in order for conflicts to be resolved the companies had to prove that they could be relied upon. This did not mean that they should 'give in' to public opposition, since this was not always a possibility. However, if trust is to be built, the managers indicated that there needs to be a desire to be humble, to be open for dialogue and to acknowledge that negative aspects do sometimes exist. Within such dialogue, the managers felt that it is important to meet opposing or incongruent views with respect, to address them directly and that where necessary to give explanations as to why they cannot be taken into consideration. Organisations can also encourage participants to come forward with their own suggestions on how a problem should be resolved and, again, give their reasons why these suggestions might not always be applicable.

Where the organisations had acted in such ways over a prolonged period, the resultant 'social capital' had a clear economic value; organisations that were trusted found it easier, for example, to recruit and retain staff, to obtain planning permission or be forgiven after minor incidents. This was particularly evident in the case of BP Grangemouth, where an amount of trust had built up in the years preceding two major accidents in quick succession in June of 2000. The managers felt that presence of this trust led community members to the conclusion that these events were anomalies rather than just another example of the company's inability to manage its risks. However, they were also aware that these accidents had quickly destroyed a lot of the trust that had built up and that they would not be forgiven so quickly if further incidents occurred before they had regained the confidence of their stakeholders. Similarly, Casco found that social trust gave them more room for making and admitting mistakes, because in that case an incident does not destroy the reputation of the company.

It appears therefore that where there is at least a partial coincidence of interests between the firm and its stakeholders, open engagement can generate a consensus and enable confidence to be built. In some instances, social perceptions about the tolerability of certain environmental risks were clearly based upon an intuitive form of risk benefit analysis as the economic benefits were weighed up against the associated environmental risks. However, where interests are diametrically opposed, or where there are no perceived economic benefits, open engagement may not resolve conflicts, indeed in some instances it may even fuel hostility. Whether this hostility will decline over time, for example as a consequence of sustained engagement, is unclear.

Discussion: early experiences, future prospects

From the above discussion it is possible to identify some of the reasons why companies may or may not engage in more open and inclusive approaches to risk communication. Despite the purported benefits of adopting more open and inclusive approaches for society at large, at the organisational level it seems to depend upon the relative merits of two different groups of factors and on the presence or otherwise of supporting institutions.

On the one hand, companies can be reluctant to open up because it can be difficult to convey complex information on risk to the lay public, and because what information they do release can be misinterpreted and misapplied. As a result, there are fears that open engagement might lead not to an accumulation of trust and mutual understanding but to an escalation of antagonism. Open engagement may also lead to a loss of some autonomy, with companies becoming accountable to potentially antagonistic stakeholder groups that may not represent the broader public. Where companies are more pro-active than their counterparts, opening up may also mean that they have to take the blame for a wider range of risk related concerns that are beyond their control or influence.

On the other hand, companies can be keen to open up where more traditional approaches have failed to secure the support of different stakeholder groups. In such instances, open engagement can, over time, help them to understand and respond to the concerns of these stakeholders, and to build a degree of trust and social capital in their relations with stakeholder groups. This social capital can have a clear economic value, for example where it helps them to gain planning permission or ensures that they are forgiven more quickly after accidents.

To a degree the balance between these two groups of factors depends upon the presence of absence of trust or social capital in relations with different stakeholders are particularly relevant. From the analysis it is clear that opening up and engaging can either build trust or fuel hostility, depending on level of trust or social capital available at the outset. However, in some cases it may be that opening up can lead to an initial deterioration of relations to be followed by a gradual improvement – however this needs sustained commitment and a willingness to ‘weather the storm’ in the short term in order to build trust and legitimacy in the medium to long term. The absence of trust amongst stakeholders and short-termism in organisations may therefore be a barrier to change. In such contexts, moves towards further deliberation, for example in risk assessment and management as well as risk communication, are likely to depend on either a change of culture within firms so that they become more short-termist or the emergence of stronger incentives and imperatives for change from outside the firm.

This puts the broader rhetoric into perspective – even if public confidence and the perceived legitimacy of industrial development can be enhanced through the adoption of more open and inclusive approaches to decision-making, in many contexts some of the key actors that are being asked to open up may have very real reasons for being reluctant to do so. This leads us to an important question: as the organisations studied have been unusually pro-active in their development of new approaches to risk communication, what is it about them that led them to bear the costs and take the risks associated with opening up when so many other organisations have yet to do so?

A major reason is the extent to which *the activities of the organisations* had generated a need for pro-active risk communication. SKB, for example, has very actively developed competence in this area over the last decade because its central task is to get public acceptance for the final disposal of spent nuclear fuel. Similarly, BP has positioned itself as a progressive company in this field not only because of its corporate culture but also because it wants to attain the status of ‘preferred bidder’ as it seeks permission to engage in other risky activities, most notably those associated with the search for and exploitation of new energy reserves. Likewise, London Waste engaged in pro-active approaches to communication as a response to sustained criticism from pressure groups such as Greenpeace and in an attempt to persuade stakeholders that it should be trusted enough to be given permission to extend its operations. Casco, by contrast, has not seen it necessary to develop a pro-active risk communication programme at the corporate level since the need for stakeholder dialogue was seen as a local occurrence.

A second major reason is that *the experience of public distrust* varies among the companies. Those companies that had experienced serious crises – SKB, the Swedish Railroad Company, London Waste – emphasised the need for inclusive approaches and active engagement. All of these companies had previously engaged in a discursive struggle in the public arena where they did not have control over the agenda nor the framing of the issue. It is reasonable to believe that these experiences had a great effect on their view of the need for developing new risk communication programmes to build better good relations with the public. The companies that had not experienced more serious or sustained crises – as is the case for Casco for example – seem to have retained a more modernistic understanding of risk communication, namely one where risk communication is viewed as a distinct activity, with a top-down perspective, and primarily aimed to be used in cases of public outrage or after major incidents. Thus, the role of *formative events* seems to be an important explanation.

In other instances, *social learning* may have been an important factor. Within the petroleum sector, for example, the Brent Spar case is well-known example of ‘risk communication gone wrong’ (Löfstedt & Renn 1997). This event – Shell’s plan to sink an oil platform at sea in 1995 – shows that companies do not compete only in the market place but increasingly in a discursive space in which winning the argument is just as important. More exactly, the discursive struggle is an important aspect in the competition on the market place. This is made clear both by BP’s desire to protect its ‘license to operate’ and by the rather massive consumer boycott of Shell in Germany and Denmark that took place because of the Brent Spar controversy. Shell failed to win the discursive struggle, and instead blame-making processes badly affected its trademark. Tsoukas (1999: 501) explains the refutation of Shell’s view by reference to its technocratic view in its assessment of the consequences (excluding wider social concerns) and Löfstedt & Renn (1997) by reference to its undeveloped risk communication strategy, which did not understand the social processes involved in a case like this. In this case, Greenpeace succeeded with its strategy to frame the issue and move it to

become an issue of global concern, and the technocratic rationality of Shell's risk communication was defeated by a morally based rationality. This case has clear parallels with the outcomes of the engagements between Greenpeace and London Waste, and to some extent such events appear to have shaped the consciousness of managers more broadly as they weigh up the pros and cons of open engagement with their stakeholders on matters relating to risk.

Conclusions: towards a more inclusive approach?

Structural changes in society have created a new context and a changed need for risk management and risk communication. Previously, organisations sought to reduce risk to certainties through scientific and technical assessment. However, this is no longer so easily done, not least because risk consciousness is distributed among large segments of the public and science is no longer seen as an institution that delivers certain, unquestionable truths. The opportunity structure for action has changed, and companies generating environmental risks are commonly criticised by community and pressure groups for corporate irresponsibility. The discursive struggle that commonly follows tends to take place in the public arena, and it concerns the winning – or losing – of trust and credibility. While most companies have not experienced this kind of struggle, such cases can have important indirect effects on the public's general view on industrial risks. Also, much smaller cases of controversy between companies and stakeholder groups may be important factors in a broader process which leads to the gradual loss of trust and erosion of confidence. Thus, the need for companies dealing with risks to create or protect their credibility and their perceived legitimacy becomes more pronounced, particularly in situations characterised by complexity and uncertainty. At the same time, traditional public relations techniques seem to be failing industry (Jones 2002: 50).

A means suggested to respond to this new situation is public inclusion in risk management. Through an inclusive approach, companies and agencies hope that public confidence will be built. The study conducted here shows a rather diverse picture. Evidently, none of the organisations studied had adopted a very far-reaching view on risk communication, where new relationships between the companies and lay people are developed and where stakeholders are invited to participate in their risk assessment and management processes. At the same time, it should be noticed that several of the studied organisations have tried to move beyond the traditional view where risk communication is seen as an opportunity to educate the public through a one-way flow of information. Instead, they have started to develop more dialogical forms of communication in the hope of understanding the ways in which lay people perceive and attribute meaning to different risks, and where the creation of appropriate fora for discussion and deliberations is seen to be important.

As previously mentioned, there are several reasons why companies have diverse views of and attitudes towards inclusive approaches. Depending on what kind of industrial activities they are running, and the various contexts within which they operate, companies have different incentives for developing more open and inclusive approaches to risk communication. In some cases, the traditional way still seems to suffice – some companies have not experienced public distrust and see risk communication as a defensive strategy that is something to put into operation only in extra-ordinary cases (accidents, public outrage etc.). However, other companies appear to be using risk communication as a way of building social capital and creating public trust. Whereas the former see it as something that is usually unnecessary and often undesirable, the latter see it as a way to create more legitimate decision-making processes and as a central means for building social capital. However, there is reason to believe that companies will be forced to become more actively involved in creating public

acceptance for their activities as, for example, media attention on conflicts over risks or to specific industrial incidents will make it important to have developed such approaches.

In broader terms, reflexive scientisation opens up new possibilities for influencing risk management and decision-making. Risk assessment and management strategies may be characterised by more open negotiations among a wider range of stakeholders. However, doubts can at the same time be raised as to under what conditions this will create a better outcome, and indeed to what the different actors might see to be a better outcome. The reason for this is that opening up allows greater possibilities for strategic action by stakeholders. This is likely to create public debates on highly contested issues, and may run the risk of causing a loss of confidence in the capacity of organisations and their regulators to recognise and manage risks.

A particular problem here is the heterogeneity of the public. It will probably make it hard to reconcile all stakeholders' different interests, because to satisfy one often means to displease another. However, public inclusion – at least if it is not entered very late in a decisional process – may serve as a mechanism for social learning amongst all of the actors involved and this can create a space within which perceptions and preferences can be changed, thereby avoiding an entrenchment of views and a polarisation of the conflict. In this context, it is important to notice that the most significant outcomes of a dialogue process are often just as symbolic as they are concrete (Jones 2002). In most cases compromises are needed, and the dialogue does not only serve to find compromises, but also to legitimate the decision-making process and its outcomes.

At the same time there is a risk that public inclusion is seen as a general cure for all kind of problems in public relations. It will not serve as a simple means to mitigate or prevent all kind of problems and conflicts (Richard 1992). A dialogue can fail, but the chance to achieve a good solution increases if there is at least a dialogue between stakeholders. Not least, at the root of the problem is loss of trust in industry and regulators, the exclusion of the public – or the involvement of them too late in the decisional process – may in the long run be a risky business.

Our point is that if inclusion, transparency and democracy are widespread values in society, and if – at least partially – these are institutionalised in society through legislation, there may be no alternative to public inclusion and transparency in risk management and new approaches to risk communication. Not only governmental agencies and political bodies, but also companies and scientific communities have to respond to this task (cf. Beck 1992, Giddens 1994). This transition will not be smooth; it is likely to lead to debate and controversy that may sometimes lead to loss in credibility and further conflict. However, in the long run such debate and discussion on the ways in which ? are generated and managed may result in what might be termed a reverse Pyrrhic victory: in some cases battles will be lost, but in the long run the war will be won.

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