RITUALS OF ENVIRONMENTAL EXPERTISE

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Abstract

Use of experts in media reports about the environment is not confined to its information function. Voices of expertise are also invested in ritual functions of societal communication as these are built around common consensual world views as well as conflict and dissension. This article presents theoretical discussions and examples from a case study of Danish television news coverage of the environment supporting such an understanding of expertise in media.

Introduction

Throughout the history of environmental problems as an issue for public concern, acknowledgement and representation of the issue have relied heavily on expert knowledge. Or rather, expert knowledge has had a somewhat ambiguous position in public constructions of environmental issues. On the one hand environmental problems are rarely available to direct sensuous experience, they need the sensory organs and cognitive frames of science to be acknowledged, and they are presented to the public with an abundance of scientific iconography: graphs, computer models, and phrasings like "experts warn". On the other hand environmental degradation is seen as caused by human technologies which are linked with scientific expert knowledge and by faulty and untrustworthy expert advice.

This article understands the role of expertise in media as more than just dissemination of knowledge and information. Expertise is also part of social rituals through which society is maintained. So the question is: What are the rituals of expertise in media-constructions of environmental issues? In answering this question the article wants to present a theoretical discussion of the matter as well as illustrative examples from a case study of Danish TV-news coverage of selected environmental issues in 1992 and 2002.

Sociological approaches to this field has had a tendency to not only deconstruct the authority of natural sciences, but also to side with what is construed as lay knowledge in a divide between ordinary people and local knowledges on one side versus technocracy, expert knowledge and the powerful on the other. This article wants to suggest a more nuanced understanding realising that (scientific) experts can play different roles in the rituals of societal communication, and that scientific status and knowledge isn't necessarily and always connected to dominant positions in the social order.

The article will proceed with a discussion of expertise in media stressing three points: that societal communication, including communication of expertise, always has a ritual dimension; that a central feature of intercultural dialogue is dissension; and that status as expert isn't confined to scientists. This is followed by an account of some findings from a case study. The study analysed Danish television coverage of the Rio and Johannesburg UN summits in 1992 and 2002 and of related environmental issues – climate change and the environment in general – the same years. The study was mainly performed as a discourse analysis focusing on narrative progression, structure and actors in the analysed news stories. This article will not give a comprehensive account of the entire case study (but see Petersen 2007); the purpose here is to investigate different ritual settings and communicative functions of environmental expertise through a closer analysis of five examples. To further stress the point that dissension is a part of (ritualised) societal communication about the environment the article offers a count and categorisation of voices and actors appearing in all the items of the case study. This is finally followed by a conclusion to which is added a short discussion of the ideological workings of deconstructing environmental expertise and pitting expert versus lay knowledge.

1. Expertise in media

Let us start with the question what is expertise? Or more specifically, what role do experts play in news and documentaries and other forms of media-narrations of the environment?

Telling news about nature and the environment in broadcast media are acts of societal communication. *Societal communication* can be defined as distribution of knowledge and information across distances in space and time by various technical devices *and* organised by various text-producing and text-distributing institutions (Thompson 1995: 26). The role of expert statements, claims and advice in such societal communication can be understood within the framework offered by cultural sociologist James W. Carey. Following his approach societal communication, and hence also communication of environmental expertise, has two dimensions: control and ritual.

Communication, including communication of expertise, can be understood as "the transmission of signals or messages over distance for the purpose of control" (Carey 1989: 15). Note that there is more to this aspect of communication than just dissemination of information. Environmental problems such as depletion of ozone layer or long term toxic effects of chemicals are beyond personal and tactile experience, so individual and collective knowledge about such dangers – or the lack of danger – is only established through some sort of societal communication spreading expert knowledge obtained through the sensory organs of technical instruments and scientific methods. In dealing with environmental risks, communication of expertise can in this sense be seen as a matter of publicly establishing the existence or non-existence of dangers, defining them and distributing information about their importance and gravity and how to deal with them. Experts serve as authorities endorsing the correctness of those observations that we cannot sense ourselves.

However, the notion of 'control' embraces a much broader spectrum of communicative practices with regulatory potential. Apart from 1) warnings or assurances from experts about potential, imminent or long term dangers and information about how to deal with them, it may imply: 2) Publication of laws and regulations to the affected populace. 3) Public campaigns seeking to advance or prevent certain forms of behaviour by investing and circulating scientific and expert advice. 4) Involvement of mass media in political *agenda setting*, i.e. framing social issues in public media, thereby defining what issues should attract attention and forming the perception of them. A process that is facilitated by issue entrepreneurs from power institutions as well as public campaigners among which can be found scientists as well as campaigners with experience based expertise. However, in a comprehensive study of agenda setting Dearing a Rogers find that scientific research results don't play an important role in the agenda-setting process (Dearing & Rogers 1996: 91; about issue entrepreneurs on environmental issues see also Anderson 1997). 5) Furthermore 'control' also regards guidance and even education and enlightenment, through which templates for everyday practices are established, thereby forming these practices. It should be noted that not just direct instructions but also entertaining formats of communication such as story telling – which also is a property of news reporting and the casting of experts in news – contain templates for behaviour and thought.

This leads to the *ritual* dimension of societal communication. "A ritual view of communication is directed not towards the extension of messages in space but towards the maintenance of society in time; not the act of imparting information but the representation of shared beliefs" (Carey 1989: 18). Through the ritual of communication – the ritual of *risk* communication – social cohesion is established and confirmed. In other words, risk communication is also a matter of ritualising dangers: interpreting unknown dangers through experts' explanations, maybe providing comfort through reassurances from experts, and first and foremost defining and confirming the community that share these dangers.

As ritual, communication of environmental and other social concerns serves as an establishment of general world views rather than as specific solutions to specific problems. French political theorist, Claude Lefort makes an analytical division between two levels of politics and political communication. He distinguishes between "*Le* Politique" and "*La* Politique" or in English between "Politics" and "The Political". (The wording is impossible, but it does signal close relationship between the two levels). *Politics* is the level of specific political decision-making and concrete strife over changing issues, e.g. how to recognise and handle specific environmental problems. *The Political* is the more basic level of constructing and continuously reconstructing society as such including its dominant and marginal world views, defining what interests and values that possibly can be at stake. (Lefort 1988: 216-19). Confirming a community through the ritual of communication touches on this basic level of The Political.

Thus, in a study of the major American television networks' celebration of Earth Day 1990, Delli Carpini & Williams (1994) show how communication about environmental problems didn't focus so much on specific actions and policies to address the problems,

but rather revolved around basic notions in American culture. Even though the American community by the very topic of Earth Day was defined as vulnerable to environmental problems, community was not constructed around the relationship between nature and culture but rather around basic (American) conceptions of political institutions versus the individual and more specifically around a nostalgic individualism and distrust of political institutions.

Also John Hartley can contribute to an understanding of the ritual aspect of communication. He maintains that societal communication through mass media, regardless of its content, whether it is news or entertainment, always contains three elements: politics, drama and teaching (Hartley 1992: 7-8). In other words, experts serve as teachers, as political actors and as key characters in drama and ritual.

It must be added, though, that when communication functions as ritual projecting basic world views and social cohesion, it is not just a projection of the consensus that unites a social grouping. It is also a projection of what divides it. A point that is inspired by Mary Douglas: "Intercultural dialogue is inherently agonistic; the outcome will at any point be a victory for one and defeat for another of the contestants; the contest is about the form of the life to be led in common." (Douglas 1997: 129). *Dissension* is an integral part of collective identity and of individual identities understanding themselves as belonging to one side or another in such a dissension. Part of the ritual of communication – involving expert voices – is to maintain disagreement. It seems for instance that an ongoing disagreement over the issue of abortion has become a defining trait of the American public. Similarly, it is and has to a large extent been dispute rather than consensus that has characterised public communication about global warming. And expertise is and has been involved at both sides of the dispute.

Other accounts can add to the understanding of experts and science in media and still also be seen within the framework offered by Carey. Thus, Hans Peter Peters (1994) explains how journalistic use of science falls in two different modes, either as science-oriented or as problem-oriented. In the former case scientific findings – and the experts who make them – constitute in themselves the story that is reported. The object for this mode of science reporting is to translate and lead interested audiences to insights of science, and the role taken by scientists is the role as teachers. In the latter case scientific experts are employed to explain the workings and particulars of whatever issue is on the agenda such as unemployment, military operations, climate change, crime, etc. This mode of science reporting can be further split into two types, either consensus or conflict oriented, each carrying different roles for scientific experts: as teachers or as advocates of conflicting positions.

Both science-oriented and problem-oriented science reporting may be seen in terms of the control dimension of societal communication, explaining the world as science sees it or informing about – as well as establishing guidelines for dealing with – a specific problem. However, there will also be a ritual dimension to both modes of science reporting. When explaining about issues of public concern community is defined by that concern, and the

scientific experts act in the role of confirming the problem as a common problem. When conflicting positions are advocated by opposing experts they are engaged in a ritual enactment of societal dissension. And scientific findings are narrated in ways that at the same time reproduce basic world views and cultural orders. For instance, in an analysis of a BBC documentary on chaos theory, Danish media scientist Jens F. Jensen shows how this mathematical theory complex is told through mythic narrative structures of order versus chaos resulting in a ritual confirmation of chaos as evil, and of man's effort to fight chaos – which by the way is contradicting the basic recognition in chaos theory that chaos and order are contained in each other (Jensen 1991).

The relationship between scientific expertise and lay publics has been widely studied and theorised in the field of inquiry called Public Understanding of Science (PUS). This field has fostered different approaches. One is a so-called 'deficit model' in which publics are seen to lack or misunderstand scientific knowledge, and a result of this lack is un-informed social debate. The way forward can only be greater public education about science. (Irwin & Michael 2003: 23). By implication the role of scientific experts in media should exactly be to teach and explain, although that often is obscured by the way media work. Contrary to this 'deficit model' a critical and ethnographic tradition in PUS has tended to focus on lay local publics and to understand these as possessing highly relevant knowledge and skills, while scientific expertise is seen to undermine and colonise lay local knowledge and culture (Michael 2001: 209). By implication the effect of media appearances of experts is exactly to exercise power and dominate other thought systems.

The latter understanding is in line with the understanding of communication as control, but this article still wants to move beyond both traditions of PUS. First, it should be acknowledged that also local knowledges foster positions of expertise, albeit not endorsed as scientific. Expertise is not just scientific, and non-scientific forms of knowledge and expertise are also connected with power. Second, experts are not just providers of information and knowledge, whether one understands them as teachers educating the public or representatives of power institutions colonising the public. Experts are also participants in social rituals.

In a recent work on public expertise, Danish sociologist Jakob Arnoldi offers a better definition and understanding of experts in media: Experts are "those persons who get to explain or interpret specific events that are being reported in the news", "experts explain the background, describe the context, evaluate the importance, and predict the consequences and implications of the given events." (Arnoldi 2005a: 80). Following this definition the role of expert is different from the role of claims maker, although the same actor can hold both roles.

It is a key point that the role as expert is not limited to persons holding a position in scientific institutions. Rather, expertise should be conceived as a specific form of knowledge that has "achieved a certain kind of status, legitimacy, and authority" (Arnoldi 2005a: 81), and in media reports of all kinds of events and issues many different kinds of people and professions can hold and express such kinds of knowledge that have achieved

status as expertise. NGO-representatives, practitioners of all kinds, businesspeople or journalists can all qualify as experts.

This is to some extent in line with Collins and Evans who in their article "The Third Wave of Science Studies" discuss the role of scientific expertise in political decision making and public discourse. They coin the phrase *experience-based experts* for those who have "special technical expertise by virtue of experience that is not recognized by degrees or other certificates" (Collins & Evans 2002:238). They refer to Brian Wynne's study of the relationship between scientists and sheep farmers in Cumbria in England after radioactive fallout from the Chernobyl disaster had contaminated the Cumbrian fells (Wynne 1996).

The sheep farmers were not acknowledged by official, university trained, governmental experts, but they were in fact experts by experience. To call them "*lay* experts" is wrong, and likewise it was bad science not to include their knowledge, experiences and expertise when the government scientists wanted to investigate the consequences of radioactive fallout. However, Collins & Evans' aim is not a deeper understanding of media stagings of expertise, but a normative theory of how scientific expertise can and should be involved in the political domain (including public communication of expert knowledge through mass media).

Furthermore, Arnoldi refers to French sociologist Pierre Bourdieu's notion of cultural and symbolic capital in making this point. Cultural capital is constituted in various ways, not the least by education and affiliation with such institutions that produce knowledge and culture. It is however not competences gained by education and work in relevant institutions that in themselves make up a persons cultural capital. The value as capital of education, competences, experiences, positions, possessions, etc. is constituted by the recognition and acknowledgement of others, of society in general and its smaller communities and specialised fields. Hence, it is not expertise in itself, i.e. knowledge and competences, which allows people to act as experts in public communication. It is the *recognition* and *acknowledgement* of certain positions and knowledges as expertise that gives a person status as expert when he or she is acting in public arenas. (Arnoldi 2005b: 16-17, Bourdieu 1989 & 1991).

Furthermore, expert sources in journalistic reports do not always provide actual information or present knowledge from their field. That is taken care of by the journalist, and the expert witness is there to provide credibility and authority. And as a consequence the expert witness's status as expert is reproduced.

It must also be emphasised that what constitutes cultural capital is historically contingent, it changes as society changes. Today "university academics are losing out in the competition with people from other professions about what constitutes expert knowledge." This is not the least a result of mass media practices. It is through these that criteria for what counts as cultural capital are changed. (Arnoldi 2005a: 82).

To further elaborate on the workings of media rituals of environmental expertise this article now wants to pursue with examples from a case study of environmental news in Danish public service television.

2. Different ritual functions

The case study examined changes in environmental discourse by analysing television news stories about three selected topics in 1992 and 2002. 1) The UN Summits on sustainable development in Rio de Janeiro and Johannesburg, 2) global warming and climate change, and 3) the environment and environmental politics in general. The material consisted of all news items on the selected topic from prime time news programmes in both *DR* (Danish Radio) and *TV2*, the two national public service television channels in Denmark.

DR began as a national radio broadcasting corporation in 1925. It started sending television in 1951 and had national monopoly on television broadcasting until 1988 when TV2 started, and these two stations together remain dominant in the Danish television landscape. The news programmes of DR and TV2, *TV-Avisen* and *Nyhederne* respectively, are the biggest national television news programmes, if not the only.[1] Whereas DR is entirely financed by license fees, TV2 is financially a hybrid channel funded by commercials for approximately two thirds of the budget and one third from public license fees – with accompanying public service obligations. (Hjarvard 2000: 63).

Each of the news items were taken through a number of analytic procedures scrutinising them for different features. The analytical questions were concerned with narrative developments and the actors that carried them. Much news reporting is organised as narrations in which knowledge and belief are ordered in relation to the course of events and the involved actors – or rather 'actants'. What follows from what in the reported events? What are the initial state, the moving force, and the consequences of the reported events? To whom and what are the roles of acting subject/hero, pursued object, helper, opponent or villain ascribed? (Cf. Greimas 1974). In addition to identifying narrative developments in the media texts, the analyses also focused on binary oppositions set out in the texts and on the images used in telling the story (see below), and together these analyses served in identifying how community was delimited, how "we" and "them" were defined in the stories.

Systems of knowledge and belief can be ordered in binary oppositions, so identifying such binaries gives an insight into the discourse (cf. Harland 1993). What categories are set in opposition to each other, and which qualities are they aligned with? E.g. when economy is set in opposition to environment and the first is aligned with sense and the latter with feelings. In television much of the meaning is carried by images – by their denotative and connotative content established in connection with spoken words and

[1] The channels DR and TV2 had a combined total share of 80 % on average in the selected weeks of the study in 1992 and 68 % in 2002. (Gallup TV-Meter online weekly press releases http://tvm.gallup.dk/tvm/pm/ (8 May 2006)).

narrative and rhetoric developments of the story. What is shown, what surplus meanings might the images carry, and which meanings are settled in the combination of images, words and sounds? (cf. Barthes 1990). Particular images can serve as *index* of wider phenomena which means that the image as sign carries traces of what it signifies (cf. Peirce 1994). A picture of a fuming chimney can for instance be an index of economic activity as well as environmental deterioration; it carries traces of and can signify both.

In the five examples below special attention will be paid to the role of experts, how voices of expertise are involved in defining and delimiting community.

Example 1: UN-report warns about environmental deterioration

Both in 1992 and 2002 there were news stories in TV2 based on reports from international organisations about the environmental state of the earth and the massive problems the world faces, and in each case the story was staged with the use of witnesses with expert status.

In 1992 (26 April) it is a report from World Watch Institute that gives rise to a news story. It tells that the future of the planet looks bleak. Thousands of animals and plants – "with which we share the planet" – will die out within the next decades, there will be increased draught, farmland will be damaged, and it is all because of human activities: global warming, pollution, overconsumption and first and foremost overpopulation. The narrative progression of consequences laid out in the story is as follows.

Increase in population (represented by images of *Asian* babies in hospital bassinets) + Pollution and overconsumption (represented by images of endless row of cars and energy plants)

- Leads to greenhouse effect and global warming
- Already so much greenhouse gas in the atmosphere that a 1° temperature-rise is unavoidable.
- Desiccation of farmland due to increased precipitation, disaster for wheat production. + Mass extinction of all forms of life with which we share the globe.
- Implication: Accept that some damage is unavoidable. + Act to stop increase in population to avoid further damage.

An expert appears in this story, a man in his fifties resented with his title as engineer. He gets to explain technical points about precipitation, desiccation and damages to agriculture and also explains that the whole problem is closely related to increase in population. If that isn't brought under control all other interventions to protect the environment will be futile. He thus serves in different functions: 1) As assisting narrator aiding the journalist who is lead narrator. 2) Emphasising the importance of the problem and endorsing the relevance and validity of the report and the news story about it. 3) Letting the public in on the bigger picture and the basic problems. 4) As authority that tells what really needs to be done.

Community is constructed around different nodes in this text. Partly community is expanded to comprise the whole world and all of mankind. "We" share the globe with animals and plants; "we" are all threatened by global warming and the crises in agriculture that will ensue; we are responsible for damages to the globe; and we are guilty of overconsumption. But community is at the same time implicitly confined to people in the developed and rich world (and to Denmark), when overpopulation is defined as the primary cause of the threats to the globe, illustrated by pictures of newborn Asian babies lying in long rows of hospital bassinets. By implication "they" are defined as those who have to do something about increase in population, whereas "we" don't have that problem (although we do have the problem of overconsumption). This narrower definition of community is in fact brought forward by the expert's verdict.

Thus, the expert has several functions relating to the two aspects of communication mentioned above. By providing knowledge about the problem and its causal relations he contributes to the control aspect of communication: through his (and other) verdicts the problem can be understood and recognised. But no advice and no recommendations for the public are offered through the staging of his expert knowledge, nor does he act as an agenda setter – that role being taken by the authors of the report – so he contributes not the least to the ritual aspect of communication. Partly by serving as the cool-minded co-narrator, partly by getting to tell a story that doesn't leave much room for action by the audiences listening to it – other than noting what the world is coming to. And finally by getting to phrase those explanations through which community is delimited.

Example 2: Report from WWF is met with criticism

In 2002 (9 July) it is a report from World Wide Fund for Nature (WWF) that gives rise to a news story in TV2. Again it is a report about environmental deterioration and disaster due to human activity, but this time the story is told as a controversy. As the newsreader introduces it: "From the troubles of everyday life to something that resembles a prophecy of doom. World Wildlife Fund has figured out that our planet in 50 years' time will be used up. Fortunately, one could say, there is disagreement on the matter." And following this, two expert witnesses are staged as opponents in an elaboration of the report.

First a representative of WWF in Denmark gets to explain findings of the report and the problems that we face: extermination of biodiversity, scarcity of food, conflict over clean drinking water. Then an economist from Institute of Economic Affairs in London gets to interpret and contradict the report and explain that we shouldn't pay attention to it. "Change is natural; it is unnatural to expect that everything remains the same." There are thus two sets of conflicting narrative logics laid out in the story.

Human abuse of the planet. We are not acting in accordance with the limits of nature.

- There will be consequences: the earth will be exhausted and ruined
- A possible development is indicated: There is a UN summit on sustainable development later in the year. Inspired by WWF we may take action and respect the limits of nature

versus

The world is in constant development (things are OK).

- WWF issues a scare report.
- WWF grabs headlines and creates attention for itself.
- But no need to pay attention and no need to be alarmed.

Community is constructed around this conflict. For each of the contradicting narrative logics there is a corresponding definition of community. "We" are either all of mankind who at the same time will be victims of environmental deterioration and are guilty of causing these disasters. Or "we" are sensible people who don't get alarmed by prophets of doom or organisations prone to scare mongering for their own benefits. Put together, these opposing views define community around a conflict between environmentalists and sceptics. One of the experts serves in the function of claims maker, putting the WWF report and global environmental problems on the public agenda. But mainly the two experts serve in a ritual function, by marking the positions in a societal conflict between concerned environmentalism and non-concerned growth-optimism and thus maintaining this conflict.

Example 3: Scientists disagree about climate change

Disagreement between experts is also a central feature of a news story from DR in 2002 (August 1st) about heavy weather and climate change. The event giving rise to this news story is a passage of extreme weather with cloudburst and heavy rain (more than 100 mm within 2 hours). Coverage starts with reports from flooded neighbourhoods bringing interviews with ordinary people and firemen, but continues with background reports and discussion about climate change and possible causes for extreme weather.

First, the news program's own weatherman – who is a trained meteorologist – is interviewed and offers vaguely formulated confirmations that weather and climate is indeed changing; something strange and hitherto unseen is going on. Then, two different and opposing explanations are presented, laid out by the journalist, illustrated by graphics and images of flooding and draught around the world and confirmed by statements from two different scientists. On one hand climate change is explained as a result of increased greenhouse effect caused by extensive and increasing use of fossil fuels. On the other hand climate change is explained as a result of increased solar activity, a natural variation in other words. Each of these understandings is supported by a scientific expert. Endorsing the greenhouse effect explanation is an older man, presented as climatologist, D.Sc. from the National Environmental Research Institute. Endorsing the solar activity explanation is a younger man, presented as climatologist from the Danish National Space Centre.

As in the previous example the experts are cast in an enactment of dissension. The conflict is explicitly narrated as a *scientific* dispute, and even though it may implicitly be tied to a corresponding societal conflict between different attitudes to energy politics, the ritual function of the experts' appearance lies in this scientific quality of their performance.

Where in the previous example controversy is set between environmentalism and growth-optimism, allowing easy access for the audience to side with one or the other of these positions, in this example controversy is between scientific theories and appears open-ended and detached.

When these two experts with their performance contribute to a ritual establishment of general world views it is a world of uncertainty that is established, a world exposed to dangers we do not fully understand. This is further emphasised by the first expert voice, the weatherman familiar from countless weather forecasts. He just confirms that something strange is going on with the weather. His phrasing indicates that this kind of dramatic weather is untypical for Denmark, where we understand ourselves as far from the natural disasters of other regions. "Usually we only get this kind of images from abroad." He unifies where the two other expert witnesses divide, but he unifies around an uncanny feeling that something strange and dramatic is going on, the typical Danish is undergoing change, and thereby he emphasises the same sentiment of uncertainty that emanates from the scientific dispute.

By the performances of these three different experts a Danish "we" is constructed around a sense of uncertainty and a feeling of being exposed to climate change, which is a common condition for all us – we are all threatened by climate change. But at the same time community is constructed around dissension in the perception of this common condition, dissension in the world views through which it is read: whether it is nature itself or man that is the cause of our problems?

Example 4: Showdown with public councils

Dissension and conflict are also at the core of a report in DR in 2002 (Jan. 11th) about closing down of a number of public councils and boards, after the appointment of a new rightwing government two months previously. This time it is the status and value of experts that is the object of conflict.

- Closing down of boards and councils = reordering of priorities for the benefit of old and sick people.
- Prime minister's verdict from resent New Year's address: "Lately a veritable jungle of boards, councils and institutions have sprouted up and proliferated everywhere. A lot of them have turned into state authorised arbiters of taste claiming what is good and right in different fields. There are tendencies to a tyranny of experts."
- Closing down of boards and councils = Ideologically motivated.
- Ordinary consumers, especially children, will suffer
- A threat to democracy and open debate. Critics will be removed.
- Opposition: Any popular debate needs a foundation of facts and knowledge which has been provided by these boards and councils, but now the new government doesn't want its positions challenged by expertise.

The story is covered thoroughly. *Green Information Service,* a phone-in service that provided advice to the public about environment and health and now has lost its government funding, is visited by a camera crew. People involved in a financing system to improve quality of water in small waterworks tell their story. Politicians from government and opposition are interviewed. In other words, a lot of different voices and actors are heard. These are mainly organised in two opposing positions.

It is noteworthy that both sides of this conflict refer to the wellbeing of ordinary lay people in Denmark as a foundational norm for their position.

In the narration of this conflict, experts – certified experts as well as experts by experience – don't get to explain or interpret the event that is reported. People with (potential) expert status do appear in the story, but in a role of being affected by the event, rather than in the role as claims makers or narrators of background, context and implications of the event. Accordingly, experts also have a different role in defining community. In the story's construction of community, the category of ordinary people hold a privileged position, and dissension is located in defining what sort of support ordinary people need and how their interests should be prioritised. They do need expert advice and services that are independent of big industry *versus* they don't need arbiters of taste and expert dominion.

Example 5: Lomborg provokes again

How such criticism of expert tyranny paves the way for new experts can be seen in TV2's coverage of the Johannesburg-summit on sustainable development in 2002. It starts with a story (28 Aug) about Bjørn Lomborg who "provokes again" by stating that we shouldn't put our stakes on fighting greenhouse effect but rather on fighting poverty. Lomborg is in this first story from Johannesburg presented as "debater", and the story mainly reports about protests, also from government representatives, against Lomborg's statements.

But already in the next summit story Lomborg's views are supported: "I think it has been entirely relevant of Lomborg to single this problem out [...] sustainable development is also about poor countries getting the opportunity to earn their own money" (Denmark's PM, 1 Sep). In the last story from the summit the reporter concludes in a similar way: "Possible conclusion: Clean water helps faster and more effectively than windmills and solar cells. As Lomborg said before the meeting" (4 Sep).

Lomborg's role seems to have developed according to mythic tales like that of Galileo or of Numskull Jack in Hans Christian Andersen's fairy-tale, where the protagonist in his unimpressed manner rides into the royal court on a donkey serving the princess with a dead pigeon, his actions are frowned upon by the establishment, but he wins the heart of the princess. Also *The Emperor's New Clothes*, another of Andersen's best known fairy tales, springs to mind. Like in all these mythic tales, Lomborg is staged in a way where his opinions first are met with disbelief and protest, but eventually he is vindicated.

The way Lomborg is staged serves as an authorisation of his claims, giving him not only status as expert, a true expert with fresh ideas and guts to speak against establishment, but also as man of the people. At the same time his performance serves as a re-enactment of Danish self understanding. We are practical people who want to face the true facts of the world and get things done rather than waste time on "pompous summits and airy resolutions" as it is phrased by a journalist in describing the prime minister's attitude.

An analysis by Louise Philips of a television-debate between Bjørn Lomborg (BL) and Lester Brown (LB) of World Watch Institute in DR (4 February 1998) reaches similar points. "BL constructs an identity as an ordinary person who is on the side of the people against the expert LB. " "[Lomborg] expresses a popular scepticism for scientific authority. He exudes [...] an ethos of common sense" (Philips 2000: 126). But in doing so Lomborg is constructed as a new authority whose expert knowledge and advice is much better because of its closeness to ordinary people.

Summary

From these examples can be discerned a complex of different ritual roles and characteristics. The table below offers an overview of the various roles performed by experts in the analysed examples.

Table 1: Overview of the roles performed by experts in the analysed examples.

Example	Role of experts
1. UN-report warns about environmetal deterioration	- Cool-minded co-narrator. - Offering explanations though which community is delimited. - Outlining world view
2. Report from WWF is met with criticism	- Claims maker (putting environmental concern or anti-environmentalist claims on the agenda). - Marking positions in and maintaining a societal conflict.
3. Scientists disagree about climate change	- Performing dissension and controversy - Establishing general world views - Narrating risks and uncertainty and establishing them as common for the public
4. Showdown for public councils	- As objects of political controversy - As contrast to common sense of ordinary people
5. Lomborg provokes again	- Focus point of public attention and public drama (i.e. media star) - Marking societal conflict - Performing national self perception

3. Controversy increases

Experts act in different ritual roles and communicative functions, and these roles change over time – depending on which issues of public concern the experts are involved in. To demonstrate such a change in the role of environmental expertise a count and categorisation was made of voices and actors with expert status appearing in all the items of the case study (not just the five examples analysed above).

Following Arnoldi's definition (see theoretical discussion above) experts are those actors in media stories who get to explain or interpret specific events. Hence there are and can be several different kinds of actors who are granted expert status in the media. This was also the case in the analysed news stories. Apart from certified experts like scientists, university professors and researchers also NGO-representatives, public servants, business representatives, professional debaters/commentators and even journalists and politicians appeared as experts in the sense that they got to describe and evaluate background, context, importance and implications of the reported events.

The actors in the news items were further categorised based on the principal character of their statements, i.e. the statements they were allowed by the journalistic arrangement while still obtaining an expert status due to their position in society – revealed in name tag and introduction – and their role in the story. Their statements were seen to fall in four different categories. 1) They could serve as *explanations* of the event, its context and background, and the processes involved. 2) They could serve as assessments of the situation and it implications. 3) They could serve as prescriptions for how to address the reported problems. 4) Or the expert statements could be invested in controversy. The count did not include reporters in their role as narrators and directors of the stories, but they were included when they appeared in the role of some kind of expertise or evaluator.

The different types of experts could also have a role as political actors, i.e. as claims makers and participants in political strife. To some extent they held such roles at the same time as they were explaining and assessing events or giving prescriptions for how to deal with them, but particularly when being engaged in controversy.

When looking at the figures in table 2 it must be taken into consideration that the 2002-material covers a longer period. The months of November and December 2001 were included, because general elections were held in Denmark on November 20th 2001 leading to a shift in government and quick announcements of new policies in the field of environmental regulation. Thus the 1992-material comprises 34 and the 2002-material 39 news items. This cannot, however, account for the significantly higher number of voices and actors that are present in the stories from 2002. It may be a general development in news reporting that more actors are involved in each news story, but allowed less time to speak, but that is not the issue here. For our purposes it will suffice to establish that there are more than twice as many actors appearing in the analysed environmental stories in 2002 and see changes in the various categories in that light.

Table 2: Voices of expertise

	Explanation		Assessment		Prescription		Controversy		Sum	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
Scientist / Certified expert	9	14	1	3	8	9	0	7	18	33
NGO-person	2	4	3	6	8	6	3	14	16	30
Public servant	3	2	3	2	4	4	1	0	11	8
Business-person	2	4	0	1	1	3	2	0	5	8
Politician	1	0	5	12	2	1	7	38	15	51
Journalist	1	1	1	6	2	3			4	10
Debater or other (artists, royalty)	0	1	0	2	1	5	1	3	2	11
Sum	18	26	13	32	26	31	14	62	71	151

The figures show that there are indeed several groups in society that can serve in the role as experts in media reports about the environment. Other than that there seem to be just one very distinct development over the decade from 1992 to 2002. There is much more controversy in reporting about environmental issues (or at least in reporting about climate change, UN conferences on sustainable development, and the environment in general). Actors and voices appearing in stories on these subjects were to a much larger extent staged in conflict, disagreement, clash of opinions, and controversy. The rise in the category of controversy is 342 %, where the rise in total number of voices and actors is 112 %. The rise in the category of controversy accounts for more than half of the rise in total number of voices and actors. Scientists and certified experts were staged as actors in controversies in 2002 but weren't in 1992 at all. NGO-representatives appeared to a much larger extent in stories that revolved around controversy on environmental issues. Politicians appeared in much higher numbers, and mainly in stories about conflict and controversy.

This rise in the category of controversy shows how the ritual roles of expertise do indeed change over time. Maintaining conflict can be an important ritual function of experts in media and did become an important part of Danish television coverage of the environment. This development also tells something about changes in environmental discourse. Thus John Barry has characterised changes in environmental discourse (in UK) in exactly those terms: "Powerful actors have successfully emasculated the green critique by

normalizing it as controversy", and "attempts to galvanize democratic publics behind environmental change has been blocked, delayed, watered down and otherwise prevented" (Barry 2004:181; for a more comprehensive account of changes in environmental discourse in Denmark see Petersen 2007).

4. Conclusion and discussion

The case analyses above can contribute to an understanding of (environmental) expertise in media, how experts are invested in ritual functions of societal communication, and how such rituals are performed around not only consensus but also dissension.

As Simon Cottle explains and shows (also inspired by Carey): "news portrayal of the environment does not simply function at an informational level, imparting rational discussion and resources for environment opinion formation ..., but can also frequently be found to work at a deeper cultural level in which widespread, if rarely articulated, structures of feelings towards nature and the environment are articulated" (Cottle 1993: 131).

What the above case analyses can add is that one of the ways these deeper cultural sentiments towards the environment – as well as deeper cultural understandings of and reactions towards (environmental) risks – can be framed is through the appearances of experts. Expert sources in media are not just educators and providers of information and explanation. Nor is it on the other hand reasonable just to see media appearance of scientific experts as the power of a dominating thought system being exercised, hereby colonising lay knowledge. In fact, scientific experts and expertise can be framed as exactly subordinate to ordinary people and lay knowledge, and preference for lay knowledge can serve to legitimise governmental power (as seen in examples 4 and 5).

Furthermore it appears from the case examples that a number of different professions can be framed in the media as relevant and trustworthy expertise. Such a status is not confined to the natural sciences or even to academia. Or as Arnoldi puts it: criteria for what constitutes expert knowledge and what counts as relevant cultural capital change. In the case study there are examples of NGO-representatives appearing as experts but also of economists gaining status and trustworthiness on behalf of not only NGO-representatives but also experts from the natural sciences. Furthermore, the qualities that build trustworthiness and credibility for the performing expert can be his aura as non-expert and common man, as a guy in tune with collective self understanding, or as a young man with fresh ideas, rather than any of the classic insignia of *scientific* expertise – insignia which usually serve to separate science from lay knowledge.

What the case examples show is thus that voices of expertise also have a ritual function in societal communication. They

- outline world views – consensual or contested, directly or indirectly
- mark positions of societal conflict and dissension
- induce sentiments and moods, such as uncertainty, anger, optimism, etc.
- perform collective self understanding

With this insight we can turn to a final discussion about deconstruction of scientific authority, adding to and extending another of the article's central points: that controversy is an important aspect of media representations of environmental expertise.

Myanna Lahsen (2005) offers some important points for this discussion in her analysis of U.S. climate politics in which she also focuses on public controversy. She departs from Ulrich Beck, who in his theory about risk society and reflexive modernisation makes the point that new environmental threats have exposed how uncertain scientific knowledge is, and also that environmental problems are produced by the very same science-based technocracy that has held a position of heavy authority. "The exposure of scientific uncertainty is the liberation of politics, law, and the public sphere from the patronization by technocracy" (Beck 1992: 117). Science's claims to truth and enlightenment are demystified because of its failures in handling modern environmental risks, and due to this development science and technical decision-making – i.e. decision making "at those points where science and technology intersect with the political domain" (Collins & Evans: 236) – will be democratised. (An understanding that is echoed in the so-called critical tradition of PUS as outlined by Irwin and Michael).

Lahsen finds this position naive. Her analysis of American climate politics suggests that although scientific knowledge may have lost status and authority this has not led to a democratisation of technical decision making. Loss of scientific status has at most become yet another instrument for vested interests and political and financial elites to influence public opinion and political decision making.

In the American public scientific reports on climate change and recommendations from the Intergovernmental Panel on Climate Change (IPCC) have been met with strong public opposition and criticism formulated by other experts, scientists and campaigners, thereby – one could say following Beck – producing uncertainty and demystifying scientific expertise. But this uncertainty in public accounts about greenhouse effect and climate change has been the product of an organised and aggressive campaign from fossil fuel-related vested interests and conservative elites securing disproportionate public attention for so called "dissident" climate experts claiming no problems with fossil fuels and CO_2. And dissidents have resorted to all kinds of rhetoric practices: attacking scientific credibility of IPCC and other climate experts, transforming scientific uncertainties into certainties, using selective data, and even circulating false allegations. (Lahsen 2005, for similar accounts see also Barry and Buell).

Lahsen's point is then that public controversy over climate politics and climate science hasn't been an exercise in producing a diversity of social and scientific perspectives, thereby enhancing societal preparedness for different climate change scenarios. Rather – to use this article's formulations – a systematic societal conflict has been produced and ritualised and

related to other cultural and social conflicts of the American public. The result of this controversy, of investing expert statements in dissension over climate politics and endowing new actors with expert status, has not been enhanced public participation in technical decision-making, but enhanced dominance of particular economic and political elites.

Furthermore, it is a lesson of Lahsen's analysis that the role of experts in public communication and technical-political decision-making cannot be understood in terms of a divide between ordinary people and local knowledges on one side versus technocracy, expert knowledge and the powerful on the other. Firstly, technocracy defined as specialists and scientists of various public institutions from UN to universities and local administration do not necessarily possess dominant positions in influencing the public mind or in forming actual policies. For instance, IPCC cannot be counted among "the powerful" in American politics. Rather, there are different technocracies, different fields of expertise, and different expert groups that are affiliated with different and more or less dominant societal actors.

Secondly, in intercultural dialogue the category of ordinary and lay people can be very powerful. Referring to the needs and lives as well as the common sense and gut feelings of ordinary people often proves to be a rhetorical stronghold. Being successful in construing this category, perhaps even in opposition to experts, can be a mark of victory in intercultural dialogue.

In conclusion: experts in the field of environmental problems serve as actors in communicative rituals maintaining society, including the conflicts running through society. Experts may be staged as helpers or as opponents of lay people and common sense. Either way public performances of experts are invested in societal struggles, where the category of "ordinary people" is no less ideologically charged and no less affiliated with dominant societal actors than the category of expertise.

Therefore this article wants to finish with the suggestion that sociology – of various kinds: of scientific knowledge, of environmental communication, of public policy – needs to deconstruct the category of lay knowledge and common sense.

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