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Disassembling the mass mediation of research

a study of the construction of texts, relations and positions in the communication of social science

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Disassembling the Mass Mediation of Research

A study of the construction of
texts, relations and positions in
the communication of social science

Ursula Plesner



Ph.D. thesis

Department of Communication, Business and Information Technologies

University of Roskilde, Denmark 2009

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Disassembling the Mass Mediation of Research

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CHAPTER 1

Understanding mass mediation processes as assemblages, actants and translations

A social scientist writes a long newspaper essay on the basis of the scientist's own research paper. In the two texts, the same example is interpreted differently and used to support two different arguments. In a letter to the editor, a journalist criticizes the scientist for being too colorful.

An academic produces a radio program. Trained journalists introduce her to the basics of putting together a broadcast which complies with 'the media logic', and she masters both the rationales of academia and of journalism. When she interacts with researchers, they see her as a 'typical journalist', disrespectful of complex knowledge.

The telephone is central to a journalist's relationship to 'professional expert sources'. If researchers are inaccessible by phone, they are unlikely to be used in the media on a regular basis.

A researcher and a journalist share an interest in communicating complex sociological knowledge. This results in media texts characterized by complex ideas and a complex language. But the journalist also uses the researcher for quick comments in conventional news texts. And the researcher uses the journalist to lend voice to otherwise silenced groups, or to promote members of his research group.

A communication officer defends the integrity of research-based knowledge against 'the media logic'. Researchers consider him incapable of understanding complex knowledge claims, and position him as yet another journalist, incapable of understanding the language and rationality of research.

The snapshots above stem from the empirical material of this thesis. They all exemplify positions and practices in the mass mediation of social scientific research. Furthermore, I will argue that they point to the *complexity* of positions and practices in the mass mediation of research, and that we fail to grasp this complexity if we conceive of mass mediation as a linear, top-down communication process, or if we conceive of researchers, journalists and audiences as making up distinct groups governed by fundamentally different rationalities. Researchers are not only producers of knowledge, which is then popularized, maybe even distorted, by journalists. They also popularize and transform research-based statements. People who 'do journalism' are not necessarily journalists, and

are not necessarily incapable of understanding complex knowledge. Mass mediation practices are dependent on other entities than people – also technologies and practical issues influence the creation of a media text. The same actors can perform journalism or research-based expertise in various ways in different sites. These are the kinds of complexities I try to address in this thesis, through the analysis of the coming-into-being of concrete texts and relationships.

To zoom in on the complexities of the mass mediation of social scientific research, the thesis develops an approach based on the analytical vocabulary of assemblages, actants and translations. They are borrowed from Actor-Network-Theory (ANT), primarily as developed by Bruno Latour (2005). Being concerned with the processes through which media texts, arguments, positions and relationships come into being, the thesis can be seen as part of a post-structuralist move away from theorizing structures and essences towards attempting to grasp processes of linkage and emergence.

The thesis engages with an ongoing debate in Denmark – and elsewhere – about the political demands for increased engagement with the media on the part of researchers (e.g. Kjærgaard, 2006, Kristiansen, 2007). In 2003, a new Danish University Law added communication with the broad public to the universities' main obligations of conducting research and teaching. Since then, various communication policies, new science communication formats and activities have been initiated. Researchers have become more aware about the necessity of communicating via the mass media, not the least because of a lot of talk about adjusting basic funding to the universities on the basis of measurements of researchers' contributions to the mass media. And apart from increasingly using research-based experts as sources, newspapers and television have upgraded their science coverage with new sections on 'ideas', 'knowledge' or science, where research-based stories are told. So although it is commonly questioned whether the mass media offer the best forum for the communication of research, the mass media stand out as important actors in this field. One critical line of argumentation suggests that mass mediation is a one-way communication process without possibilities for feedback, and that people outside of the university are cut off from possibilities of influencing research agendas when research is 'just' communicated via the mass media. Part of the motivation behind this thesis is to explore how the mass mediation of research can be seen in the light of a more relational, dialogic conception of communication processes, including mass mediation processes. The thesis demonstrates how a focus on relations and negotiations can lead to a view on the mass mediation of research as something other than an efficient transmission process or a dubious channel for the one way dissemination of research.

The core of the thesis consists of four case studies of how mass media stories come out of diverse assemblages of journalists, editors, and researchers, together with elements such as symbolic resources, technologies and co-constructed ideals.

While the case studies are analyzed as in terms of assemblages, actants and translations, the final empirical chapter is a discourse analysis. The thesis brings in discourse theory (Laclau and Mouffe, 1985) to address how shared discursive resources make up the broader situation against which the cases should be understood. These discursive patterns, which link the case studies to a wider range of texts and actors, are left unaddressed by the way in which I have constructed the analytical framework based on ANT. Concretely, the thesis analyzes the discourses of usefulness and the discourse of accessibility which are running through the case analyses, and as such, it becomes possible to couple the case studies to central policy documents and other publicly available material on the communication of science. The final chapter suggests that the discourses of usefulness and availability identified in the empirical material should be seen in the light of the broader discursive field of the knowledge society. Here, research-based knowledge occupies a central role, and its interplay with other kinds of knowledge and its relevance to different actors has been the topic of debates both outside and within academia (see Delanty, 2001, Etkowitz and Leidesdorff, Nowotny et al., 2003).

The centrality of 'difference' in studies of mass mediation of research

Studies of the mass mediation of research have been rather dominated by a tendency to think in terms of distinct professional categories and focus on the *different* rationalities of people involved in communicating research-based knowledge to 'the public'. This has been framed as a question of belonging to different cultures (e.g. Peters, 1995, Reed, 2001) or – in the words of a science editor – fulfilling different information functions (Fjæsted, 2002: 123). A number of science communication issues have been analyzed in terms of researchers' slowness, their unwillingness to simplify their messages and their high level of abstraction, which is contrasted with journalists' impatience, tendency to over-simplify and push for conclusiveness (e.g. Haslam and Bryman, 1994: 4pp). Differences are presented as self-evident and deeply entrenched, for instance being talked about in an affirmative tone, as in "The longstanding tension and conflicts between journalists and scientists surrounding the media reporting of science..." (Reed, 2001: 279). Such studies are more occupied with *how things are* than with the *processes by which things are negotiated, solidified, questioned or silenced*. In this way, professional categories become reproduced so

that 'scientists', 'society' and 'journalists' are constructed as rather detached from each other, with a relationship characterized by inherent potentials for conflict. Another type of studies of the mass mediation of research, with a normatively-driven focus on democracy, also tend to build on a sharp distinction between e.g. science and 'media practices' and explicitly refrain from looking into the complex interactions between different actors involved in the communication of research in the media (Kristiansen, 2007: 55, Meyer, 2005). An interest in democracy does not imply that such studies necessarily uphold clear dividing lines between science and the media, but the very abstract level of interest may result in some very general statements about the relationship between e.g. science and journalism and their common history, ideals and needs (e.g. Meyer, 2005: 98). This thesis shares the idea of Valenti (1999: 174) that science communication scholars should be wary of reproducing a 'litany of differences' and assume an inherently problematic relationship between actors involved in the communication of science to the public (e.g. Walters and Walters, 1996, Peters, 1995, Hartz and Chappell, 1997, Russel, 1986).

The tendency to assume stable identities/positions and structural differences between them is often related to a transmission view on communication. Mass communication is traditionally conceived of as a pretty linear and asymmetrical mode of communication, with distinct groups placed in different stages of the communication process (this model of communication dates back to Shannon and Weaver, 1948, but although generally refuted, is still alive and well as an assumption underlying discussions about communication). This conception is criticized for advancing a 'top-down', sender-oriented view of communication of science to the public (see for instance Logan, 2001: 153pp for an introduction to the interactive tradition), and it is sometimes related to a view of scientists as possessing valuable knowledge, journalists as occupying a powerful role of mediums, and the public as ignorant and in need of popularized accounts of science.

Turning to relations and negotiations

The approach of this thesis differs from the above mentioned type of science communication studies by turning its attention to the *negotiations* and *establishment of relations* among numerous heterogeneous types of elements that are assembled in and around media texts with a social scientific content. The project focuses on co-constructions of knowledge as well as the positioning work performed by actors involved in the mass mediation of social scientific knowledge. While acknowledging that the above described conceptualizations and lines of critique are important and address a range of problems related to the mass mediation of science, the thesis seeks to add to the literature by

demonstrating that the mass mediation of research to the public can also be understood in more relational terms, and show how such an approach makes it possible to draw a picture of complexity and the blurring of positions. As indicated above, its main theoretical inspiration is derived from Latour's version of Actor-Network-Theory (Latour, 2005), supplemented with some of Callon's contributions (Callon, 1986). This implies that the thesis focuses on constructions of facts, negotiations and associations between a number of different elements (including material ones). The thesis argues that this focus allows us to capture the complexities of the production and communication of knowledge, and that the production of exemplars that demonstrate complexity is crucial to understanding the mass mediation of science.

By giving analytical attention to actual relations and negotiations in communication practices, the thesis shows how actors cross borders and perform complex versions of their professions, and become aligned in heterogeneous collectives in productive ways. With this focus, the thesis can be seen as drawing on post-structuralist insights from both communication studies and Science and Technology Studies (STS). In communication studies, the transmission view of communication has been thoroughly challenged, and in STS, the relations between actors have been rethought – an initial tendency to operate from the general categories of science and the public has been replaced with empirical, contextual research and talk of publics in the plural. It has been argued that the so-called postmodern condition of science has altered different actors' 'production/dissemination' focus on science communication to a 'construction/negotiation' focus (Dijck, 2003: 185). My thesis can be seen as part of this turn. Although few studies of science communication embrace the idea of hybrid actors, it has also been argued that the binary opposition between scientists and non-scientists has dissolved into a continuous palette of participants (ibid.). My thesis is informed by the same anti-essentialist thrust as this postmodern, multicultural approach to science/society relations. However, it also seeks to account for the instances where (professional or institutional) boundaries are drawn between actors, and recognizable positions therefore maintained. The same goes for the relations between science and the media – or researchers and journalists. From various anti-essentialist perspectives, attempts have been made at conceptualizing the interconnectedness of 'science' and 'the media', where the media are seen as actors in an important space where the construction and constitution of science is negotiated. The media (like science) are not 'out there', bound to simply disseminate messages, but are equally distributed, heterogeneous and implicated in the construction of science as part of culture (Dijck, 2003: 183, see also e.g. Erickson, 2005). From this perspective, the media cannot be seen as channels between experts and lay persons. Within the Public

Understanding of Science tradition, it has also been questioned that the media are treated as a self-contained entity, and audiences as passive receivers of media agendas (Irwin, 1994: 179-181). While very much in line with these theoretical understandings, this thesis also seeks to understand the *performative* character of the notions of 'media', 'science' and 'the public'. That is, they are not only understood as interwoven in a social fabric, but as entities which are constructed or reproduced discursively as important actors, and thereby become significant entities in practice. In the analyses, these concepts are treated as actants and parts of concrete networks, where they make other entities act in specific ways.

Social science in focus

Some of the above mentioned issues of blurred boundaries between media, science and the public are accentuated by my choice to focus on the communication of *social* science in the mass media. The broad category of social science was chosen because its public communication is relatively underexposed in science communication studies and science journalism studies (Cassidy, 2008, Dunwoody, 2008). The treatment of social science raises a range of special considerations, notably because it is sneaking into mass media texts – outside of science sections and as an integral part of news production – only to regularly surface as political, biased or commonsensical in public discourse. Some claim that social science is considered less valid and scientific (Evans, 1995: 168) or less newsworthy (Arnoldi, 2006: 61, Fenton et al., 1998: 39) than the natural sciences, and with reference to their survey of Danes' conception of science, Siune and Vinther (1998c: 9-19) seem to confirm these observations. They mention that whereas 66% of the Danes articulate 'high interest' in medical science, the number is 9% for the social sciences – and where 84% can name a correct example of research in medicine, the percentage is 37 for the social science (and more than 50% gave up in advance when asked about the social sciences and humanities). Also structurally, the hard sciences can be seen as favored by e.g. occupying the main part of the newspapers' science sections; by having specialist journalists covering their fields, or by its practitioners being labeled 'researchers' or 'scientists' (which connotes objectivity) rather than 'writers of the report' or 'authors' which are generally assigned to social scientists, emphasizing the contingency of their knowledge (Evans, 1995: 172). In the media, social science is constructed as more subjective, while the value-laden character of the hard sciences (Latour, 1987) is not articulated in public discourse. It is more widely recognized that social criticism and commentary is an integral part of social science research (Horst and Poulfelt, 2006: 174, Fenton et al., 1997: 18) – but this seems to undermine its authority (Fenton et al., 1997). Whereas the political nature of hard sciences and technology is a central theme within STS, and largely unnoticed by actors involved in

the production and negotiation of media texts, the opposite can be said about social scientific knowledge. The political nature of such knowledge is constantly articulated among producers and users of media texts, whereas the field of STS has given less attention to the creation and use of this kind of knowledge – and, as noted above, science communication studies have given equally little attention to its public communication¹. Also within science journalism studies, social science is commonly left out of the story, allegedly because the specialized coverage of social science is insignificant in size (Dunwoody, 2008: 18).

To summarize the above, the thesis is the result of an urge to disturb the tendency to think of science/society or researcher/journalist relations in terms of fixed positions and differences, and an interest in focusing on negotiations and the establishment of relations in mass mediation of social science. With my study, I wished to focus on emerging situations and construction *processes* rather than established professional positions or relatively stable systems of meaning.

Research questions

To be able to address issues of ‘emergence’ and ‘process’, I focus on two kinds of construction processes. One process was that of assembling media texts though the use of various symbols, stories, examples, and so on. The other was the process of assembling the collectives² of ideals, people, technologies, and bits of text that make the production of a media text possible. I intend to capture both kinds of processes by the broad research question:

How are media texts dealing with research-based social scientific knowledge assembled?

Informed by a relational, constructivist ontology, my main interest lies in zooming in on the relations between the various actors and elements in the practice of mass mediation and communication processes. This is why the question is posed in an open manner, without pointing out actors or institutions as sites of investigation.

As mentioned above, the thesis draws on analytical concepts from Actor-Network-Theory to approach the field of mass mediation of research. Thus, in addition to the above

¹ See Cassidy (2008: 225pp) for an extended discussion of this.

² Or actor-networks, or assemblages. Further below, I argue for using the terms somewhat interchangeably.

research question, I want to explicitly address the analytical strategy of the thesis by posing the question:

How can an analytical framework informed by Actor-Network-Theory contribute to our understanding of science communication in the mass media?

I work from the fundamental ontological assumption that *actor-networks are established around the production of concrete media texts, and that these enact specific versions of reality*. On the basis of this, I seek to articulate the possible contribution of ANT to the topic of mass mediation of science. It allows me to analyze knowledge claims as co-produced through the processes of translating statements and interests to produce a media text. I have drawn on a number of ANT concepts that address how relations are made, how knowledge claims are constructed, and how things come into being. In the next chapter, I will discuss the most important concepts, namely those of assemblages, actants and translations. ANT has plenty of other useful concepts in stock (both in Latour's and Callon's versions and in numerous other versions of ANT), but I have concentrated on those three for two reasons. First, I believe they make the distinctive contribution of ANT clear by laying bare some of its ontological and epistemological assumptions. Second, through the process of analyzing the material, the concepts of assemblages and translation aptly captured processes of establishing relations, the thesis' ambition of not reifying connections was met by the analytical focus on temporary assemblages, and the concept of actants allowed for an exposure of the heterogeneity of the empirical material.

To shed light on the processes of assembling texts or collectives, I have posed a number of sub-questions which are intended to address dimensions of these processes relevant to my knowledge interest. The sub-questions revolved around the relational (1-3), the mundane or practical (4), as well as the dynamic negotiation aspects (2+5+6) of the mass mediation of science. This was in line with my interest in disturbing the tendencies to work with predefined actors, to produce generalizing statements about the mass mediation of science, and to focus on end products (whether media texts or established relationships). The sub-questions guided my reading of the empirical material:

- 1) *Which types of relations are established in texts and interview accounts?*
- 2) *What kind of positioning work takes place in texts and interview accounts?*
- 3) *Which types of actants make a difference in the production of media texts?*
- 4) *Which practices and routines are part of constructing media texts?*
- 5) *Which types of translations take place in production processes and texts?*

6) *Which kinds of issues are hot/open (controversies) in texts and interview accounts?*

On the basis of the analyses, I have created a range of empirically grounded examples of different types of relations, positions, and translations that are established in the mass mediation of social scientific research. As I will explain in more detail in the methodology chapter, I have done this by selecting a range of media texts containing social scientific knowledge or people actively engaged in the mass mediation of social scientific knowledge and exploring their linkages to various elements. They were selected according to a maximum variation criterion (Neergaard, 2001: 27), so as to create a broad empirical foundation for exploring complexity through the treatment of different types of media texts, different types of actors and different kinds of social scientific knowledge.

Overall, my empirical cases are examples of the complexity of the mass mediation of social scientific research. This is not only because they map a complex field of relations and a variety of discourses or positions, but because the analyses zoom in on minute details and particularities, thus articulating the transformative moments and processes through which relations and texts emerge. Much of the existing literature on the production of media texts with a social scientific content draws sweeping conclusions and takes up general discussions. In contrast to this, my approach is limited to providing local and quite specific knowledge about how negotiations and translations have taken place in concrete instances of mass mediation of social scientific research. This is inspired by the ambition of ANT to be very myopic in its empirical approach³.

Capturing the complexity of mass mediation processes

Besides being informed by ANT's attempt to avoid privileging one type of actors or elements a priori, the thesis is inspired by ANT's rejection of abstract explanatory devices such as 'contexts', 'mechanisms' or 'causes' in sociological analyses. In the case of the mass mediation of research, such abstract phenomena could be 'global convergence', 'competition', or 'professional identities'. The problem of using such imprecise, abstract concepts is that they may become easy explanatory shortcuts which prevent us from investigating and understanding the complexity of mass mediation. To get an idea about actors' actual practices, we need to give more attention to concrete details; to the everyday and the mundane. And abstract phenomena can enter the analyses if they are part of actors' accounts of their practices and relations. In that way, they are linked to a myriad of other entities, and do not serve as part of the observer's causal explanations. For instance,

³ I present an extended discussion of this in chapter 2.

the thesis shows how the idea of 'the media logic' is linked to a range of editorial choices, statements of researchers, and to the positioning of actors as legitimate or illegitimate. 'The media logic' is not an actually existing force that explains actions, but a co-constructed entity woven into a web of relations to other actors. And the aim of the thesis is precisely to offer such images of the *complexity* of relations and positions which are part of the story when we talk about the mass mediation of social science, rather than resort to generalizing explanations. Hence, the thesis does not suggest how we might understand 'the position of the social science researcher', 'the job function of the journalist', 'the media logic', or 'what happens to social scientific knowledge when it is communicated in the mass media' – at least it does suggest that universal mechanisms produce such general patterns to be discovered. Rather, it explores how professional categories become blurred in actual mass mediation processes, and it focuses on the complex practices and articulations of social scientific researchers who communicate their knowledge in the mass media, and co-construct knowledge in relation to other actors. As indicated above, showing the non-essential character of 'the social scientist' – and other actors – is in line with recent developments in the Public Understanding of Science-tradition, where the science/public division itself has been questioned. Irwin and Michael have suggested that "Instead of assuming the contrast between science and society, it becomes necessary to explore contrasts between actors or constituencies each comprised of mixtures of both science and society" (Irwin and Michael, 2003: 111). They have devised the concept of ethno-epistemic assemblages to point at "the complex ways in which public and science are (sometimes simultaneously) differentiated and intermingled, aligned and opposed" (Michael and Brown, 2005: 50). It is meant to capture both the situated ('ethno') character of knowledge ('epistemic') production and -negotiation. And it points to the fact that a number of different actors and resources ('assemblages') are involved in the construction and negotiation of knowledge (Irwin and Michael, 2003: 143). This concept invites us to look analytically at specific situations of knowledge construction and negotiation, in order to flesh out who and what are part of the situation – and in which ways. I believe that this type of research may prove beneficial to journalism studies and science communication policies by offering a less simplistic understanding of professional practices and identities and showing that e.g. 'scientists', 'journalists' and 'communication professionals' are not (only) distinct species governed by different rationalities. In my analyses, I am inspired by the concept of multiplicity (Mol, 2002) to think about the enactments of different kinds of realities without dismissing complex practices as fragmented or incoherent, and I aim to provide detailed, empirically based insights into the performativity of these different

practices, to avoid simply concluding that relations and practices relating to the mass mediation of social science are complex⁴.

To say that something is complex implies that we give up describing essential features or providing simple models of explanation of it. But at the same time, to be complex is not the same as being chaotic. Law and Mol have characterized complexity as 'more than one, but less than many' (Law and Mol, 2002: 11). By this they mean that although the social cannot be understood in any simple terms, we can still identify some agreements and regularities. In relation to the mass mediation of social research, it would be wrong to assert that everything is unpredictable and chaotic. Indeed there is a degree of recognisability with regards to the ways in which researchers express themselves or the ways in which journalists work. Also, actors involved in the communication of research are able to produce sweeping statements about what scientists are like and what journalists are like, as in the words of a science editor:

Many scientists tend not to see themselves as another interest group among many - some even regard science as ideology-free - but claim the privilege of having special access to knowing what is true and good and what is not. However, no such privilege is recognized by media practitioners, who look at all social groups as having interests (Fjæsted, 2002: 125)

But although general characteristics of professional positions and the specificities of professional traditions are interesting as orientation points, they have been described thoroughly elsewhere (e.g. Jensen, 2000, Haslam and Bryman, 1994, Reed, 2001, Weigold, 2001, as well as in new institutionalist perspectives on the mass media), hence they will not be the central focus of this thesis. It is concerned with positioning processes more than established positions, and with actor-networks more than institutions.

Outline of the thesis

The thesis contains nine chapters. In the next chapter, I present three theoretical concepts that make up the analytical framework of this investigation of the mass mediation of social scientific research. I have chosen to highlight the concepts of assemblages, actants and translations because, as indicated above, I find them particularly suitable to address the relational, the processual and the negotiation aspects of mass mediation. In chapter 2, my main concern is to relate issues addressed by these analytical concepts to parallel

⁴ See Schröder and Phillips (2007) for a similar argument about complexity.

discussions within media studies and science communication studies. I do this in order to spell out how the thesis is not only an account of how mass mediation of social science takes place, but also a showcase of a different sensibility towards studying knowledge communication and mass mediation. I also give examples of how Actor-Network-Theory has hitherto been applied in studies of media texts and -technologies.

Chapter 3 deals with methodological aspects of the study. It falls in three parts. Part one discusses the ontological basis for the research questions, and how these questions tie in with the research design. Part two contains extensive reflections regarding the interviews which represent the main method of data production of this study. It brings out some implications of being a media sociologist interviewing media actors and fellow social scientists. The last part is a presentation of the analytical design on which the empirical case studies are based. Here, I return to the concepts of assemblages, actants and translations with the purpose of operationalizing them – and related concepts – as analytical tools.

The three introductory chapters are followed by four case analyses. Each case is an example of relations established between social scientists and media actors and a range of other elements in order to create media texts with a social scientific content. Rather than arranging the analyses thematically, I have taken specific elements as a starting point for tracing how different assemblages are made. The individual configurations of each assemblage then become the topic of a whole chapter. This implies that the chapters are quite unequal with regards to the themes and the analytical concepts they bring up. The point of maintaining each case as a distinct story told against the backdrop of *different* theoretical and methodological ideas is to substantiate the claim that mass mediation of social science is complex, and needs to be approached with openness both with regards to the choice of focus and the choice of analytical concepts. The constellation of heterogeneous analyses demonstrate that assemblages in the mass mediation of social scientific research comprise very different actants, positions and fact construction processes, and that a uniform analytical treatment of these dissimilar assemblages would not do justice to their uniqueness – or situated character. Together, the cases explore the complexity of the mass mediation of research. They are based on explorative interviews and a range of different texts (including academic texts, radio programs, newspaper articles and public discussion forums on the internet). The criteria used to select individuals and texts are that 1) they deal with social scientific knowledge (both evidence based and interpretive), 2) they relate to one another by being either traces or parts of controversies or associations. Within each case, entities make up a network because each

relates to one or more of the others, and including entities in the analyses has been a matter of following their associations. 'Following the actors' has of course been a process of construction, so the cases should be considered my constructions of assemblages, in which I have highlighted elements such as ideals, mundane practices, positioning work, and particular kinds of relations.

The first analysis, presented in chapter 4, draws the contours of a type of assemblage where important entities highlighted by interviewees comprise communication ideals, email communication and distinctive symbolic entities such as gossip stories, colorful examples and current events. It describes the work required of a researcher to establish and uphold associations with a newspaper editor and to establish a position as a sort of public intellectual. His 'compliant' approach to the communication of research-based knowledge entails that a journalist accuses him of having gone too far to accommodate the media's supposed demand for the colorful and the possibility for identification and entertainment. The analysis follows the unfolding and closure of this controversy.

In chapter 5, the analysis revolves around the process of assembling people and knowledge claims to produce a radio program, and draws a picture of a collective which is held together with some difficulties. Here, important actants include 'the media logic', and diverse interests have to be aligned to make the radio program work according to its pre-defined premise. I analyze what happens when professional choices governed by actants that are co-constructed by journalists are assembled with other types of elements; participants in the debate, knowledge claims and pre-produced recordings. Like the previous assemblage, this one is marked by a controversy, but this is one which revolves around the status of social science versus the status of natural science. It is also marked by more antagonistic positioning work, and shows that positions have to be achieved through negotiations – they are not given in advance.

Chapter 6 deals with a type of assemblage where a researcher is enrolled as expert source alongside facts and other kinds of sources. In the interviewees' accounts of their practice, the phone stands out as central to the relationship between journalist and 'the professional source' who often fills out the expert position in what I term a news story collective. The analytical focus is on a researcher's establishment, maintenance and destabilization of relations both to media actors and colleagues at the university, because in the researcher's account, these were linked. Also in connection with this type of assemblage, controversies over transgression arise as a central issue. But whereas controversies in chapter 4 had to

do with accuracy versus entertainment, here they mainly have to do with the linkage of research-based knowledge claims and policy-consultancy.

Chapter 7 deals with an assemblage characterized by the centrality of a special type of relation, namely one that revolves around the empty signifier of 'practice'. 'Practice' is articulated as a very important element in the association between journalist and researcher, and the researcher is constructed as the connection between the media and practice. Another aspect which distinguishes this assemblage is an uncontroversial linkage of research and the political, which is articulated as an important element of the researcher's job, and stands largely uncontested in the media.

In chapter 8, I pick up elements that have recurrently surfaced in the previous analyses but have not been fleshed out. I turn to discourse analysis to address them more thoroughly as shared discursive resources rather than isolated instances of language use. I identify a discourse of usefulness and a discourse of accessibility, and draw on additional empirical material not presented in the case analyses. As such, the chapter is a step towards drawing the contours of the broader situation of which the cases described in the preceding chapters are part. The discursive and political elements described in this chapter make up an important part of the communication environment of the mass mediation of research.

The conclusion – chapter 9 – returns to the questions of how mass media texts dealing with research-based social scientific knowledge are assembled, and of how an ANT-inspired analytical framework can contribute to our understanding of these processes. In the first part of the chapter, I describe how meaning and positions are relationally constructed, and how knowledge claims and positions are co-constructed. On this backdrop, the conclusion picks up on the concepts of assemblages, actants and translations, which I had established as central to my investigation. It recaptures some of the empirical insights produced by these concepts, and shows how each of them operates on several levels. Finally, the chapter contains a discussion of the thesis as an attempt to arrive at a particular analytical sensibility regarding complexity. It reflects upon some of its contributions to the fields of media studies, STS, and science communication studies, and touches upon some of its empirical and analytical absences. After demonstrating how the analytical framework produced novel insights into the complexities of the mass mediation of social science, it ends up suggesting how this feeds into more general discussions about power and democracy in relation to the mass mediation of science.

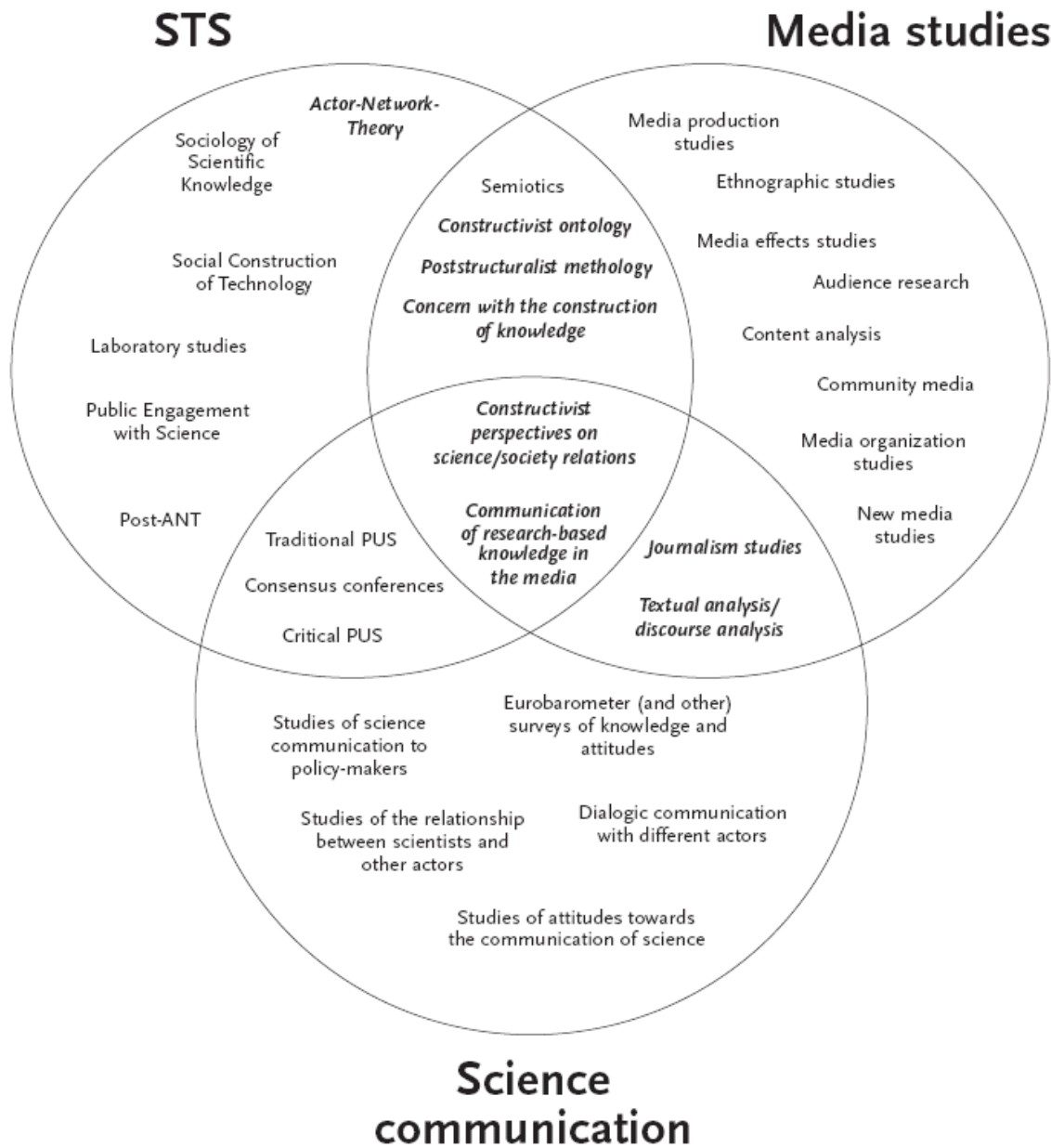
CHAPTER 2

Theoretical background and framework

This thesis works at the intersection of the traditions of Science and Technology Studies (STS), science communication studies, and media studies. The aim of the present chapter is to position it in relation to relevant literature within subfields of those traditions. The ambition of the chapter is twofold. It is meant both to explicate the distinctiveness of the analytical concepts applied in this thesis in relation to other approaches to mass mediation and science communication, and to point to affinities and shared concerns with these approaches. Hence, while arguing that ANT offers an inroad to studying the mass mediation of social science in a way that produces a particular kind of knowledge, the thesis also seeks to engage in a dialogue with existing studies by discussing some of their core concerns and drawing on their empirical insights. The chapter opens with a brief introduction to the interdisciplinary traditions of STS, science communication studies and media studies. Because the thesis draws on three different traditions which are already interdisciplinary, I have chosen to refrain from providing comprehensive literature reviews of them. Instead, I have structured my introduction to the relevant literature according to the fundamental analytical sensibilities of the thesis. It is ordered around the concepts of assemblages, actants and translations. Hence, the main part of the chapter is devoted to discussions of how this thesis' concern with assemblages, actants and translations relates to similar concerns within the subfields of STS, science communication studies and media studies. In that way, it becomes possible to reflect upon how these subfields and the present thesis can mutually inform or inspire one another. The chapter ends on a brief review some of the ways in which ANT has been drawn upon in studies of mass mediation or media technologies, to give an idea about the kinds of analytical strategies used and the sorts of issues taken up.

Three interdisciplinary traditions

In order to indicate the scope of the traditions I draw on for analytical inspiration and empirical insights, the following sections offer a brief overview of the traditions and some of their overlaps. Of course, this overview cannot do justice to the traditions, operating on such a general level. The aim is to locate the ensuing, more detailed discussions of subfields in relation to their intellectual legacies.



This model illustrates how subfields from the interdisciplinary traditions of STS, media studies and science communication studies overlap. The interests of this thesis can be located within the areas of overlap (marked by italics and bold). The model also indicates the scope of the traditions by mentioning a number of important subfields which are outside the limits of this thesis' theoretical, methodological, and empirical interests. The model is a depiction of the following sections' presentation of the traditions.

Science and Technology Studies

Science and Technology Studies is a heterogeneous field drawing on sociology, anthropology, philosophy, history, and other academic disciplines. It has its roots in the sociology of science, or more specifically in the Sociology of Scientific Knowledge (SSK). The proponents of SSK developed the argument that scientific knowledge is not derived from nature, but should be understood as socially constructed (Barnes and Bloor, 1982, Collins, 1983)⁵. Along the same lines of thought, a concern with the development of technology led to the emergence of the Social Construction of Technology (SCOT) perspective (Pinch and Bijker, 1984). The main argument here is that technology is socially shaped, i.e. dependent on interaction with different groups of actors. Parallel to these intellectual developments, Latour and Woolgar's laboratory studies (Latour and Woolgar, 1986, Latour, 1987) demonstrated that scientific practices and everyday practices are not fundamentally different, but that the production of knowledge depends on mundane, everyday activities. This argument was based on ethnographic studies of the production of scientific arguments through linguistic and material means. Out of the broad constructivist movement concerned with science and technology grew a particular approach to the study of science, technology and society. This was Actor-Network-Theory, which has since produced studies of how collectives of humans and non-humans become organized through translations and enrolments (Callon, 1986, Latour, 1999a, Law, 1994), and has been put forward as a radically different sociology (Latour, 2005). Presently, the term ANT is widely used about different partially connected contributions to the sociology of science which share parts of the vocabulary or some of the concerns of ANT as developed by Latour, Callon and Law. Part of this field has been termed 'post-ANT' (Gad and Jensen, 2007). Among others, this term covers studies that are concerned with the political implications of methods, more specifically with how methods enact different realities (Law and Mol, 2002, Mol, 2002, Law and Urry, 2004). Also a body of feminist STS studies should be mentioned, having contributed to the field both with the gender perspective (e.g. Harding, 1991) and with concepts that build on and transcend the feminist project by challenging views of the human as an entity separate from materiality and science and technology (e.g. Haraway, 1991: with her concept of the cyborg)⁶.

⁵ See also Richards and Ashmore (1996) for a discussion of the development of SSK and its relation to neighbouring fields

⁶ For general introductions to Science and Technology Studies, see for instance Sismondo (2004) or, in a Danish version, Jensen et al (2007).

Out of the concern with the production of scientific knowledge and the relation of science to other areas of society grew another research tradition, generally referred to as the Public Understanding of Science (PUS) tradition. PUS has been called a multidiscipline (Irwin and Michael, 2003: 19pp) concerned with exploring and gauging the relationships between 'science' and the 'public'. The tradition is often described as consisting of three strands, each with different views of the role of science, the role of the public and the promise of science communication. Inherent to these different strands of PUS are different models of science communication – captured by the notions of dissemination/diffusion, dialogue/deliberation and conversation/negotiation. For discussions of these see Michael (2002), Trench (2008), and Horst (2008a). Horst (2008a) shows how these are connected to the three strands of PUS; traditional PUS, Critical PUS and network perspectives on science/public relations⁷. Whereas STS has generally been more concerned with the production of scientific knowledge, the PUS part of the STS tradition has an interest in communication that overlaps – and informs – a part of the field of science communication.

With respect to how the thesis draws on the field of STS, I primarily borrow from the constructivist approach to scientific knowledge production widely shared across STS, more specifically as theorized by Latour. I also share the interest in the production of knowledge of STS, but I am mainly concerned with exploring the co-production of knowledge that takes place in relation to actors outside of the university. In this respect, I am inspired by constructivist PUS – the strand concerned with exploring networks and negotiations – in the understanding of science/society relations.

Science communication studies

Apart from overlapping with a subfield of STS, PUS, as described above, science communication studies draw on journalism studies, media studies, sociology, theories of learning, psychology, and various other traditions.

Closely related to traditional PUS, parts of science communication have investigated the public's knowledge of, and attitudes towards, science. Such studies include the so-called Eurobarometer surveys and other surveys which measure 'scientific literacy' (e.g.

⁷ The assumptions of PUS and communication studies have developed in a parallel manner. PUS was initially primarily concerned with the public's *understanding* of science, and communication was considered a technical issue of getting the message through, to remedy a deficit in understanding. Then arose a concern with the public's engagement with science (captured by the abbreviation PES, Public Engagement with Science), mirrored by the trend in communication studies to consider people active users rather than audiences, and taking their needs into account. Both led to an interest in dialogic communication formats. At present, all these conceptualizations are still in play, but supplemented by a less hierarchical understanding of science/society and communicator/user relations, with a strong focus on the circulation of knowledge and communication in networks.

Claessens, 2008, Miller, 1998). A series of Danish reports on the public's attitudes towards and sources of knowledge about science also falls within this tradition (Albæk et al., 2002, Siune and Vinther, 1998c, Siune and Vinther, 1998b, Siune and Vinther, 1998a). Another subfield of science communication has been more concerned with exploring the potential for direct dialogue between researchers and publics (Horst, Forthcoming, Phillips, 2008)⁸. Within this area, we find scholars occupied with the development and theorization of dialogic communication initiatives such as consensus conferences (e.g. Blok, 2007, Horst, 2008a, Powell and Lee Kleinman, 2008), science cafés (e.g. Riise, 2008), and the like.

Besides these concerns with people's knowledge of science, and ways in which to enhance this knowledge (for various reasons) or ensuring the robustness of the knowledge production of academia through dialogue with the public, a strand of science communication studies is occupied with the role of the mass media in the communication of scientific knowledge. Some have analyzed media representations of science (e.g. Allan, 2002, Carvalho, 2007, Maesele and Schuurman, 2008, Marks et al., 2007), some are closer to journalism studies' concern with source relations and interactions between scientists and media or communication professionals (e.g. Dunwoody and Scott, 1982). Others conceptualize the interplay between mass media and the production of science (e.g. Bucchi, 1998, Hilgartner, 1990, Brossard, 2009).

Science communication scholars have also been concerned with other sites or kinds of science communication. For instance that which takes place within or between scientific communities (e.g. Myers, 1990, Cloître and Shinn, 1085), to or with policy makers (e.g. Bielak et al., 2008) or as part of scientific knowledge production (e.g. Phillips, 2006). Apart from the last type of study, science communication studies obviously differ from STS by having less interest in the processes of producing research-based knowledge. Overall, it seems fair to suggest that science communication studies have more significant overlaps with media and journalism studies⁹. Among the studies that operate on the border between the traditions of science communication studies and media studies are (Arnoldi, 2005, Dunwoody, 2008, Friedman et al., 1986, Fenton et al., 1998, Hansen, 1994, Haslam and Bryman, 1994, Nelkin, 1987, Weiss and Singer, 1988, Horst, 2003, Carvalho, 2007, Maesele and Schuurman, 2008, Marks et al., 2007). This thesis similarly operates at the intersection between the two traditions¹⁰.

⁸ See also Sanden and Maijman (2008).

⁹ Journalism studies is generally considered a subfield of media studies.

¹⁰ For an account of studies in the mass communication of science see Logan (2001), and for a review of science communication literature more generally, Weigold (2001).

Media studies

Just like the traditions outlined above, media studies draw on various academic disciplines, ranging from sociology and ethnography to communication studies, cultural studies, linguistics, and many more. And like science communication studies, the field can be divided into a more quantitative and a more qualitative tradition. They need not be constructed as oppositional, but for the sake of clarity I treat them separately here¹¹. The quantitative tradition has been occupied with measuring media effects and carrying out quantitative content analyses, whereas the qualitative has engaged in media and audience ethnographies and qualitative textual analyses.

Concern with the mass media dates back to major diagnostic contributions, such as Marshall McLuhan's idea of the global village (McLuhan and Powers, 1986) or the Frankfurt School's Marxist critique of the culture industry (Horkheimer and Adorno, 1944). A range of early approaches to the mass media tended to operate on this general level, theorizing the possible effects of mass media on society or individuals. This interest has been persistent, and has resulted in the formation of a 'sociology of mass communication' concerned with the role of the mass media as an institution in society (e.g. Curran, 1977, McQuail, 1972, Meyrowitz, 1985). The influential British Cultural Studies tradition also engaged with this theme, but, importantly, spurred an interest in the interactional aspect of meaning making. With the concepts of encoding-decoding, Stuart Hall created an analytical framework for investigating how meaning is created both with the sender and with the receiver of a message (Hall, 1974). This can be seen as an early evidence of the huge interest media studies has accorded to audience and reception studies (e.g. Ang, 1985, Richardson and Corner, 1986)¹². Reception studies could take different forms, for instance they could use interviews or ethnographic methods. The latter were also used in studies of media production (e.g. Tunstall, 1971, Cottle, 2000a, Reisner, 1992, Schudson, 1996), for instance in newsroom studies. Such media production studies are related to more macro-oriented organization studies of media corporations.

Alongside the studies concerned with the mass media as institutions, or with researching the audiences or producers of media products, the study of media texts is a huge subfield within media studies. Quantitative content analysis is aimed at uncovering patterns in media coverage, e.g. through the measurement of coverage of a topic over time (for an

¹¹ Jensen (2002a) offers an extended discussion of their interrelationship.

¹² See also Jensen and Rosengren (1990) and Schröder et al. (2003).

account, see Schröder, 2002). Other kinds of textual analyses include rhetorical, semiotic, linguistic, etc. Here, I will emphasize a strong tradition of applying discourse analysis, to be able to reflect upon the relationship between textual features and the (practical and social) context of a given media text (e.g. Fairclough, 1995, Phillips, 2000, Chouliaraki, 1999, Carvalho, 2005). Discourse analytical studies are also coupling media text analyses with audience research (e.g. Schröder and Phillips, 2007, Benwell, 2005). The studies mentioned here primarily draw on critical discourse analysis, but few attempts have been made to apply the discourse theoretical approach of Laclau and Mouffe (1985)¹³. An edited volume offers further examples on different discourse analytical approaches to media texts (Bell and Garrett, 1998).

In this short section, I have not mentioned more specialized areas of study, such as television/radio studies, community media studies, new media studies, and numerous other areas of concern within, or on the margins of, media studies. For general overviews of the field, see for instance Jensen (2002c) or Corner (1998).

Besides the overlaps between media studies and science communication studies on the level of empirical observations and analytical discussions, as mentioned in the previous section, I will point to another overlap on the level of epistemology, namely between elements of discourse theory and ANT. As John Law has noted, ANT is about the “ruthless application of semiotics” (Law, 1999) – and this can be said of discourse theory as well. They share the poststructuralist insight that entities only acquire meaning in relation to other entities. This thesis turns to subfields of the traditions discussed above to engage with such insights regarding language and meaning.

Summing up

There are few common discussions running across the broad, interdisciplinary traditions outlined above. However, in my reading of them, some of their subfields are bound together by proponents of a constructivist approach to identity and knowledge and a focus on professional practices, and they all contain discussions of expertise and the construction and communication of knowledge. In relation to this thesis, STS and science communication studies are particularly relevant to the focus of the thesis on the communication of science to the public. Media studies and science communication studies inform the elements of the thesis that deal with the mass mediation of science. Finally,

¹³ On the use of discourse theory in media and communication studies see Plesner (2009, Carpentier and De Cleen, 2007), and for an example see (Carpentier, 2005).

both STS and discourse analytical media studies feed into the thesis' analysis of the construction of knowledge claims.

Whereas the thesis draws its ontological position and methodological elements from a subfield of STS, it primarily engages in discussions with subfields of media studies and science communication studies on a middle range theoretical level. That is to say, my analytical observations are contrasted with or supplemented by the analytical observations of media studies and science communication studies. In the remainder of this chapter, I will demonstrate how. Each section opens with a presentation of the insights I have adopted from ANT and STS, revolving around the analytical focus points of the thesis: assemblages, actants and translations. Each section then proceeds to discuss the contributions of media studies and science communication studies in areas related to these focus points. Here, I give quite extensive examples of particular studies, in order to substantiate my claim regarding their affinities and differences in relation to this thesis' focus on assemblages, actants and translations.

1) Assemblages in the mass mediation of research-based knowledge

The objective of this section is to introduce my use of the concept of assemblages (and its sibling concepts of associations, actor-networks and collectives) in the analysis of mass mediation of social scientific research. After explaining why the concept of assemblages provides a useful way of looking at connections between actors and elements in the mass mediation of social science, I will turn to some contributions of media and journalism studies, as well as the narrower field of science communication studies. Since the thesis enters the empirical domains of subfields of these academic traditions, I will discuss and contrast how the issue of connections has been addressed there – with other concepts and concerns at the center of attention. As noted earlier, I do borrow ideas and empirical insights from media studies and science communication studies, but the goal of this introductory chapter is first and foremost to position my ANT-based (Latour, 2005) approach to mass mediation of science by pointing out some of the ways in which it is distinctive from other approaches to the same issues, as well as how it has affinities with elements of those approaches.

An ANT-inspired conception of connections

Bruno Latour has called Actor-Network-Theory a 'sociology of associations' (Latour, 2005). He constructs this as an opposition to the traditional 'sociology of the social', which

explains all kinds of activities – e.g. law, science, politics, religion – with the same kind of stuff, namely ‘the social’ or ‘social mechanisms’. ANT, on the contrary, refuses to use ‘the social’ as an explanation altogether. Instead, the social is seen as an outcome of *associations*, which then become the central analytical concern. ANT claims that

...there is nothing specific to social order; that there is no social dimension of any sort, no ‘social context’, no distinct domain of reality to which the label ‘social’ or ‘society’ could be attributed; that no ‘social force’ is available to ‘explain’ the residual features other domains cannot account for (Latour, 2005: 4)

From an ANT perspective, it is thus an empirical question how different actants create associations, and *thereby* tangible, ‘real’ phenomena. Ties between actors are constantly made and un-made (Latour, 2005: 28), and the task of the researcher is to follow the traces of these activities. The ideal of Latour is to approach the empirical material in a way that he has characterized as “naïve and myopic” (Latour, 2005: 104). The idea of staying close to the material to follow associations in the making is central to my project’s focus on how people involved in the mass mediation of research relate, compare, and organize (Latour, 2005: 150) knowledge claims, expert positions, issues and events in their professional practice. In line with this, I refrain from using abstract forces such as ‘culture’ to explain relations between – for instance – different occupational groups, but try to grasp the emergence of connections between various entities.

And precisely the point about *various* entities is important. Talking about associations in an ANT-perspective means acknowledging how a very varied spectrum of human and non-human elements (for instance a new CEO, a market analysis, a technology, a feeling) relate to one another. I will get back to the role of non-human actors in the coming section. For now, I will merely emphasize how this approach to associations encourages us to bracket our preconceptions about how different entities relate to one another, and try to create accounts based on how actors themselves relate different types of entities to one another:

...either we follow social theorists and begin our travel by setting up at the start which kind of group and level of analysis we will focus on, or we follow the actors’ own ways and begin our travels by the traces left behind by their activity of forming and dismantling groups (Latour, 2005: 29)

In media studies, working analytically with an ANT conception of associations thus implies an openness vis-à-vis the heterogeneous types of elements that are assembled in specific situations. For example, a community of online-journalists is intrinsically linked to

computer-hardware and broadband connections, and relations between reporters and sources might be dependent on texts such as reports, statistics, or the like. Instead of defining our focus in advance (on interpersonal relations, institutional factors, texts, or technologies), the idea is to forget about 'levels' of analysis and explore what actually happens in, for instance, the mass mediation of research.

In ANT, the concept of 'actor-networks' is devised to capture such heterogeneous associations of various kinds of actants. It is an analytical concept aimed at capturing concrete connections which are physically traceable – 'actor-networks' are not fixed entities 'out there'. Other concepts have been used to point to the processes of establishing and maintaining relations. They include associations, collectives, and assemblages (e.g. in Latour's work, see Latour, 2005, Latour, 1986). I use them somewhat interchangeably throughout the thesis, but I have chosen 'assemblages' as a heading for this part of the chapter because I think it points more to the *processes of creating relations*, than to the material aspects which I will cover in the section of 'actants'. The concept of assemblage points to a certain analytical sensibility:

...extracted from the Deleuzian theory machine and made to do conceptual work in specific projects of cultural analysis and research, assemblage functions best as an evocation of emergence and heterogeneity amid the data of inquiry, in relation to other concepts and constructs without rigidifying into the thingness of final or stable states that besets the working terms of classic social theory. (Marcus and Saka, 2006: 106)

Marcus and Saka are exponents of the tradition of ethnography, and their engagement with the concept testifies to the extension of this kind of analytical sensibility. It is fundamental to post-structuralist approaches as such, and part of a general move towards looking at how practices create the world we live in – i.e. moving the attention from identifying established structures and positions to positing that these are contingent, constantly made and remade, and that we should look at the ways in which they have come to emerge as phenomena we can relate to¹⁴. Assemblages or actor-networks may become rather solid, but they are contingent.

An anti-essentialist and agnostic inroad into the relations in mass mediation processes

To appreciate what the above described approach to connections can bring to a study of the mass mediation of research, recall 'the litany of differences' (Valenti, 1999) mentioned above. As I argued in chapter 1, studies which are concerned with exploring and

¹⁴ In ethnography, we also see the emergence of similar analytical strategies, such as Marcus' (1995) call for research to follow the people, the thing, the metaphor, the life and the conflict.

explaining e.g. antagonistic relations between researchers and journalists tend to rely on and reproduce an essentializing view of occupational groups (e.g. journalists and scientists) and the relationships between them. Also, they tend to be based on a priori assumptions of which aspect of the mass mediation process should be studied; texts, institutions, or technologies (e.g. Hartz and Chappell, 1997, Haslam and Bryman, 1994, Reed, 2001, Peters, 1995).

With inspiration from Latour's presentation of ANT as a different kind of sociology, this study shifts the attention to *how relations are established among a variety of entities*. One of its basic assumptions is that analyses of mass mediation processes should not leave unquestioned presupposed groups such as 'journalists', 'audiences', 'commentators' or the like. Thinking in terms of professional cultures or occupational identities simplifies what characterizes a journalist or a researcher and what their relationship is about, and ignores the relational aspect of identity. Instead, we can fruitfully focus on the work that goes into making alliances and establishing positions. Inspired by the anti-essentialist view on identity shared by ANT, discourse theory and other post-structuralist approaches, we may find unexpected ways in which people act as audiences and journalists at the same time. Or we will be able to see that a certain constellation of actors is dependent on a Friday get-together at the local bar, on an internal mailing list, or on certain concepts. So in the case of the mass mediation of research-based knowledge, people, ideals, symbolic constructions, and material elements are seen as equally important elements to analyze, in so far as they become parts of specific assemblages, and the identities of actors are modified as a result of the association. This *openness of the analytical framework* sets ANT apart from a number of approaches to mass mediation.

However, while the thesis should be seen as part of the previously mentioned non-essentializing move, which refuses to take categories for granted, its main ambition is not to deconstruct categories, as in many poststructuralist approaches. It merely seeks to broaden our understanding of how much complexity and variation can be found within, around and between categories. And although it shares the poststructuralist interest in looking into 'how things have come into being' – as opposed to more a more realist interest in 'how things are' – the approach of the thesis also differs from deconstructive approaches by being concerned with the relative solidity of constructions as well as their performativity when they are embedded in networks. As such, it is emphasized throughout the thesis that thinking in terms of differences (also) makes sense because actors navigate in relation to common sense – and theoretical – understandings of what it means to be a journalist or a researcher. Still, even if people co-construct distinct

professional practices and identify with those, they are also engaged in numerous other practices and relations, which create complex versions of the professional person.

Drawing on the concept of assemblages in the analysis of mass mediation in the way described above entails that we think differently about scale (Latour, 1999a: 258) in relation to the media. It means that we stop thinking in terms of micro (the individual) and macro (the media machinery). Instead, we can think of mass mediation as consisting of a number of concrete interactions and manifestations that take place at 'the same level'. If our analytical attention is directed towards this level of interaction, we can think of connections in mass mediation of research in ways that do not rely on cultural or social explanations. Latour wants to bracket the structure/agency debate. ANT is not meant to solve the problem of the relationship between micro/macro or practice/structure – these distinctions are, from an ANT-perspective, untenable. In general, ANT is unwilling to talk about levels, or about 'parts and wholes'. For a critique of this, where it is argued that it is possible to theorize how elements are parts of a whole without this being about jumping to empty notions of context, see Tsing (2008). In the methodology chapter, I will explain how I agree with the point that broader situations are present within specific situations, and throughout the thesis I will return to discussions of the promises and problems of this position.

From offering an account of how the thesis interprets and uses the concept of assemblages to account for various kinds of connections in the mass mediation of social scientific knowledge, I will proceed to a selective reading of how media and journalism studies have addressed the same kinds of issues in ways that both have affinities with and differ from the above described.

Theorizing connections in media and journalism studies

Whereas media studies have tended to operate either on the level of textual analysis, on the level of individual readings of media products, or on the institutional level, its sub-discipline, journalism studies, has typically carried out ethnographic studies of work practices in mass media organizations, for instance in editorial meetings. As we will see in this section, this means that connections between different elements in mass mediation processes have been theorized on micro, meso or macro levels, sometimes with connections between levels, but nonetheless with a fundamental distinction between them. In the following, I will give examples of how connections have been theorized on these

different levels¹⁵, and develop my argument for another approach to connections, where scale is less of an issue.

A concern with source relations

The problem of access

In media sociology, one type of connection has attracted considerable attention. This is the connection between journalists and sources. Journalists are portrayed as a somewhat neatly delineated group, which has special relationships to particular groups of sources, be it politicians, interest groups, or experts. At stake in their relationship are issues of access and power: To what degree are some groups favored by journalists? What happens when journalists get close to those in power or mingle with the elite? (Schudson, 2003: 134). To give an example, Paul Manning has theorized the interaction between news sources, journalists and news organizations as a struggle to control information flows (Manning, 2001: ix). With a view to Habermas' ideals of an inclusive public sphere, he argues that we should be concerned with issues of access to the mass media. How are different sources assessed by journalists? How can we explain journalists' reliance on routine sources of information? What strategies can subordinated groups use to become part of the news agenda setting process? Those are important issues, which can only be addressed if we keep the discussion of media relations on a general level, looking for patterns in coverage and tracing social networks. However, this requires that we maintain a focus on distinct and delineated professional groups, and stick with somewhat predefined ideas about the potentially problematic nature of their relationship. Therefore, a discussion of access cannot be part of the present thesis.

The power of routinization

To explain why journalists connect with some sources and not others, or select some events and not others as worthy of inclusion in their news coverage, media scholars have drawn on the concept of routinization. Whereas early studies of news production focused on gate-keeping and gave subjectivist explanations of source and news selection (White, 1950), a second wave of newsroom studies showed that news is a bureaucratic accomplishment (Cottle, 2000b: 433). Manning refers to Golding and Elliot (1979) for arguing that broadcast journalism by no means can be seen as the random reaction to random events, but is a highly regulated and routine process of manufacturing a cultural

¹⁵ Although it could easily be argued that textual analyses are concerned with identifying connections (between keywords, modalities, clauses) etc., I will save the discussion of textual analyses for the coming sections, because I am more concerned with showing the translation/construction interest of textual approaches, and this is the theme of the last section of this chapter.

product. Manning adds that even if we no longer conceive of the production of news simply as a question of mechanics and routinization, organizational pressures encourage the routinisation and standardization of news journalism more than ever. He believes – and others with him – that in the face of (time) pressure

One way of building certainty and control into the news production process is to establish stable relationships with outside institutions and agencies which can be relied upon to provide the kind of information that can easily be fashioned into news copy (Manning, 2001: 55)

So linked to the idea of routinization is a concern with the establishment of long-term exchange relationships. As Cottle remarks, the establishment of this linkage has become orthodoxy within critical media studies. However, Cottle holds that routinization can only partly explain the establishment of connections – and he refers to a minority of production studies which point to a less organizationally or professionally closed state of affairs (Cottle, 2000b: 434-36). Cottle insists that it is problematic to try to explain relations with reference e.g. to social or geographical proximity between journalists and sources. It could be added that it is problematic to extrapolate that routinization is an underlying mechanism that can explain patterns identified in an analysis.

The connections between journalists' work practices and culture

Culture is another common abstract phenomenon drawn upon to explain the connections between journalists' work practices and concrete choices. A broad range of media studies emphasize context and cultures or 'the social structure' as they analyze media production processes or media products (for a review, see Jensen, 2002b: 171). Michael Schudson (2003: 186) notes that most research on the culture of news production takes it for granted that at least within the different national traditions of journalism, there is, for instance, one common news standard among journalists. He further makes the case that this is not a universal or objective standard, but must be seen in relation to given historical, geographical and ideological circumstances:

A news story is supposed to answer the questions "who," "what," "when," "where," and "why" about its subject. To understand news as culture, however, requires asking what categories of person count as a "who," what kinds of things pass for facts or "whats," what geography and sense of time is inscribed as "where" and "when" and what counts as an explanation of "why" (Schudson, 2003: 190)

Schudson's point is that journalism is not a mechanical affair, but guided by literary conventions, conventions of sourcing, unspoken preconceptions about the audience,

assumptions about what matters, what makes sense, what time and place we live in, and what range of considerations we should take seriously (Schudson, 2003: 189-190). I profoundly agree with Schudson that the practice of journalism must be seen as situated, but I nevertheless refrain from using culture as an explanation for the specific assemblages of journalists, facts, and sources that emerge through my analysis. As explained earlier, culture is among the abstract explanatory devices that tend to remove focus from actual practices.

Actual interactions

Mark Deuze has stated that there is a need in media studies to move beyond normative concerns and focus more on what people actually do when they work in the media, and how they give meaning to this (Deuze, 2007: 111). However, it is in fact possible to identify media studies that actually zoom in on the practices of those producing media products. They include a body of research (e.g. newsroom studies and some source relation studies) concentrating on the specific moments where journalists and sources get connected and negotiate about the construction of a media text (e.g. Tunstall, 1971, Cochran, 1997, Albæk, 2007, Schultz, 2006).

In the case of interactions between journalists and experts or researchers, a Danish example is a study based on phone interviews with actors involved in the production of 395 media texts. The aim of the study was to investigate why journalists chose to use experts as sources in their news coverage, and to look into the nature of the interaction of experts and journalists (Albæk, 2007). This issue was approached by contacting journalists and experts on the same day as a news article appeared in one of the large Danish newspapers. The study concluded that although researchers often functioned as an independent authority confirming the framing of the story, this did not imply that the researcher passively provided information or expertise to the journalist. On the contrary, there seemed to be much interaction between researchers and journalists, and both journalists and experts reported how the latter had acted as sparring partners as journalists developed a story (Albæk, 2007: 15). This contradicts earlier studies which – based on textual evidence – have suggested that experts are brought into stories in a somewhat mechanical way to confirm the stories of journalists (Wien, 2001: 4).

Another well-known study of the interaction between journalists and expert (social science) sources is the holistic study carried out by Fenton et al (1998) in Great Britain. These media researchers constructed their study of the mass mediation of social science as a mixture of quantitative and qualitative methods. They carried out quantitative content

analyses, mail questionnaire surveys and semi-structured interviews; they tracked journalists and did focus group analyses of audience reception; and they analyzed the media content used in their audience research. The aim of their extensive study was to present the 'natural history' of a newspaper report, tracing its 'gestation' in the interaction between several individual and institutional sources and news professionals. They emphasized that they wanted to go into the details of its production, and among others they wanted to shed light on the political and strategic actions of news sources in seeking to influence the frame of media coverage of a certain report, while considering the mediating role of the news-professionals in translating competing agendas into a final article (Deacon et al., 1999). My study has some affinities with this kind of approach, but it is less occupied with capturing a 'whole' and theorizing the relations between professional groups on a general level. The study of Fenton, Bryman and Deacon was modeled on a development of Stuart Hall's concepts of encoding and decoding (Hall, 1974), and thus carried an underlying assumption of a certain linearity of media production and consumption¹⁶. My study, by contrast, seeks to capture the very local activities in relation to the production of a media text, and refrain from generalizing with regards to what takes place in the different stages of media production.

A final type of study to be mentioned here is media production studies which deal more broadly with practices and discussions in news rooms or editorial meetings, basing their analyses on ethnographic research over a period of time. They may cover the connections or interactions between editors and journalists, and between these actors and actors outside of the news room. They show how media products are assemblages of numerous elements that have to connect in specific ways in order to go into print or into the air. For instance, it has been shown how interactions in a newsroom from early morning to early evening mold the specific news broadcast that goes into the air at night (e.g. Schultz, 2006: 73, who also provides a timeline of similar works). Although I tell similar stories of choices and negotiations that have been decisive for specific media texts, my analysis differs from such media production studies. First, because the latter are able to draw more general conclusions about news work or editorial practices than my type of analysis, which is much more myopic¹⁷. They can be seen as investigations of system effects, while my thesis is a study of particularities, i.e. it attempts to create an understanding of mass mediation

¹⁶ By this I mean that despite the claim that encoding and decoding are not separate moments, but stand in a dynamic relationship to one another, the analytical strategy following from the model still assumes delineated actors and entities.

¹⁷ I will return to the discussion of the advantages of being myopic in the section on methodology. Here, I will just point out that it can be seen as a pragmatic choice between looking at the general, the global, and the systemic versus looking at the specific, the local and the practical. Taking the metaphor of being myopic seriously, it is impossible to have both kinds of vision at a time.

practices based on particularities. Second, because this type of journalism studies are primarily constructed as one-site ethnographies, whereas my study has specific texts or relations in the centre and then looks at dispersed relations, sites and actors.

A concern with connectivity

My ambition to give priority to following connections outside of the sites of media production and to emphasize relations rather than specific professions can be seen as parallel to an emerging interest within media studies. This can be exemplified by Deuze (2007: 34), who tries to capture a new kind of networked sensibility in news work, partly provided by new media which deliver connectivity. In his diagnosis of media work of our time, he attempts to conceptualize the complex environment that the media worker operates in, comprised of ties, relationships, and demands that come from within and from outside of media institutions (Deuze, 2007: 91). He holds that media work is marked by a complex, daily interaction of 'creativity, commerce, content and connectivity' (Deuze, 2007: 83).

This section has demonstrated that media production studies theorize connections on a number of levels, and that there is a general concern with capturing the complexities of such connections. For obvious reasons, a large part of the literature is primarily concerned with activities within the confines of the media institution (where the production takes place), but, interestingly, we see examples of research designs that are aimed at taking the relations or negotiations between actors or entities as a point of departure. This can result in very different types of studies, since it is an open question where and how those relations and negotiations can be identified. It will become clear below how this thesis has a similar research strategy of following the connections pointed out by different kinds of actors.

Theorizing connections in science communication studies

The subfield of science communication literature concerned with the mass mediation of science has also been occupied with relations, mostly to show the problematic relationships between different actors involved in science communication. Weigold (2001) has provided a thorough review of this type of scholarship, which I will refer to in the following, adding references to a range of empirical studies which illustrate issues related to 'connections'. At the end of the section, I present an ANT-inspired attempt to approach relations in science communication. According to Weigold's account, science communication studies have dealt with five types of actors and their interrelations. I will introduce these – and the general problems they are said to have – in turn.

Routinized connections between researchers and journalists

In science communication studies, there is a body of research dealing with news organizations and science. It has shown how reporters rely on routines that provide access to news, such as press conferences, announcements, and scientific meetings. Interactions between journalists and researchers are often described as dominated by journalists' tendency to work from predefined angles, and news criteria are constructed as influencing how science is covered (Weigold, 2001: 167). As such, this literature can be said to rely primarily on the explanatory power of routinization, which I also described as central to theorizing connections in media studies in general. There are exceptions to this, as in studies that explore scientists' encounters with journalists and assessments of media relations (e.g. Gascoigne and Metcalfe, 1997, Nielsen et al., 2007). But while these offer a more nuanced and positive picture of connections, they hold onto a strict delineation of professional groups.

Inherent antagonisms between journalists and editors

The science communication literature that deals with journalists has a tendency to focus on their professional backgrounds and prerequisites for doing their job adequately. But some studies deal with connections among journalists, uncovering how they pool resources and join forces when deciding what qualifies as science news (e.g. Fenton et al., 1997). Apart from this, several studies have looked into the relationships between science writers and editors, which are allegedly marked by editors' tendency to overrule, simplify and sensationalize journalists' work (Weigold, 2001: 170). Since editors often construct headlines and leads, a science story can change quite a lot in their hands right before it goes to print. In these kinds of studies, journalists are positioned as loyal in relation to the research they are covering, whereas editors are positioned as part of the media machinery, with constant consideration of what the audience might want to hear. In this way, these studies contribute to the above described tendency to think in terms of differences – and problems between two distinct professional groups. Still, some of them have an eye for the ambiguous position of the journalist, who is sometimes aligned with the media – in an antagonistic relationship to researchers – and sometimes aligned with researchers' agendas – in an antagonistic relationship to their editors (Schmierbach, 2005: 282pp). Connections, in this literature, are generally portrayed as either routinized or problematic.

Science information professionals connecting scientists and reporters

In studies of relations in science communication, transmission metaphors abound. And when communication is seen as a chain from researchers to journalists (and their

audiences), the science communication officer may be seen as a link in this chain. Accordingly, communication “will travel through” (Weigold, 2001: 171) this actor. The communication officer is conceived of as a ‘liaison’ between scientists and journalists, performing a difficult role of boundary spanner who is needed because of the conflicting roles of scientists and journalists. This difficult role is captured by C.L. Rogers when he writes: “Scientists see the professionals as too close to the media, journalists see them as “flacks” for scientific organizations, and both view them as representatives of organizational administration” (1986, quoted in Weigold, 2001: 171). There are relatively few science communication studies dealing with science PR people and their connections to other actors involved in the communication of science (but see, e.g., Treise and Weigold, 2002, Walters and Walters, 1996). A parallel can be drawn to media and journalism studies in general, which treat PR people as part of the ‘sources’ that may inform or influence journalists, but rarely place them at the center of attention. But when they are portrayed, this is not only as a kind of translation machines, but as ambiguous figures whose identity is linked to specific situations or relations, like I argued it was sometimes the case for journalists.

Troubled connections between scientists and the public

In science communication studies, there is a great deal of concern with scientists’ abilities and willingness to communicate with or to the public. The lack of connections between scientists and the public are explained with reference to scientists’ difficulties of communicating in plain language (e.g. Walters and Walters, 1996, Shortland and Gregory, 1991). A big issue is whether and how scientists can – and are willing to – improve their communication skills, for instance by taking communication courses. The idea is that “the scientist must be skilled at translating ideas from the technical language of his or her discipline into a currency accessible to lay audiences” (Weigold, 2001: 173, Shortland and Gregory, 1991). The science communication literature – and Weigold’s review of it – makes very few references to the Public Understanding of Science tradition and its attempts to conceptualize the relationship between ‘science’ and ‘the public’ in ways that go beyond the problem of speaking different languages. So although there is some recognition of the widespread criticism of deficit models of communication – and the assumptions about science and the public that comes with it (see Dijck, 2003, Logan, 2001, Bucchi, 2008)¹⁸ – the literature tends to remain occupied with the more technical problems of establishing connections between science and the public.

¹⁸ And more pronounced criticism of deficit models of communication in, for instance, science communication studies occupied with dialogic communication.

The public as disconnected from science

The last type of actor which is mentioned as central in science communication studies is 'audiences'. They are constructed as an entity separated from both the entity 'science' and the entity 'the media', and as actors which it is hard to connect with. Just like scientists are seen as having a problem of expressing themselves, audiences are constructed as having a problem of listening. So we have two groups that are distinct, where communication has the potential to connect them. Again, this is not to suggest that science communication studies are unaware of critiques of deficit models of communication¹⁹, but they remain concerned about the public as an entity which is difficult to reach²⁰. In Weigold's review, we encounter three ways of addressing this difficulty (Weigold, 2001: 174). The deficiency model depicts the public as ignorant about science, but potentially reachable through efficient, pedagogical communication. The rational choice model reminds us that we should be concerned with what people *need* to know, and the context model requires understanding of the context of people's use of scientific knowledge. The literature on Eurobarometer surveys (e.g. Bonfadelli, 2005, Bauer et al., 1994) empirically examines these kinds of issues (of what audiences know and think about science). The quantitative way of addressing the relationship between science and the public has been criticized for assuming a unitary "general public" and having a cognitive deficit approach to public understanding of science (e.g. Davison et al., 1997), but such studies remain occupied with finding new ways of connecting those unconnected actors, e.g. through more dialogical communication (ibid) or through designing differentiated communication so as to accommodate heterogeneous publics with different interests and needs (e.g. Featherstone et al., 2009).

As should be apparent from the above, there is a tendency in science communication studies to cast connections between actors in terms of conflict. And in line with this, Weigold ends his review with a section devoted to summing up numerous examples of 'conflicts among the players'. As he writes,

The science communication literature offers many perspectives on ways in which the interests, goals, values, and routines of scientists and science journalists clash. These differing values may, in part, be responsible for misunderstandings and disagreements that can hinder relationships between journalists and scientists (Weigold, 2001: 179)

¹⁹ See the discussion of PUS on page 24.

²⁰ For instance Horst (2003: 1pp) presents a review of central conceptualizations of the relationship between science and the public.

Among the conflicts described as generally agreed upon is the idea that science is an objective enterprise, while journalism is subjective. Also, journalists are described as having confidence in scientists, whereas scientists hold negative views of reporters. Finally, journalists cannot enter the domain of science, whereas scientists have the potential to learn translating complicated issues into simple prose (Weigold, 2001: 183).

People and their problems

In looking at how science communication scholarship has treated connections, two issues emerge. The literature is primarily concerned with *people* and their interrelations, and is occupied with the *problems* arising from their encounters. Only in rare instances do we see accounts of productive interactions and positive statements about relations. This might be linked to the tendency to focus on problems in linear communication processes, with few attempts to look at communication as networked and part of broadly circulating discourses. As noted above, there are generally few references to the Public Understanding of Science tradition and other approaches which treat communication and mass mediation as elements bound up with a broad range of issues or actors²¹. These remarks are not meant to suggest that science communication studies generally subscribe to inadequate, simplistic, 'traditional views' on communication, be it linear models of communication, diffusion models, or popularization or transmission views. And by the way, such models may offer appropriate tools and conceptualizations for certain types of communication. The point is that when such views of communication run as an undercurrent *in discussions of relations* between the people involved in communication, we are bound to think of their connections in certain ways, which, as the above has indicated, involve asymmetry, misunderstandings and other problems.

Communication in networks

Other approaches to communication have informed studies which can be placed somewhere between the traditions of science communication studies and STS. For instance, journalists' work has been conceptualized as a question of creating networks (Horst, 2005: 188). Against this background, it is possible to look into the connections and

²¹ Within Science and Technology Studies, it has been suggested that PUS and media studies could cross-fertilize each other. Irwin and Michael (2003: 133) have suggested that "any analysis of the process of engagement with expert knowledge should also take into account the impact of various media through which this, and related, knowledge circulates. These media (TV, IT, newspapers, telephones), which are simultaneously cultural and material, might well play a part in 'shaping' the ways knowledges - scientific, personal, experiential, ethical, economic, political - interact, come together, combine or polarize. [...] with the aid of such technologies of communication, negotiations are conducted which facilitate both the emergence of new relations and identities *and* the retrenchment of existing ones". In the section on translations I will go more into the issue of media representations and the place these are assigned as a 'connector' between 'science and the public'.

transformations between sites of knowledge production and media representations. Highlighting *connections* between actors entails that differences are downplayed. As Horst writes, "Although the chains of translation between [...] different settings might be long and complex, there is no fundamental ontological difference between the production of facts and the production of news (Horst, 2005: 197). Of course, this far from implies that relations are free from controversies and antagonism, but an actor-network perspective on communications and relations does not take antagonisms as the natural starting point of its inquiries. The actor-network approach also entails that other actants than people may enter the analysis as significant parts of a network (e.g. Horst, 2008b: 199), and that the analyses follow traces outside of the mediation processes. Horst reminds us that news production is only one among many interconnected ways of articulating 'socially viable representations of the world', and wants to keep broader social and political conflicts in the picture in relation to specific instances of mass mediation of science.

In the above, I have argued that a large part of the science communication literature is concerned with connections between what we could call the traditional actors of mass mediation of science: scientists, journalists, PR-professionals and audiences. I have also briefly mentioned how an ANT-approach – which operates at the outskirts of the science communication tradition – introduces another set of connections to look at, namely the representations which connect sites of knowledge production and sites of media production (and connect these sites to yet other sites). In this thesis, I engage in a discussion of some of the empirical insights provided by more traditional science communication with regards to actors and their connections. The thesis shares theoretical and analytical outlook with the last mentioned type of study, although it can be distinguished from such a mass media analysis because it follows connections made in actors' *practices*, i.e. also outside of the media texts, and does not place representations as centrally in the analyses.

Wrapping up

In the subfields of media studies and science communication studies concerned with mass mediation, there is a concern with connections on two levels, at least. On one level, we see an interest in exploring the conditions for establishing relationships between sources and journalists. On another level, there is a body of research dealing with the (cultural) conditions of choosing to combine particular elements into a story. All in all, in the approaches discussed above, the question of connections is addressed with an eye for practices and culture, in recognition of the view that there is no objective reality waiting to

be reported by journalists functioning as objective mediators. This mirrors the STS interest in analyzing science as practice and culture. Just like the positivist view of science as a disinterested provider of factual truths has been challenged within STS (and elsewhere), the view of journalists as objective reporters of a given reality has been challenged within media studies (and elsewhere). These kinds of insights from both traditions can be used to supplement the different approach to connections of this thesis. In the following analyses, connections are not analyzed in order to account for the culture of mass mediation of social science, but with an eye for the emergence of connections through negotiations.

The above has shown that science communication studies share some of media studies' concerns, especially with regards to source relations. However, there is (of course) a great emphasis on the specificities of communicating science – and on how this subject matter gives rise to particular types of negotiations, often marked by animosity between well-defined actors. The complexity of the subject matter ('science' or research-based knowledge) often tends to overshadow the potential complexities of positions and relations in the mass mediation of science (except in the studies mentioned above which demonstrate some interest in the ambiguous professional positions).

As an addition to the field, the present thesis aims at looking at *other types of connections* than antagonistic relationships between predefined defined actors. This ambition is inherent to the analytical framework's use of the concepts of assemblages and actants. Assemblages are heterogeneous collectives of a variety of actants. The next section takes a closer look at the concept of actants, and it also touches upon the issue of positions in processes of mass mediating science, particular with regards to the performative aspects of positioning work.

2) Actants in mass mediation processes

In this section, I will suggest that the concept of actants can be of value in studies of mass mediation processes because it calls for an open approach with regards to the types of entities we should be interested in accounting for. I will sketch what is meant by actants in ANT, and indicate how the concept can be put to use in a study of mass mediation processes. Then I will – again – turn to media studies and science communication studies to discuss how they have been dealing with the inclusion of non-human elements in the study of mass mediation processes. Again, this is to show how my approach both borrows from these fields, differs from them, and may contribute to them. This part of my account will concentrate particularly on communication technologies, but will also touch upon

elements such as values and identities. The engagement with this type of non-human elements mirrors the space they occupy both in my analyses and within subfields of the media and science communication literatures.

Humans and non-humans in ANT

In the section on assemblages, I argued for looking at *connections* between heterogeneous elements in mass mediation processes, and I briefly mentioned that such elements could be, for instance, people, ideals, symbolic constructions, or material objects. Now let us take a closer look at this claim. It is based on ANT's ambition to avoid distinguishing a priori between human and non-human actors:

...any thing that does modify a state of affairs by making a difference is an actor – or, if it has no figuration yet, an actant. Thus, the questions to ask about any agent are simply the following: Does it make a difference in the course of some other agent's action or not? (Latour, 2005: 71)

The inclusion of other agencies than humans in sociological analyses is not an attempt to take away the agency of humans and grant it to other kinds of forces, but rather a recognition of the fact that humans do not act in a void. Instead, they are linked to all sorts of elements in long chains, and in so far as these elements 'make a difference', they have agency. This is captured by the term 'actant'. One of the purposes of drawing on ANT is to create an analytical sensibility towards this interwoven-ness of humans and non-humans, and to avoid 'the twin pitfalls of sociologism and technologism'. As Latour argues, we are never faced with either objects or social relations, but chains of associations of humans and non-humans: "Of course, an H-H-H assembly looks like social relations while a NH-NH-NH portion looks like a mechanism or a machine, but the point is that they are always integrated into longer chains" (Latour, 1991: 110). So when we have a group of humans (e.g. an editor, a journalist, a source), it might look like we have a set of social relations – but we should not forget that their association depends on and includes (for instance) e-mails, editorial meetings, coffee, texts, and computer hardware.

Drawing on the concept of 'actants' thus implies an analytical sensitivity with regards to the possible influence of non-human elements in specific situations, and an agnostic stance with regards to the kinds of entities that may become actants. Despite the materialist orientation which is built into the concept, material factors are not seen as determining any situations or course of events, and they are not used as explanations for phenomena. To

repeat, the point is to avoid imposing a priori asymmetry (or symmetry) between elements.

Alongside non-human elements, networks consist of very active humans that organize, evaluate, compare, argue, etc. To account for the significant place of humans in ANT-inspired analyses, we may turn to Callon, who has offered an additional explanation of how we should understand the position of the human in relation to non-human elements. In his account, the concept of actor is distinguished from the concept of actant by accounting for an ability to manipulate the other elements in a network in various ways. He defines actors as any entity able to associate texts, humans, non-humans and money. Being an 'actor' implies being an 'author', putting others in motion (Callon, 1991: 140). Still, this does not imply that non-human entities have no agency; even with this additional argument we may hold onto the idea of granting agency to various kinds of entities.

Empirically emerging actants

Social studies of the natural sciences have accounted for microbes, scallops and graphs as active elements of actor-networks. With the ambition of looking at concrete constellations of different kinds of agencies in the mass mediation of social science, it seemed to be a fair assumption that actor-networks assembled around the production of media texts would contain people and symbolic constructions as important elements²². But besides this, some elements were articulated by actors as central to their practices of assembling texts. I have thought of these elements as actants, because they were constructed as performative forces – or as elements that 'made a difference' for the production of media texts. Below, I will try to make it explicit why it makes sense to look at entities such as communication technologies, values, general mechanisms and identities as actants.

When people tell about the practices involved in the mass mediation of social scientific research, they routinely refer to information and communication technologies (ICTs). Different ICTs become coupled to other elements in specific actor-networks – for instance, the phone is central to a specific kind of expert commentator function and the email nurtures particular kinds of relationships. Including materialities such as ICTs should not result in an essentializing account of the 'effects' of ICT, i.e. it is important to keep in mind that mundane technologies like the phone or the email need not perform the same function in different situations. Rather, such technologies must be treated analytically as

²² When symbolic entities are conceived of as actants, this is in line with the discourse analytical view of language as constitutive.

actants tightly integrated in networks with other actants, without being assigned particular forces or consequences a priori.

When actors make references to values and feelings as causing particular choices, such values or feelings are not seen as explanations of a choice or a situation more generally. Instead, they are conceived of as actants, because they are articulated as significant entities for the actors. This implies that for instance a reference to 'news values' is seen as a trace of an actant in an actor-network. The terminology of media studies and journalism is thus present throughout the thesis. Well-known and widely agreed-upon values and mechanisms are constantly referred to by actors, and to steer between reifying them and deconstructing them, I maintain a focus on how they are performed or enacted by assigning them the analytical status of actants. One such mechanism is the idea of 'a media logic'. Although I theoretically question the existence of 'a media logic' (as part of the refusal to draw on abstract, invisible forces as explanations), this phenomenon has been brought into existence discursively and has become an actant because people relate to it as actually existing. For instance, media training of researchers will teach them how to craft one-liners and simple stories that comply with various news values and 'the media logic'. This makes sense because it often works – when researchers are taught those tricks of the trade, they often succeed in getting media coverage. However, it ignores how many different ways researchers have of establishing relations with media actors by ignoring all the instances where other rationalities are at work. My analyses tell stories of journalists who are not particularly interested in news values and who go for complex stories, and when they talk about their decisions, there is no talk about complying with or fighting against a media logic. In such cases, the media logic is non-existent.²³

The same is the case for identities and positions. At times, it makes sense to refer to people's identity constructions and positioning maneuvers to say something about the actors involved in mass mediation of science. However, another analytical object is the instances where identities and positions become actants, i.e. constructions that make people act in certain ways. For instance, when actors work with categories such as 'experts', this entity may become an actant in so far as it has little to do with a specific person or a person's expertise, but performs a certain function in a story or in legitimizing choices or interpretations. Similarly, a co-constructed 'professional identity as a journalist'

²³ I have been able to make this point because I have chosen to interview media actors who are engaged in the communication of social scientific research, and who are affiliated either with more intellectual media outlets or with an area of specialization which is dependent on expert statements. Had I chosen to talk to tabloid journalists or general reporters with little interest in research, I could probably not have told this story.

may push individuals to perform journalism in specific ways, and specific understandings of 'the public' or 'the audience' may become actants because people adjust communication strategies or language use according to these entities. Recognizable positions or identities are not evidence of essential features – instead, they are the outcome of discursive actions. As Latour has remarked,

Just as an innovation can become increasingly predictable by black-boxing longer and longer chains of associations, an actor can become so coherent as to be almost predictable [...But predictable actors] are not forced onto the data, they are extracted from the actors' own efforts at rendering each other's behaviour more predictable (Latour, 1991: 123)

As Latour notes, an essence emerges from the actor's very existence, but this is an essence which can dissolve at a later stage.

In the above, I mentioned that I have a relational view of identity, meaning that identity is possible only in relation to something else (see, e.g. Laclau and Mouffe, 1985: 113). It follows from this that there is nothing essential about identities, and it becomes an empirical question how the subject positions of 'researchers' and 'journalists' are established, and how appropriate 'academic' and 'journalistic practices' are configured in specific situations. Still, we can safely assume that actors involved in the production and communication of science to the public are constantly occupied with positioning themselves and others. Michael and Birke (1994) offer an example of how scientists construct their opponents and the public discursively, and thereby create their own positions. It is a premise shared by all social constructivist approaches that all kinds of identity talk – whether it is about the identity of self or others – has performative effects. For instance, it is in line with discursive psychology and its avoidance of talking about essential or stable traits, attitudes or behaviors which can be discovered (Potter and Wetherell, 1987). It comes with this discourse analytical sensibility that interests are constructed, so when I talk about the interests of my interviewees, this is not to say that they possess certain interests, but to focus on their self-declared interests, which, if they are well-articulated, may become actants as well.

I will argue that the concept of actant has the potential to become a central bearer of an alternative take on 'holistic' studies of mass mediation practices, because it calls for a focus on heterogeneous actors. It alerts us to the significance of the simultaneous presence of people, ideals, symbolic constructions, and material elements in networks of media production. Already at the turn of the millennium, Deacon et al. identified a growing body

of work concerned with the entirety of mass communication processes (Deacon et al., 1999: 6, for a science communication example see Holliman, 2004). I am not trying to argue that existing holistic studies ignore the significance of diverse elements in mass mediation processes. What I am arguing is that the performative effects of various types of elements are under-theorized and that a specific type of agency is often placed at the center of attention as more significant than others. It can be argued that I am not really doing justice to the scholarship that aims to embrace a variety of significant elements (values, geography, time, economy and so on) in media work (e.g. Deutze, 2007), but I have left such approaches out of the discussion here because they tend to operate on a general level rather than on the level of detailed empirical analysis, so looking through their theoretical lenses makes it hard to see precisely how such elements are networked. But let me now turn to the human and non-human elements that are theorized as 'making a difference' in media studies and science communication studies.

Humans and non-humans in media studies

In media studies, the concepts of the media logic, news criteria and professional identities are constructed as entities that make a difference in the production of media texts. Of course, they are not talked about as 'non-human entities', but they are used as common explanatory devices applied by both media practitioners and media scholars. Information and communication technologies (ICTs) make up another non-human element in media work which has been studied quite extensively, not least in studies with a technological determinist thrust. This section devotes quite some space to such media studies, because ICTs are among the actants treated in my analyses.

The mechanism of the media logic

The concept of the media logic has different meanings and performs different explanatory functions in media studies texts. It may refer to the routine workings of a media machinery that processes all kinds of information according to a set of implicit and explicit rules. These rules are depicted as overruling other 'logics'. Hence in this version, the media logic is seen as a dominating force. For instance, a historical account of changing source relations draws on the concept to account for the increasing power of journalists, arguing that 'a political logic' has been replaced by 'a media logic' whereby the requirements of the media have taken center stage and shaped the means by which political communication is played out. Control over news has shifted from the hands of newsmakers to the hands of journalists (Albæk, 2007: 5)

It may also refer to the special characteristics of a particular medium. In that case, the concept addresses the question of the constraining and enabling features of particular media technologies or media formats. Peter Dahlgren has offered a definition of media logic in this sense, arguing that it points to

...the particular institutionally structured features of a medium, the ensemble of technical and organizational attributes which impact on what gets represented in the medium and how it gets done. In other words, media logic points to specific forms and processes which organize the work done within a particular medium. Yet, media logic also indicates the cultural competence and frames of perception of audiences/users, which in turn reinforces how production within the medium takes place (Dahlgren, 1996: 63, with reference to Altheide & Snow)

Often, 'the media logic' is referred to more loosely, for example as an explanation for source relationships or as an explanation of the transformation that statements or texts undergo in the course of media production processes.

News criteria as imperatives

In a similar manner, news criteria or news values are often referred to in a casual way as something that explains the practice or outcomes of news production (e.g. Arnoldi, 2006, Treise and Weigold, 2002). This is not only the case in scholarly texts – indeed, news criteria are commonly articulated by media actors as ground rules that inform their understanding of what is fit to print (Harcup and O'Neill, 2001: 261). However, within media studies, the explanatory power of news criteria has been questioned. For instance, Schultz is critical towards the role they are assigned as anonymous entities which rule over the media (Schultz, 2006: 57). According to her, Danish journalism course books have reproduced the same news criteria or news values from the 1970 to the present day. Those are: timeliness, prominence, conflict, identification and sensation. Shultz herself adds a sixth criterion, namely that of exclusivity. Taking a look at the international literature, the list could be considerably extended²⁴. The point is not so much the naming of the actual criteria, but the role they come to play in accounts of the media. As Schultz remarks, they are used as rather mechanical explanations or justifications, while in practice they are floating – adjusting to a complex reality. For instance, definitions of 'prominence' varies greatly as a function of the journalist defining it, and 'timeliness' may emerge simply because a story is written at a particular moment (Schultz, 2006: 60-61). The criteria are thus given meaning in concrete situations. Tuchman has put forward a similarly nuanced

²⁴ See Harcup and O'Neill (2001) for a review and the presentation of an extensive 'contemporary set of news values.

view of news criteria, asserting that newsworthiness is a product of negotiations (Tuchman, 1978: 211). This is also the tenet of Manning's discussion of news values. He argues that news values are not universal or absolute, but if news sources speak to human interest aspects, simplify the complex or individualize structural problems, they have a greater chance of getting their message through (Manning, 2001: 67). Both Tuchman's and Manning's views express a social constructivist understanding of news criteria, asserting that they are constructed and historically as well as culturally contingent. While I agree with this, such positions do not give priority to accounting for the performative power of such co-constructions. Describing the news criteria (actuality, conflict, etc.) as powerful actants that a text can benefit from associating with probes us to ask more questions about what they do or how they act. In a sense, it is equivalent to saying 'making a research story meet the news criteria is a way of making it more likely to be printed', but the focus on news criteria as actants emphasizes that 'news criteria' is not a phenomenon existing independently of the people, news articles, communication courses and journalism textbooks reproducing it. Furthermore, when they appear as actants in the analyses of this thesis, they are not used to explain choices or the shape of particular texts, but seen as elements interwoven with other elements.

Positions as significant constructions

Linked to the above are constructions of the types of actors appropriate to include in different types of media products. Media studies have been concerned with how positions are established by news workers and in texts. In that way, there has been widespread concern with not only the actual people involved in news production, but also with the subject positions that are possible to take up and the labeling of actors that takes place. I will merely offer two kinds of examples, addressing how images of 'the other' are part of the construction of media texts and how identities are negotiated in media texts.

Cottle (2000b: 440) refers to Berkowitz (1992) and his description of how news workers develop a mental catalogue of news story themes, including how a plot will unravel and who the key actors are likely to be. Such key actors can be 'experts', 'consequence experts' or the like. Cottle adds that this might be the case, but that news actors do not always just play predetermined, textually prefigured roles. Another take on identities and positions comes from discourse analysis. For instance, Phillips has analyzed negotiations taking place in the media around the position of 'the expert'. The analyses show discursive contestations of who has the right to be called an expert, and of the ways in which expertise should be understood. Phillips identifies two discourses articulated through combinations of scientific discourse and everyday, lay discourse. In her particular case, the

latter is characterized by the inclusion of luck, humor, conversational elements, populism, an ethos of commonsense, youth, informal clothes, and localness (Phillips, 2000). She concludes that in the media, experts are ascribed identities both as experts and as ordinary people, which promotes identification between experts and audience (Phillips, 2000: 124-125). Expertise might be cast in lay terms, it has no fixed borders, and a general conclusion to draw from this type of study is that the same is the case for the expert position.

The two ways of looking at positions share a view of positions as constructed through the news production process. I similarly consider positions and identities the outcome of construction processes, but in my analyses I am relatively more concerned with what these positions or identities perform – i.e. what they do to a text or an assemblage. Particularly, the analyses of this thesis seek to capture the processes through which they emerge in relation to other entities, and what this does to the assemblage they are part of.

Imagined audiences as influencing media work

A general discussion within media studies has revolved around the issue of engaging with media audiences. To put it crudely, textual analysts have been accused of neglecting or assuming audience activity, and reception researchers have been accused of assigning audience reception too much significance and ignoring e.g. the reproduction of power or inequalities in media texts, in source relations, or in media institutions. In comparison to this prolonged discussion of audience research, relatively few studies have looked at how *ideas about the audience* are constructed and used in media work. But a collected volume by Ettema and Whitney (1994) introduces different ways in which this issue of ‘audiencemaking’ has been addressed. They write:

By the idea of audiencemaking, we do not mean the assemblage of individual readers, viewers, or listeners who receive messages. Such actual receivers may exist in mass communication theory [...], but they do not exist in an institutional conception of mass communication – at least, they do not exist as individuals. In an institutional conception, actual receivers are constituted – or, perhaps, reconstituted – not merely as audiences but as *institutionally effective audiences* that have social meaning and/or economic value within the system (Ettema and Whitney, 1994: 5)

The construction of such audiences is often based on measuring and segmentation, but audiences may also be ‘hypothesized’, i.e. imagined audiences constructed by media producers. The performativity of imagined audiences (i.e. their function as actants in mass mediation assemblages) is relatively unexplored in media studies, as it is also the case in

science communication studies. I will return to this point in the section on humans and non-humans in science communication studies.

ICTs as affording communication and causing change

Just like STS scholars have drawn upon the concept of affordances to describe how technologies in general shape human action (see Michael, 2000: 23), this concept has been theorized within the sociology of the media. Hutchby has used the term 'affordances' to explore the performativity of the materialities of communication technologies – what he calls “the technological shaping of sociality” (Hutchby, 2001: 441). He is not interested in opening the black box of technology, and he is not interested in looking at technologies as texts (i.e. as given meaning through construction and consumption processes), but in questions of the 'use-in-situated-social-interaction' of technical devices, specifically those used in the mediation of human interpersonal communication (Hutchby, 2003: 582). He believes that media affordances are determined by the way people use technologies, and looks at how people rely on the materiality of – for instance – such technologies as the phone. He has been criticized for treating the properties of technologies as a resource to be drawn upon, rather than taking these properties as a topic of analysis (Rappert, 2003: 575). For scholars interested in technologies per se, e.g. the social construction of technology tradition (SCOT, see for instance Bijker and Law, 1992), it will often be a matter of disagreement what a technology affords and constrains. And as Rappert puts it, the notion of affordances 'does not help out with the hard work of elaborating the relation between technology and the social'. My position on this is closer to Hutchby's interest in people's reliance and use of certain technologies than in questioning technologies as such. However, I am not interested in pinpointing particular traits of different communication technologies, i.e. saying anything in general about what they afford, but only to point at their affordances in particular situations. This is why I grant communication technologies the status of actants in particular actor-networks.

Whereas the notion of media affordances points to a concern with ICTs as part of interactions between humans, or between humans and machines, media studies have also theorized ICTs as central to the development of a whole new journalism. Written in 1997, Cochran's text 'Journalism's New Geography' reflects on the difference between 'traditional journalism' and a new practice and culture (Cochran, 1997: 3). Whereas the former relied on journalists' physical presence where news event unfolded, befriending sources (e.g. at the police station or in the court room), the latter could go directly to 'the raw material of news', which could be found on the internet. According to Cochran's account, this implies that journalists presently have more time for critical analysis and are

less dependent on the 'least reliable source', i.e. the human. Also, multiple sites are now generating news. Before, there was a general neglect of sites beyond the ones routinely visited. The same picture of a new kind of journalism is drawn in Deuze (2001). His study captures some of the specificities of changing work practices brought about by the internet; e.g. how it allows some journalists 'go online' completely and engage in 'annotative journalism' or 'open source journalism'. A central point is that this creates a certain mindset. Deuze and Dimoudi (2002: 88) even talk about 'the media logic of the internet'. This is defined as a converging logic, affecting all existing media modalities with online presence and forcing them to adjust their existing production patterns to the internet. In studies such as the above, technology is portrayed as a driving force for change, and new ICTs stand out as noticeable and different. The merit of such approaches is their attempt to capture the specificities of the new ICTs. But even if we grant the latter importance and accept that particular traits be attached to them, we also need an approach that captures on one hand the seamlessness of new ICTs and on the other hand the possible symmetries between technologies.

In media studies, another type of approach to ICTs deals less with the daily practices of newswork, or with journalism as a profession, and more with the complex webs of relations, which new ICTs enter and alter. The examples below share an ambition to steer clear of technological determinism and account for heterogeneous types of influences that change journalism.

Cottle and Ashton (1999: 22) carried out a detailed empirical study of a particular news operation, in order to understand the complex interactions between changing news technologies and the practice of journalists. They conclude that new communication technologies, digitalisation and technological convergence, along with multi-skilling and multimedia production, have gone hand in hand with a transformation of both professional practices and news content. News centres have been spatially reconfigured, people have been redeployed, and workloads have increased. These developments are not seen as logical consequences of new technologies. Rather, new technologies are seen as constructed – by managers – as a means to restore financial equilibrium in times of increased competition, and as allowing for increased production. Marjoribanks (2000) similarly discusses how the introduction of new ICTs have affected work relations in the media industry. He draws a complex picture of how control over the introduction of computerized technologies into the workplace is dependent on the prevailing balance of power between trade unions and workers, management and employers, as well as the state. So while studies of the role of technology may have a tendency to posit a causal

relationship between the introduction of new ICTs and specific changes in society (McLuhan and Powers, 1986) or in work practices, not all studies do this. For instance, a newsroom study by Ursell identifies a new occupational hybrid between the journalist and the computer expert ('the server manager'), but it is emphasized (Ursell, 2001: 180) that reorganization of work practices were underway before the full import of digital and electronic technologies.

As can be seen from the above, when media studies have looked at technologies, it has been central to *understand technology*, not to let it emerge as significant in actors' accounts. An exemption is Hutchby, who stays on the micro-level with his use of conversational analysis. All of these contributions are characterized by their useful assessments of what technologies can or do, and by operating on a generalizing level. By contrast, this thesis produces situated accounts where a particular technology may have particular performative effects due to its enrolment in specific assemblages.

Humans and non-humans in science communication studies

Values as governing science coverage

News values such as conflicts and timeliness are also talked about as significant in the science communication literature (e.g. the edited volume by Haslam and Bryman, 1994, Leon, 2008), but since this has been covered in the above, I will discuss other kinds of values that are constructed as influences on science communication processes. I cannot, of course, identify all the kinds of values that the literature constructs as crucial to the mass mediation of science, but there is a set of values that seems recurrent. They have to do with the status of natural science versus social science, and the status of science versus non-science.

Several scholars have pointed out that the value ascribed to natural science is visible in the way in which this field is covered in relation to other fields. For example, Evans has argued that the structure of news organizations reflects and reinforces a devaluation of social science, in the sense that most news organizations have no special social science staff, and social science has no special section. Most social science stories are written by journalists who define themselves as general-assignment, political or feature reporters. Evans writes:

Social scientists are rarely afforded the status of natural scientists by either journalists or the lay public. Journalists and their audiences often deem the social sciences less useful and valid than the natural sciences, and occasionally even devalue social science expertise as little different from common sense (Evans, 1995: 168).

This phenomenon is generally explained with reference to the positivist legacy (e.g. Arnoldi, 2006), which posits that real, trustworthy science is based on statistics, double blind tests, and so on. Schmierbach has argued that since 'accuracy' is of great importance to journalists (and editors), they are very happy with numerical data and references to 'n'. He explains this with the fact that journalists are susceptible to same psychological biases as others (Schmierbach, 2005: 284), and in this way uses the alleged agreed upon value of natural science as explanation of media actors' choices.

Also on a more general level, values are seen as separating the domain of science from the domain of the media, leading to a problematization of the idea that research-based knowledge can be successfully communicated via the mass media. In one account, for instance, the mass media is depicted as one of the most important producers of knowledge, information, ideology, norms and values, but also as governed by certain interests, rationalities and power structures (Arnoldi, 2006: 56). This implies that the values of science cannot compete with this system, and the use of scientific sources in the media follows the logic of the media. In another study, it is noticed that science reporters tend to have different values than regular reporters (Treise and Weigold, 2002: 315), thus crossing over between value-systems. This, of course, potentially produces other kinds of problems than the ones just described, for instance tensions between journalists and editors, who are constructed as advocates of the public interest.

Imagined audiences

The public or the audience is portrayed in different ways in science communication studies. Either simply (maybe implicitly) as the *raison-d'être* of communication efforts, as actually existing users or receivers of information, or as imagined audiences. Here, I will go more into the latter sense of the term, where audiences are seen as constructions, and as an entity which scientists, science communicators and journalists have to relate to and adjust to. In science communication studies, I have found surprisingly few remarks on the constructions of audiences that journalists operate on the basis of – apart from recurrent references to the audience as incapable of understanding or appreciating a wide range of topics or concepts (see Logan, 2001: 142). In a review of the edited volume *The Mass Media and Environmental Issues*, Irwin notes that it covers how journalists and scientific

institutions operate with fixed sets of assumptions about audiences. He is concerned with the media-centricity of the book: “the analysis within much of this book simply reinforces this separation of ‘the media’ and ‘audiences’, with the media seen as highly influential over citizen concerns, but with very little evidence produced to support this” (Irwin, 1994: 179). But I will argue that we should talk about a *vague* set of ideas about audiences and publics, which remain vague in the analyses of mass mediation production. For instance, in the anthology in question, Cottle analyses a news program and notes that “the audience is offered no understanding of the background needed to help explain this account” (in Hansen, 1993: 122). But a reception study like John Corner’s and Kay Richardson’s offers an understanding of audience readings of science programs:

...in our research we also found viewers who accorded respect to argumentative *form* without having the capacity or desire to engage very deeply with its *content*. The former permitted viewers to infer that ‘these experts know what they are talking about’ (in Hansen, 1993: 225)

In audience studies, ‘the audience’ obviously becomes less of a vague entity, but this kind of study still refrains from investigating how such knowledge about audiences corresponds to media workers’ conceptions or knowledge of audiences, or from investigating the precise ways in which such knowledge might inform media production work. This is, I should mention, not the intention of audience studies. Picking out some of the statements about audiences does of course not do justice to the authors’ ideas or analyses, but the point here is to illustrate that the influence of ‘audiences’ or ‘conceptions of audiences’ on the mass mediation of science is often overlooked. While Irwin’s main concern is the lack of knowledge about how audiences respond to media accounts, i.e. he is critical of the absence of audience research, I am more interested in how images of the audience are performative – how they become actants in mass mediation processes. This, by the way, is similar to Irwin’s (2006) interest in how ‘talk about the public’ becomes an important player in all kinds of arenas, or to Michael’s (2008) concern with how different kinds of publics (what he terms Publics in General and Publics in Particular) are constructed discursively. Also, it ties in with the rising interest in ‘SUP’, i.e. Scientists’ Understanding of the Public (e.g. Davies, 2008, Young and Matthews, 2007).

One empirical study of imagined audiences argues that experts have models and theories of the competences of lay actors, and that this structures the interaction of experts and lay people (Marenta et al., 2003: 151). The aim of the study is to analyse experts’ conceptions of lay persons. These are captured by the concept of ‘imagined lay persons’ (ILPs). ILPs are functional constructs, and have no necessary resemblance with real lay people. The

point is that experts have no face-to-face interaction with the public which they might be interested in addressing. Lacking this kind of experience, they assemble lay persons (in their imagination) in different ways so that it makes sense to communicate with them. Lay persons may be ascribed economic interests, political motives or epistemic competences, and this is integrated into the communication strategies of experts. Marenta et al (2003: 159) show that experts grant lay people a quite reduced amount of interests and capacities, because seeing them as more complex would make it too difficult to communicate with them. A more recent study has shown that in spite of the widespread recognition of the need for two-way communication and public engagement, scientists tend to conceive of the public as unreceptive and in need of pedagogical communication (Davies, 2008: 430).

Dijck has suggested that we need to see 'audiences' as knowledge-seekers or interpretation-demanders. They have access to new tools such as the internet, they have a new attitude towards science, and they have, to a larger degree, become co-constructors in the process of defining knowledge. According to Dijck's diagnosis, there has been a shift in culture, where science and knowledge are no longer passively disseminated but actively negotiated, and this means that the audience should be rethought as a complex and heterogeneous actor (Dijck, 2003). What this entails – more specifically – for science communication is not clear from Dijck's account, but we might see it as an attempt to establish – conceptually – an understanding of audiences which can ultimately lead to novel ways of approaching potential users of research-based knowledge.

Media formats and 'the media' as significant players

Several science communication scholars have made a call for more attention to the role that media formats and the media apparatus as such play in science communication. Logan refers to a body of literature that goes into issues related to 'channels' and asks questions such as "to what extent does visualizing complex scientific processes enhance the public understanding of science?" Or "To what extent can the interactive, print and visual capacities of the Internet be optimized to the Internet's full potential as a science educational tool?" (Logan, 2001: 149) At another level, Dijck reminds us that the entire apparatus of audiovisual mass entertainment is more than a simple mediator. He calls media technologies – especially high-tech and digital forms – an inextricable part of the sociotechnical ensemble (Dijck, 2003: 184), which means that they must be counted upon as a significant entity in this ensemble.

Empirically, Gascoigne and Metcalfe (1997) have seen that scientists who are experienced media performers recognize how journalists working with different forms of media have

specific needs that can be quite different from each other. From this account, it seems that there exist a set of widely circulating, co-constructed assumptions about different formats and different media which guide how scientists express themselves: “Radio, for example, values entertaining and succinct descriptions couched in colloquial language; television needs pictures; and print seeks a combination of both pictures and eloquence” (Gascoigne and Metcalfe, 1997: 269). This thesis also has a concern with formats, but rather than uncovering the general characteristics of different formats, it includes them in the analysis when they are ascribed constitutive forces in particular configurations.

Information and communication technologies as causes of change

Like media studies, the field of science communication studies contains reflections about what new ICTs have done to the daily work practices of, in this case, science communicators and science journalists. In an article which draws on literature from 1995-2000, Duke (2002) sums up the results of a number of studies which have sought to capture precisely which kinds of new practices ICTs have brought about in science journalism. It is highlighted how the internet is central to researching stories and finding sources, and how e-mail now matches the telephone as a preferred method of communicating with sources. Generally, e-mail research has emphasized how e-mail communication and the internet are linked to ‘efficiency’, and has seen it replacing other types of communication, including telephone, letters, and face to face communication. Duke refers to several researchers, who have argued that the internet has fundamentally changed journalism. For instance, Callahan talked about ‘...the most important new reporting tool since the telephone’, and Garrison “called computer-assisted reporting the dominant new tool of the decade” (Duke, 2002: 316).

Dumlau and Duke offer an account of journalists’ changing practices based on interviews. In their study, they let science journalists describe what the introduction of e-mail and the internet had done to their work practices. All respondents agreed that those technologies had changed the way they work “by facilitating communication with sources, with other journalists, and with the audiences or readers they seek to inform” (2003: 292). Journalists spoke of e-mail communication as “convenient when people are busy”, “indispensable as a system of keeping in touch with people”, “main mode of communication”, and described it as helpful in clarifying information or doing follow-up and in contacting new or difficult to reach sources. One of the interviewees stated that “The thing that is really changing the practice of journalism is e-mail”. The same was said about the web, which was widely used as a research tool, for finding background information, for keeping in touch with colleagues, and for finding sources (Dumlau and Duke, 2003: 293-296).

In this section's discussion of media studies, I mentioned a tendency to establish causal connections between new technologies and changes in work practices. As we have seen here, this tendency can be identified in science communication studies as well.

Wrapping up

There is one actor commonly treated as an object of analysis in both media studies and science communication studies, namely the expert. In the above, we have seen that subfields of media studies and science communication studies share one of the concerns of the following analyses, namely to describe how people are positioned as experts and what function this positioning has. This is in line with science studies concerned with expertise as achieved (e.g. Jasanoff, 2003, Gieryn, 1983) – and it implies that I am more interested in the work done to establish or categorize expertise in concrete mass mediation processes than in entering the huge discussion of the role of experts in society and the classification of different kinds of expertise (e.g. Collins and Evans, 2002, Wynne, 2003, Rip, 2003, Turner, 2001, Jasanoff, 2003). Of course, this discussion is immensely important, but again, the conceptualization of experts and expertise as actants that have performative effects in concrete networks takes the discussion of expertise to a less general level. Hence, the contribution of this thesis to this subfield of science studies is the detailed analyses of the minutia of the processes of establishing expertise or expert positions in specific mass mediation processes.

To return to the above discussions of conceptualizations of humans and non-humans in subfields of media studies and science communication studies, they have indicated how non-humans are not just an interest of ANT and other avowedly materialist sociological approaches. Media studies and science communication studies of other epistemological orientations also analyze and theorize entities such as values, positions and technologies as important aspects of mass mediation. The distinct contribution of the concept of the actant, apart from the ontological and epistemological baggage it carries, lies in the coupling of entities, as well as in the explanatory power elements are assigned. As I showed in the section on assemblages, ANT is concerned with looking at the relations between entities in a symmetrical way. This means that one entity should not stand above the other to explain it, and one entity should not be understood as operating as a general mechanism standing above – or lying underneath – the occurrence of particular elements.

As I have shown above, some approaches to technologies tend to overemphasize their effects. Both media studies and science communication studies have told numerous stories of how the daily practices of media work and science journalism have been altered because of new ICTs, and how these changes have been articulated discursively. My study shares the interest in practice with some of those studies, and I agree with their ambition to embrace a whole range of phenomena to understand new ICTs in science communication. Also, they usefully point to some consequences of particular technologies. What distinguishes my study from the ones discussed above is that it started out with no assumptions about the significance of ICTs, or other actants, and that it avoids generalizing about its findings. Actors' concern with (e.g.) ICTs emerged from the empirical material, and it is basically their very specific stories, which are rendered in my account²⁵. The merit of this approach is primarily that it avoids building explanations into the research design, but gives actors a say regarding what is important. I believe that the analytical advantage of 'actants' is that it may draw attention to the mundane, often unnoticeable, objects of everyday life – be it advanced ICTs or the coffee machine in the newsroom.

3) Translations in mass mediation processes

The notion of translation is the last concept which is central to my approach to the mass mediation of social science. In ANT, it has a specific meaning as that which holds actor-networks together. It also points to the contingency of discursive constructions – and thereby to the fact that particular texts are constructed in particular circumstances as part of actors' particular projects. This is also a widely shared assumption within media studies, and I will give examples of how media studies address the issue of situatedness and construction in a way that differs from the ANT approach to construction. In ANT, translation also points to processes of transformation, and this interest is shared by science communication scholars. Within the field of science communication, some studies have emphasized translation as a linguistic phenomenon, while others have been more interested in looking at the negotiations that shape statements in specific ways. This last concern is quite close to my concern with translations, as I will show in the following.

²⁵ See Plesner (forthcoming) for empirical examples and an extended argument on this.

Translations as central to associations

Two aspects of the concept of translation are particularly relevant to my use of it, namely its centrality to alignment processes, and its centrality to communication processes as such.

Translations as central to alignment

Engaging with insights of ANT, I conceive of translation processes as central to the establishment of actor-networks. Just like non-humans are essential for holding actor-networks together, as I argued above, this is the case for translations. Different actors and actor-networks manage to reach agreement and associate through translations, i.e. to join forces, they must be able to reach common definitions. A successful process of translation generates a shared space, equivalence and commensurability in an actor-network. It aligns actors who otherwise have different agendas. Conversely, unsuccessful processes of translation weaken the actor-network (Callon, 1991: 142-145). The point is that objects and actors do not have fixed identities or interests, but that identities and interests become a collective project where some actors may succeed in defining others' place in the collective. If we take, for instance, the assemblage of a media text with social scientific content, the story has to fit with the interest of an editor (or the editor's interest has to be shaped to fit the story), maybe statistical facts have to be aligned to confirm an angle on the story (or the storyline has to be aligned so that it fits statistical facts), experts have to make proper statements in relation to parts of the story, or journalists have to adjust their interests to fit the expert statements. And so on. If all these elements of the actor-network are not aligned, we cannot talk about a successful translation process – or a successful text, for that matter.

Latour has defined translation processes as a chain of actors that shape and alter an original statement in accordance with their projects and needs (Latour, 1986: 268). This is not (necessarily) a deliberate, manipulative process, but rather a series of adjustments, experiments, or negotiations about how things can be put together. Tied to this is a view of communication as much more than a linguistic representation of an objective world; we do not have an objective reality on one hand which is to be transmitted faithfully to some mind on the other hand²⁶. Rather, objects, identities and representations are created along the way. So translation is not just about representations, but also about the constitution of actants:

²⁶ See Latour (1999b: 69pp) for a detailed account of processes of transformation

Thanks to translation, we do not have to begin our analysis by using actants with fixed borders and assigned interests. Instead, we can follow the way in which actant B attributes a fixed border to actant A, the way in which actant B assigns interests or goals to A, the definition of those borders and goals shared by A and B for their joint action (Latour, 1991: 124)

So actors or interests are not preconstituted, but collective projects. The same is the case with regards to language use and strategies, which emerge in interaction. So when I talk about how people draw on linguistic resources, I am not talking about a deliberate language use of preconstituted building blocks. Even though I talk about strategies, I am not calling for a view on language use as a conscious, strategic practice. This is somewhat obscured in my text for two reasons. One is that I am concerned with people who actually work deliberately and strategically with language as part of their job. The other is that I highlight the active and creative dimensions of actors' practices and therefore accentuate the constitutive than the constituted elements of their discourse.

Translations as a condition of communication

A certain type of science communication studies are interested in the kind of translation processes where some actors process the information provided by others. Research-based statements are portrayed as 'translated' by PR-professionals and 'transmitted' by journalists (e.g. Walters and Walters, 1996, Brechman et al., 2009). Such studies construct translation as something performed by other actors than the researcher, and from such a perspective, mass mediation processes are often depicted as distortion (as for instance in Kristiansen, 2007). But as science communication studies (e.g. Bucchi, 1998) have shown, translations also take place when researchers communicate their own research-based knowledge in the mass media²⁷. With ANT's understanding of translation (there is no information, only translations) it is obvious to look at the translations taking place when researchers themselves communicate their knowledge to new groups of people by entering – or collecting new elements into – new actor-networks.

The assertion that there is no pure information builds on poststructuralist insights concerning language. As mentioned above, in this view, language is not a neutral medium mirroring an objective reality, and actors do not have pre-discursively constituted interests. So communication cannot be 'pure', i.e. free from constituting relations, interests and actants. Such a view of communication entails that we can challenge the idea that

²⁷ And ANT scholars have a similar interest in how statements change over time in scientific knowledge production, for instance through the removal of markers of uncertainty and the inclusion of references. Importantly, translation is not seen as distortion here, and is not seen as other actors' mistreatment of scientists' language.

specific professions are necessarily coupled with specific kinds of actions or logics. We can also question the idea that the researcher provides knowledge in a specific way (abstract and complex) and that the journalist translates this in accordance with the logic of journalism (simplifying, news oriented). If they do, these are contingent occurrences.

In relation to other poststructuralist positions on language, including empirical discourse analyses of media and audience discourses, ANT adds the focus on what translations do to relations, i.e. the role of translations in the establishment of actor-networks. The inspiration from ANT also leads to an interest in the *processes* of translation, i.e. all the minuscule moments of transformation. The following section will make the affinities and dissimilarities of the two kinds of approaches more clear, by spelling out how constructivist media studies *assume* the constructed nature of texts (and, by extension, that interests are translated as some discourses come to dominate others), whereas ANT inspires us to turn our analytical attention to the construction process itself.

Media studies' concern with construction and contingency

Media studies informed by a poststructuralist view of language focus less on the role of translation *in establishing relations* and less on the *processes* of translation, and more on theorizing the constructed nature of news or analyzing particular texts with regards to their contingent components.

In media studies, there has been widespread criticism of structural functionalist approaches to the mass media for ignoring the degree to which news discourses are complex and contested (Manning, 2001: 27). Many scholars disagree with the assumption that news journalists will produce texts in accordance with the functional imperatives specified by the structural role of news organizations. As Manning puts it, "we know that news texts reflect a variety of currents, interests and political pressures which, in turn, reflect the complex social relationships through which news journalists produce news" (ibid). However, in social constructivist approaches there still is an interest in finding explanations for the ways in which texts are constructed. Schudson reviews a range of (media) organizational studies and cultural approaches which operate from the assumption that news are constructed rather than a reporting on reality²⁸. Such studies agree that even if news are constructed, they should not necessarily be seen as distorting reality (Schudson, 1996: 151). They differ with regards to their explanation of *how* news

²⁸ They are part of the constructivist tradition within media studies, informed by semiotics and the British cultural studies tradition and in opposition to mirror views of representation. See Hall's classic text (Hall, 1997).

stories are shaped – by organizational pressures, routines, and so on, or by symbolic systems within which journalists go about their duties:

Where the organizational view finds interactional determinants of news in the relations between people, the cultural view finds symbolic determinants of news in the relations between ‘facts’ and symbols (ibid)

The subfield of discourse analytical media studies obviously places emphasis on the symbolic dimension. From a discourse analytical point of view, language use is constitutive of relations and identities (see, e.g. Phillips and Jørgensen, 2002: 50pp, 84pp), but discourse analytical perspectives on media texts maintain a focus on relations as created in discourse, refraining from taking a step further to look into the relations between actual people and their interconnectedness with longer chains of actants in networks.

Discourse analytical approaches to media texts are also concerned with the interrelatedness of power/knowledge or ‘the social’ and discourse. Manning wants to look beyond news texts to focus on the ordering of social practices which influence text production. He is inspired by a Foucaultian view of power/knowledge and interested in the textual devices which operate to secure the authority of the truth claims of a text. He relates this to theories of dominance, to look at how news are socially shaped (Manning, 2001: 47). Allan argues (in Manning, 2001) that texts have a ‘will to facticity’, not because he wants to argue for a gap between journalists’ construction of reality and other objective measures of reality, but because texts are linked to ‘reality’ through discourse. Phillips describes her social constructionist discourse analysis as attempting to “integrate an analysis of broader questions of social practice, politics and power with analysis of specific communication practices – in this case, the production and consumption of a media text” (Phillips, 2000: 116). The point is not to identify causal relations between media texts and developments in society (and vice versa). Rather, that the social or political emerges through everyday, discursive practices – and through media texts, we get an idea about their interrelations. This has been conceptualized as a ‘cultural circuit’, in which institutional discourses, media discourses and citizens’ discourses shape each other – and where the textual dimension is an integral part of the circuit (Phillips and Schröder, 2005: 276).

We also find examples of media studies which explore how texts are constructed interactively, but retain a strong focus on messages and the media (not so much on actors). For instance, Rafaeli defines interactivity as a variable quality of communication settings

and states that to distinguish between different levels of interactivity one must ask whether later messages recount the relatedness of earlier messages (in Schultz, 2000: 210). Schultz argues that online forums increase the interactivity of mass media (Schultz, 2000: 214), and gives a number of examples of how people write emails to journalists, how readers comment on articles, ask specific questions, request further information, give news tips, etc. However, he also reports that parts of readers' responses consist in hate mails, complaints, PR and pressure group spam, and that journalists rarely have time to react to the different kinds of feedback. In that sense, according to Schultz, new ICTs do not live up to the 'formal characteristics of fully interactive communication, which usually implies more equality of the participants, where opinions are not merely announced, but discussed openly and free from distortion' (ibid). Such views on interactivity and the construction of media texts fail to acknowledge that communication is never purely one-way – that interactivity comes before the text – and they have little concern with looking at the linkages between the actors of interactions.

For Allan, the talk about translations is in opposition to the view of news as constructed. As he writes:

...while journalists typically present a news account as a *translation* of reality, it may be better understood to be providing an ideological *construction* of contending truth-claims about reality. To deconstruct a news account in ideological terms, then, it is necessary to ask: why are certain truth-claims being framed by journalists as reasonable, credible and thus newsworthy while others, at the same time, are being ignored, trivialized or marginalized? Responses to this question will help bring to the fore the truth-politics of science reporting in all of their complexities (Allan, 2002: 74)

Whereas, from an ANT-perspective, translation and construction are not opposites, in Allan's understanding of the term, translation is linked to transmission views of communication. It also implies that actors involved in mass mediation of science has a non-analytical way of thinking about their endeavors, while it is the task of the analyst to uncover what is really being said and done. But as I argued in the section on translations above, this need not at all be the implication of using the term translation. My use of the concept of translations in a study of mass mediation has some affinities with social constructivist approaches, especially with regards to the view of language as more than a reflection of reality, which leads to an analytical focus on how media texts are constructed. My approach also shares an interest in rhetorical devices and linkages with discourse analytical approaches, but has less (theoretical and analytical) interest in the circulating nature of discourse and hence its connections to phenomena beyond the networks they are

part of. To sum up, my ANT-based analytical framework is not meant to provide *explanations* for the ways in which texts are constructed – and particularly, power, culture, or ‘the social’ are not used as explanations. A main concern is to theorize relations between actual people and their interconnectedness with longer chains of actants in networks.

Transformations and negotiations in science communication studies

The concern with translations can be seen as inherent to all types of science communication studies, given that they are concerned with the processes by which complicated knowledge can be communicated to people that are more or less unfamiliar with the topic. In the following, I will focus on the studies that are concerned with transformations and negotiations of scientific knowledge claims within and around the mass media, because this literature is the most relevant in relation to my empirical interests. As such, I refrain from entering the huge subfield concerned with institutional dialogue initiatives and similar areas of study within the science communication tradition. I should mention that a large body of science communication literature (e.g. Marks et al., 2007, Maesele and Schuurman, 2008, Carvalho, 2007) is concerned with how science is constructed in the media, more on less in line with the media studies on representations presented above, but in the following I will focus on a different kind of approach to the constructed nature of texts, namely one that reflects upon the process of their construction. This literature is relevant because of the thesis’ concern with processes of constructing texts, whereas issues of media representations of science are more secondary in relation to my empirical interests.

Transformations of content following from shifts in context

Many science communication scholars have been concerned with translation in what we could call a linguistic sense of the term, looking at the changes that happen when statements produced in one setting are reproduced in another type of setting. In a classic study, Fahnestock has applied rhetorics and discourse analysis to investigate what happens when scientific reports travel from expert to lay publications. She conceives of this as a process where the ‘orators’ of newspaper columns try to ‘bridge the enormous gap between the public’s right to know and the public’s inability to understand” (Fahnestock, 1998: 331). She identifies a shift in genre from the forensic to the celebratory and a shift in stasis from fact and cause to evaluation and action. On a general level, she concludes that there are changes in both genre, audience and purpose when we compare scientific reports with lay publications.

A similar kind of study has framed the issue of translation as a question of following the 'flow of scientific knowledge from peer-reviewed journals to the American public' (McIneray et al., 2004: 49). The purpose of the study was to demonstrate how press releases affect what is published in the popular press, both to be able to say something about the relationship between articles published in scientific literature and a more general literature, and to interrogate which effects language and publication genres have on the public perception of scientific issues. The authors identify multiple terms on the same issue and a "multiplicity of meanings generated from the simple communication in *Nature*" (McIneray et al., 2004: 66), and conclude on a general level that scientific publications are more objectivist and reportorial, whereas the popular press is more interpretive. In this connection, they note that science communication is sometimes oversimplified, and that this causes misunderstandings.

Peters is concerned with the difficulties or even the impossibility of translation. In a study from 1995, he argues that if communication partners come from different cultures, they may face difficulties in transmitting 'meaning'. To address this difficulty, scientists have to be able to relate to both the professional culture of journalists and the everyday culture of mass media audiences. This is phrased as a problem of having to explain findings in simple language, having to find metaphors, etc. (Peters, 1995: 34-35). More recently, Peters has depicted translation as an impossibility, because according to him it "would require structural equivalence of source and target language, and a shared reality serving as background for making sense of information. There is neither equivalence of scientific and everyday language, nor a shared reality (Peters, 2008: 139).

The focus on translation as taking place in between specialist and non-specialist domains has been problematized in other ways as well, namely as linked to a view of communication as a linear process. Science communication scholars have sought to show that also the reception of science communication is an active, transformative process, and that specialist expositions cannot be sharply separated from popular exposition (Bucchi, 2008: 66). Bucchi points to a body of literature that conceives of the public communication of science as 'continuation of scientific debate by other means'. He mentions Cloître and Shinn's continuity model, in which knowledge is communicated from an intraspecialist level over an interspecialist level and a pedagogic level to the popular level. In this model, translation is not about radical transformation, but about a difference in degree with regards to specialist language. This has affinities with Fleck's idea of a trajectory for scientific ideas leading from esoteric circles to exoteric circles, and, according to Bucchi, also with Latour's idea of science communication (Bucchi, 2008: 61). Bucchi's own funnel

model depicts a communicative path from specialist to popular science, which is like a funnel that removes subtleties and shades of meaning from the knowledge that passes through it, reducing it to simple facts attributed with certainty and incontrovertibility (Bucchi, 2008: 62). Bucchi emphasizes that we are not talking about a simple, unidirectional translation process where the complicated is rendered less complicated, but about complex processes and transformations through which science is appropriated, used or simply neglected by different audiences. Also, where much transformation is to be found in the works of scientists themselves, for instance in the choice of metaphors, visual images etc., which are not just to be seen embellishments, but as constitutive of knowledge. Bucchi is also concerned with the deviations from 'normal' communication paths, and with the impact of science communication on the production of knowledge. Bucchi's point is that the flow between science and the public is not unidirectional, and is not just a matter of linguistic representation. Rather, communication works back on producers of knowledge. In Bucchi's words, "the activity of communicating knowledge at any level constitute[s] a fundamental element of that complex mosaic which is a scientific fact" (Bucchi, 1998: 11). A similar view of science communication runs through the present thesis.

Transformations through negotiations and dialogue

In several science communication texts, it has been pointed out that trends in science communication scholarship have mirrored developments within the broader mass communication field, in the sense that the transmission view of communication has been supplemented with more concern with negotiations, contestations and feedback (Dijk, 2003). This can be seen in the rising concern with dialogical communication (e.g. Anderson et al., 2004, Gergen, 1994, Phillips, 2006). According to Logan (2001: 144), science communication studies generally address two different sets of questions. The first has to do with how accuracy and context are maintained as blocks of knowledge which migrate from scientific experts through media channels to citizens (as was the tendency in the works discussed in the previous section). The second is more concerned with the audience part of communication, and with theorizing communication as different from linear and top-down transmission.

Bucchi similarly draws a picture of two traditions – one dominated by transfer metaphors (e.g. reception, flow, distortions, and targets) and one characterized by an interest in dialogue. Bucchi argues on the one hand that our understanding of science communication may benefit from stepping out of the transfer metaphor to investigate the multiple interactions of specialist and popular discourse. On the other hand, this should

not lead us to abandon more linear, top-down models of communication, since some kinds of science communication are best understood as such (Bucchi, 2008: 66-68). But most importantly for the discussion of translation, he proposes a third view of science communication where the idea is that knowledge is more circulating and less in need of translation:

...the need has been invoked for another, more substantial shift to a model of knowledge co-production in which non-experts and their local knowledge can be conceived as neither an obstacle to be overcome by virtue of appropriate education initiatives (as in the deficit model), nor an additional element that simply enriches professionals' expertise (as in the critical-dialogical model), but rather as essential for the production of knowledge itself. Expert and lay knowledge are not produced independently in separate contexts to encounter each other later; rather, they result from common processes carried forward in 'hybrid forums' in which specialist and non-specialists can interact (Bucchi, 2008: 68).

According to Bucchi, such forums could be the mass media. So a trend in science communication studies is to see mass media not only as a site where linguistic translations of science are made by communication professionals, but as sites of negotiation. Logan (2001: 153) refers to a branch of the interactive tradition which has launched the idea that mass communication has become more of an informal conversation, and a shared and multidirectional experience. It is unclear precisely what the ramifications are, but Logan draws on scholars who talk about empowerment of citizens that allows them to enter public arenas, and about lay participation in journalism.

Wrapping up

As the above has indicated, both media studies and science communication studies have been engaged in criticizing positivist, realist views of language and communication. A growing body of research supports the view that mass mediation of social scientific research to the public is not simply a one-way, top-down communication process where translation becomes a matter of making obscure ideas clearer. Instead, it can be understood as dialogical, relational activities where translation is more a matter of negotiation.

This thesis explores concrete instances of these types of translations through negotiation. By doing so, it not only adds to the subfields of media studies and science communication studies discussed above, but also engages with subfields of STS, as indicated in the introductory pages of this chapter. To spell out how the thesis' approach to translations

relates to important discussions within STS, I will recapture how discussions of transmission and translation have been taken up in that tradition. This also makes it clearer how the thesis belongs to a subfield of STS, where issues of transformations and negotiations have been widely discussed, with more or less focus on the details of communication processes and mass mediation. Scholars with an interest in science/society relations have drawn on the same division of a pedagogical/transmission view and a more interactive view of science communication as the one presented in the discussion of media studies and science communication studies (e.g. Bates, 2005, see also Logan, 2001: for a review). But according to Sismondo, STS²⁹ has had a tendency to reproduce the dominant diffusion model of communication that depicts science as producing genuine knowledge, which is too complicated to be widely understood (Sismondo, 2004: 164). This creates a need for mediators who then *translate* genuine knowledge into simplified accounts for general consumption. In this tradition, translation is seen as distortion. This means that translation can be framed as a problem, both when we talk about linguistics and when we talk about societal relations:

...The dominant model is a resource for more than just individual scientists, but can be seen as an ideological resource for science as a whole. The notion of popularization as distortion can be used to discredit non-scientists' use of science, reserving the use for scientists. This is despite the fact that science depends upon popularization for its authority. If there were no popularizers of any sort, then science would be a much more marginal intellectual activity than it is (Sismondo, 2004: 165).

This diffusionist view was – and is – in opposition to the social constructivist turn which STS took from the 1970s. As noted in the opening of this chapter, STS began to look at science and technology as thoroughly social activities. Looking at science as practice and culture meant that STS scholars came to question the possibility of applying scientific methods to translate nature into knowledge. The focus on how science is constructed made it more pertinent to look at science/society relations in novel ways. For instance, with regards to communication, it has been noted within STS that popular accounts often feed back into the research process. Also, as it is evident from my account of ANT's concept of translation, there have been attempts to look at translation as something other than distortion or 'technical amelioration' of language, captured by the concept of translation as central to associations.

²⁹ In particular PUS, which Irwin and Michael also note (2003: 26).

On this note, I will end my discussion of the three interdisciplinary traditions which have informed both theoretical and empirical discussions of this thesis. My goal has been to show how my position – and the theoretical sensibilities it builds upon – both overlaps with and is distinct from existing approaches to mass mediation and science communication. Before proceeding to the analyses, I devote a short section to an introduction to a number of studies which also draw on ANT in their analyses of media texts and media technologies.

Applications of ANT in studies of media texts and media technologies

Having discussed the concepts I borrow from ANT in my study of the mass mediation of social scientific knowledge – assemblages, actants, and translations – I will briefly review some of the ways in which ANT has been invoked in studies of mass mediation or media technologies. This is to recognize that the idea of bringing ANT into media and journalism studies is not exactly new, while demonstrating that the attempts so far are less concerned with the practices of media production than one would expect, considering the practice-orientation of ANT.

Only a few media scholars have used ANT as a methodological approach to the processes and products of mass mediation³⁰. However, there have been disparate attempts to use ANT to understand various dimensions of mass mediation. Like in the present study, the concepts of ‘actor-networks’, ‘actants’ and ‘translation’ have been central to the attempts to engage with media and ICTs from an ANT perspective. In the following, I will point out some of the issues that have been addressed, and explain how my approach relates to this emerging area of concern.

In his work, Latour recurrently makes remarks about the media or ICTs as illustrative examples. For instance, he describes his disturbing experience of reading the newspaper, where heterogeneous actors pop up and associate in unpredictable ways:

On page six, I learn that the Paris AIDS virus contaminated the culture medium in Professor Gallo’s laboratory; that Mr. Chirac and Mr. Reagan had, however, solemnly sworn not to go back over the history of that discovery; that the chemical industry is not moving fast enough to market medications which militant patient organizations are vocally demanding; that the epidemic is spreading in sub-Saharan Africa. Once again, heads of state, chemists, biologists, desperate patients and industrialists find themselves caught up in a single uncertain story mixing biology and society (Latour, 1993: 1-2)

³⁰ Couldry (2008) offers a short review.

Here, the actor-network is held together symbolically in the text. Another possible use of the actor-network concept is to treat media texts as 'traces of associations', pointing to the interaction and communication that went before the text. This is the case in Marres' (2004) study. Following Latour, who has argued that ICTs provide ANT with an especially fertile research field, Marres has studied the formation of hyperlink networks to understand processes of issue formation. The methodological point is not that the concept 'network' maps onto the structures of the internet, but that the internet is a huge storage space for informational traces. As Latour puts it, the WWW has become a World Wide Lab (Latour, 2005: 119). According to Latour, ANT has always been obsessed with informational traces – and on the internet, the most ephemeral social phenomena, like conversation and the circulation of rumors, are documented and archived (Marres, 2004: 134).

Similarly, Cypher and Richardson use the actor-network idea (although they use the term sociotechnical ensemble) to expand the scope of their analysis of online game-playing to include

...a complex network of events, agents, and practices; from the computer components of the game server based in London, to the subscribers and their embodiment as 'players' and the concomitant social, ergonomic, and visceral factors involved, to the persuasive articles written in game magazines, to the code that enables the game to run, to the players interacting with the code, to the virtual artefacts traded and produced (Cypher and Richardson, 2006: 258).

The dissimilarities in the above analytical uses of 'actor-network' point to the flexibility of the analytical concept³¹. It is used to analyze the content of a newspaper, to follow informational traces on the internet, and to account for heterogeneous networks around the on-line play. It is a tool that describes traceable connections; not an entity existing 'out there' to be discovered – and as such it can be used in many types of analyses. The same is the case with the concept of 'actant', used by Horst to describe symbolic resources that are co-constructed in the public sphere over time. Horst (2008b: 199) transposes Latour's interest in the negotiations that take place in the laboratory into her study of the formation of public opinion in a range of newspapers. She theorizes the public sphere as a kind of laboratory, in which actors produce propositions and negotiate how propositions should be meaningfully linked together. She shows that media representations create actants, which become more and more powerful because they become well connected to other

³¹ The merits and problems of a flexible analytical framework are discussed more in chapter 3.

actants. When applied to symbolic constructions in this manner, the concept of actants has affinities with the above described discourse analytical insights about the performativity of language. In another study of media texts, Neresini (2000: 361) has been inspired by ANT to follow the production of 'scientific facts' in the media, focusing on the enrolment of actors in networks through translations.

In other studies, the concept of 'translation' is more central. Mager (forthcoming) finds that the providers and users of web information have very different perceptions of the web as an information structure, but that their practices revolve around the search engine Google. Mager draws on the notion of 'obligatory passage point' (Callon, 1986) to describe how Google translates the interests of various actors. The concept of translation has also been used in a second-order analysis of public statements on new communication technologies. Hannemyr has traced how various actors have become aligned in support of the statement that "It took 38 years for radio to attract 50 million listeners. 13 years for television to attract 50 million viewers. In just 4 years the Internet has attracted 50 million surfers" (Hannemyr, 2003: 111). Reproduced over and over again, this becomes an irreversible fact, despite historical records that show no major differences, according to Hannemyr, between the adoption rate of the Internet and the patterns of adoption of radio and television.

Whereas the above researchers could be characterized as ANT-scholars with an interest in media or communication technologies, Couldry is one of few media scholars with an interest in ANT. Inspired by ANT's dissolution of the distinct categories of 'society' and 'technology', Couldry (2008) wants to disturb common conceptions of media institutions and mediation as mystical or 'natural' phenomena. He suggests conceiving of them as constructed technological-social hybrids – another word for actor-networks assembled of human and non-human elements. What Couldry proposes is a step towards a general theory of the media, not an analytics of mass mediation processes. I agree with him that ANT poses relevant, critical questions to basic assumptions in much media theory. However, I believe that ANT's main contribution to media studies cannot be a general theory (considering that ANT is, in fact, vehemently critical against grand theory), but an analytical sensibility towards the complexities of actual practices and associations.

As to the other studies mentioned above, they all show this concern with complexity. Some are still simply proposing ANT as a possible future inroad into a field, others are drawing on its concepts in a kind of textual analysis, and yet others are concerned with practices. My ambition with using an ANT-inspired analytical framework in the analysis

of mass mediation practices and processes is threefold. I want to be able to describe the establishment or emergence of actor-networks in and around media texts. To do this, I draw on the concept of assemblages. I will maintain the possibility that those actor-networks comprise very diverse entities rarely thought to belong together in a media analysis. Here, I will deploy the concept of actants. Finally, I want to capture the negotiation and transformation aspects of mass mediation. In order to do this, I draw on the concept of translations. Furthermore, the intention of using those analytical concepts is to explore their capacity to embrace heterogeneous types of material (media texts, interviews (and, ideally, observations)). Ultimately, the aim is to produce accounts of mass mediation processes that are illustrative of complexity because they do not reproduce common social explanations or a priori analytical divisions, but attempt to understand science communication processes through the particular. In the next chapter, I will explain how I have gone about the production of those accounts.

CHAPTER 3

Methodology and methods

This chapter accounts for the methodological aspects of different phases of my research, namely issues related to the theoretical and methodological assumptions of the thesis, to its concrete research design, including methods of data production, and to its approach to analyzing the empirical material. First, the chapter delineates the relationship between my research question, my theoretical framework and my choice of empirical material. It shows how the thesis is based on a relational, materialist and constructivist ontology. Here it recaptures some of the points of the two first chapters, but now relates these points to how the empirical material has been produced to offer insights on particular kinds of construction processes. Then the chapter proceeds to reflect upon the status of the interview material which represents the primary research data of the study. Two main discussions dominate this section. It is discussed how interviews can be conceived of both as accounts of practice and as construction work. Also, the section critically assesses the quality of the interview material, which is marked by a certain intimacy between interviewer and interviewees, and it is argued that reflexivity cannot solve problems in this kind of data production, but should be thought of as belonging to interviewees. Finally, the chapter turns to the analysis design, and describes both the organization of my analyses, including the analytical questions posed to the empirical material, and the ways in which I generalize analytically on the basis of my material.

1. Background

As stated in chapter 1, the overarching research question of my project is: *How are media texts dealing with research-based social scientific knowledge assembled?* In more methodological terms, I have posed the question: *How can Actor-Network-Theory contribute to our understanding of science communication in the mass media?* The strategy of the study is to focus simultaneously on the associations formed to produce media texts, and on the elements, which constitute the texts. In this section, I will spell out some of the theoretical assumptions behind this research strategy.

Theoretical assumptions: a relational, materialist and constructivist ontology

The study evolved out of an aspiration to conceptualize and analyze the communication of research in a non-essentializing way, and to question traditional understandings of the

mass mediation of research as a linear, one-way communication process, where professional categories are treated as fixed and delineated.

The relational

A relational ontology implies that the identity of actors or elements is not predefined, but is established in relation to others, as when they become part of actor-networks. Rather than approaching the mass mediation of social scientific knowledge to reveal – for instance – assumed professional ethics, power relations or language barriers, a relational epistemology leads me to ‘follow the actors’, to see which relations they engage in, which categories they co-construct as meaningful, and how they associate to create media texts.

The materialist

But apart from looking at relations between people, the study is meant to account for heterogeneous actor networks, where also material factors or symbolic constructions are seen as important elements to analyze, in so far as they have become parts of the network by making other actors act. This is inspired by the radical materialist orientation of ANT. Analytically, the consequence is that we should try to avoid discriminating against or privileging any of the elements, which surround knowledge production.

The constructivist

A focus on relations is also relevant if we consider knowledge production and fact production a collective process. ANT has been concerned with showing how what comes across as ‘facts’ are the product of laborious negotiations between colleagues, and how material factors and inscription devices play a crucial role in establishing facts (Latour, 1987). If we extend this idea beyond the natural sciences to the area of science communication and mass mediation, we can argue that an important part of journalists’, editors’ and researchers’ job similarly is to negotiate about the construction of specific realities, which depend on inscription devices such as media formats and technologies. Parts of my analyses are dedicated to exploring the linkages between knowledge claims and wider networks of heterogeneous actants.

Seeing categories, facts and positions as *achieved* and as constantly negotiated builds on a constructivist ontology. Latour has put some effort into underscoring that this is not a postmodernist kind of relativist position, seeing knowledge as detached from ‘reality’. Rather, the production of knowledge claims is intertwined with the production of realities, and knowledge claims become rather solid, as they become black-boxed and elements in new knowledge claims (Latour, 1987: 2-3). As such, we should expect some degree of

stability and recognizability because knowledge is built over time and in relation to known knowledge – but we must also assume a large degree of ambiguity and co-constructedness, because this is a lengthy and negotiated process. To extend this to mediated research-based knowledge claims, we can assume that although these are contingent, they are tightly interwoven with a range of practices, inscription devices and other knowledge claims. My analyses are dedicated to showing how this interconnectedness has consequences for the media product.

The study draws on two kinds of constructivist legacy, namely from ANT and discourse theory. With ANT, emphasis is on the construction of associations and focus is on particular cases where media texts are created. With the discourse theoretical approach, I highlight the construction of hegemonic discourses and subject positions which are possible to take up, and sketch elements of the field of discursivity they are part of. Discourses and subject positions can be understood as the shared resources that are drawn upon in the actor-networks assembled around the construction of media products, and hence as elements of the ‘whole’ of which my particular cases are part (Tsing, 2008). So while agreeing that contexts should not become an explanatory shortcut, I do conceptualize specific associations as part of broader ‘situations’ (Clarke, 2005). Clarke – who also draws on both ANT and discourse theory, but from a constructivist grounded theory position – offers the concept of ‘situation’ to capture a broad range of elements that particular actions are bound up with. The rationales of Tsing’s conception of the parts and wholes and Clarke’s conception of the situation thus inform my last analytical chapter, which zooms out and looks at the broader situation of research communication at Danish universities, and identifies discourses that shape and are shaped by this situation.

To sum up, although the constructivist orientation is shared by ANT and discourse theory, they are directed towards different kinds of construction processes and empirical objects (the establishment of relations between heterogeneous elements and discursive constructions, respectively), and this has led the attention to quite different aspects of the mass mediation of research, namely to the associations formed around the construction of media products and to the discursive constructions that are part of the broader situation. This difference arises from different ontological positions which grant practice and language different status – a divergence that results in dissimilar research strategies. Whereas ANT can be seen as more concerned with micro construction processes and constructions in relation to practice and materiality, discourse theory is more concerned with how particular discursive constructions are related to broader discursive structures struggles. And although rhetorical constructions are certainly a major interest in ANT, the

introduction of a set of discourse theoretical concepts can help tease out the discursive resources, which are shared across specific sites and situations. On the level of explanation, the discourse perspective is more comfortable with large scale claims and the operation of discursive logics, whereas the ANT approach stays close to the empirical data³².

A bottom up study

Following from the above described anti-essentialist and agnostic ambition of the thesis, the method of data production was meant to be a bottom up process. The production of empirical material began with the identification of concrete instances of the practice of communicating social science in the mass media, and with interviews with individuals involved in these practices. These individuals were of course affiliated with research institutions or media institutions, but they were not talked to as representatives of these institutions. It was a central concern to avoid producing or reproducing an essentializing division of people into distinct groups of *researchers, journalists or editors*. As Latour has expressed it, there are no groups, only group formation – and in line with this, it was the ambition of the thesis to explore processes of constructing, e.g., professional identities. Hence, the thesis construes it as an empirical question which kinds of groups that are associated and which kinds of categories that are meaningful in the communication of research. Looking at my material in that way, it has become crystal clear how *working as* a journalist or a researcher is not the same as *being* a journalist or a researcher. Individual careers and experiences create very diverse enactments of those professional categories.

The aim of the analyses is not to deconstruct ‘pure categories’ and replace them with hybrids, or to tear abstract concepts apart. Rather, the goal has been to show how both pure categories and blurred borders make sense in the analysis of practice. For instance, *actors* relate to notions of e.g. ‘journalism’, even if ‘journalism’ has blurred boundaries, and is not a unified thing³³. This approach is inspired by ANT, which says nothing about how things are, or what might lay behind them. In an ANT study it is not the sociologist’s job to decide, on behalf of the actors, which groups make up the world and which agencies make them act, but instead to write accounts which integrate the diversity in explanations, concepts and categories offered by the actors (Latour, 2005: 12). Such an approach is, of course, vulnerable to accusations of being merely descriptive and pure microphone

³² In the conclusion, I propose that ANT and discourse theory could have been integrated in a single analytical framework, but the advantage of using them separately in the analyses is that it becomes clear precisely how their contributions offer very different kinds of insights.

³³ See also Latour, B. (1993) *We Have Never Been Modern*, Cambridge MA: Harvard University Press.

holding – but the analytical treatment of interviewees’ constructions of actor-networks implies a step away from the descriptive level. For instance, the application of an analytical vocabulary of assemblages, actants and translations implies a distance from actors’ experiences and descriptions.

Working with actors’ categories is one way of addressing the challenge of creating non-essentializing accounts, because their linkages of entities are so varied. At the same time, the focus on relations, negotiations, and construction work makes it more obvious to get a glimpse of that which lies *between* categories than contributing to the reproduction of categories. As I described in the introduction, I explore ways of capturing the complexity of the processes of mass mediating science. As such my knowledge interest does not lie in reproducing well-known images of ‘the journalist’ or ‘the researcher’, i.e. describing the content of a (professional) position or a category, but in describing what takes place in their *relation* to others, or how their identities are dependent upon the networks they become part of. And just like ANT has served as an inspiration in this respect, it has also contributed to the study with the idea that ‘the social’ cannot serve as an explanatory device, but comes into being when associations are being formed³⁴. As such, we cannot assume social structures. We cannot assume the existence of a ‘public sphere’ or ‘the public’, and we cannot take a preexisting ‘network’ as our object of analysis.

The flattened terrain of the mass mediation of social science

I should emphasize that doing an actor-network analysis is not the same as mapping a network. The aim of the present investigation is not to uncover and map a set of existing, more or less stable, structures and connections interlinking (in this case e.g.) journalists and public relations officers, and to reflect upon mafia-like, fraternalistic relations and ensuing problems of exclusion or gatekeepers. Instead, the investigation and analysis seek to flatten the whole terrain where the communication of research unfolds, and focus on media texts as *traces* left by *associations* formed between different actors. With the concept of ‘flattening’, Latour suggests that we refrain from working with metaphors of verticality such as ‘*overarching*’ or ‘*underlying*’, and follow the traces between entities that are assumed to operate at the same level. This implies that power relations are not seen as structural phenomena, but as concrete instances of successful enrollments of actors into networks, and as normativity reproduced discursively in concrete texts and instances. This again means that power is not in itself an object of analysis, but, rather, may be read off from solid collectives, common articulations or, conversely, controversies over

³⁴ For a more extensive presentation of this idea, see the introduction.

articulations. I return to a discussion of this in the conclusion – at this point I will just mention that its absence as a phenomenon influencing practices and relation is related to the absence of general mechanisms as explanatory devices.

Working analytically with the concept of actor-networks does not imply that these are existing entities 'out there'. They are analytical constructs, aimed at capturing the relations and practices in the communication of research. As such, the latter are rethought and addressed with a certain ontological skepticism, in the bottom-up fashion hinted at above and described in more detail below.

Distributed communication – where to look?

Methodologically, the bottom-up ideal implies that the systematicity of selection of sites and actors of interest is not granted by their embeddedness in a network. How and where, then, to look at interaction and follow the construction and communication of knowledge that takes place between different actors? Had I followed the ANT approaches which take an ethnographic approach to the construction of knowledge (e.g. in the laboratory), it would have been obvious to choose one case of research communication in one institution or one research group. But in – for instance – one research group, communication of research to the public is a minor part of its activities, and the constructions of communication and negotiations of knowledge claims are not carried out within one site. As Latour has noted, interaction is so much more than face to face communication. Interaction is distributed in time and space, and few participants in a given course of action are simultaneously visible at any given moment (Latour, 2005: 200-203). Also within the general field of ethnography, there is an increasing concern with spreading out empirical investigations over multiple sites. This is called multi-sited ethnography (Marcus, 1995). And in line with this, Latour (2005: 119) emphasizes that we should follow facts in the making in multiple sites – which are no longer limited to laboratories, but increasingly connected to daily life and ordinary concerns. So ANT can be (and is) applied in studies distributed over several sites. However, in most ANT studies, things are held together by concrete, traceable connectors. ANT's principle of following the actors and tracing the associations they make is thus somewhat at odds with the structure of the present study, which analyzes several un-connected cases in order to be able to address more types of relations, actors and controversies than would have been possible on the basis of one case. This is an outcome of giving priority to a more extensive research design rather than a more intensive design.

The strategy has been to spread out the empirical investigation over a number of sites where people are involved with the mass mediation of research. Thus, rather than dealing with the construction of knowledge within a scientific community, I look at the (distributed) discursive construction of related – but different – knowledge objects³⁵. Here, I have been inspired by Law's (2004) concept of multiple sites. If we investigate a phenomenon in multiple sites, this is not to get an idea of the different 'perspectives' different kinds of actors have on the communication of research, but to see how multiple realities are enacted – and understand the complex conditions of possibility for the communication of research via the mass media.

When a central ambition is to follow the actors, with an eye for the mundane practicalities and issues that are part of their realities, the move from the specific site of scientific productivity – into 'a broader situation' holds its challenges: What keeps the object of analysis together across different and unconnected sites of production? How is it possible to follow negotiations and associations when you cannot participate as an ethnographer in a specific site (because the production of knowledge is distributed)? How are negotiations and associations possible? With Latour, the answer to this question would be that negotiations and association leave traces. These can be texts, or they can be other kinds of entities. However, with the introduction of a discourse theoretical focus, it becomes more obvious to look at the discursive patterns shared and drawn upon by different kinds of actors, and it becomes possible to reflect upon the ways in which discourses impose certain constraints on, or offer certain subject positions for, language users. ANT and discourse theory share a view on material reality as discursive, but the radical materialist relationalism of ANT leads to an explicit focus on relations and the constitutive role of material objects, while the social constructivist orientation of discourse theory just asserts that material reality cannot be conceived of as non-social or non-discursive. This follows from the strong focus on the constitutive role of language in the latter approach. As a consequence of discourse theory's concern with circulating, discursive patterns, a discourse analysis' linkage to concrete, material, everyday practices may become weak. But in so far as this type of analysis links discursive elements of this practice to other discursive elements, I believe that it contributes with additional insights about this practice.

³⁵ When I use the concept of knowledge object, this is not unlike the concept of boundary objects, which has been put forward by Star and Griesemer (1989). The latter designates something that different people can communicate about and work with, in spite of differences in understanding – both of the object, and each other in general. I use the term knowledge object, because I think it carries less technical connotations. The concept is not central to my analyses, so I will not go into a more extensive discussion of it.

The analytical vocabulary of discourse theory

Bringing together discourse theory and ANT can be seen as an attempt to hold onto analytical focus points from both 'the linguistic turn' and 'the material turn', and despite the differences pointed out above, discourse theory is much closer to ANT than other discourse analytical approaches – such as discourse psychology or critical discourse analysis. E.g. the latter posits a direct link from linguistic observations on a micro-level (e.g. modalities) to broader social structures – an analytical jump, which is not compatible with the thoroughly empiricist orientation of ANT. At the same time, it can be argued that with their thoroughly (material) semiotic approach, ANT studies do in fact carry out a kind of discourse analysis, e.g. with their accounts of constructions of scientific arguments. Already present in ANT is also a focus on rhetoric on a quite detailed level of, for instance, modalities. But to become attuned to the ways in which categories become established and subject positions taken up, this study draws upon the anti-essentialist philosophy of language put forward by Laclau and Mouffe in *Hegemony and Socialist Strategy* (1985). In their view, meaning needs to be achieved through continuous articulation processes; its fixation is never final. In the parlance of discourse theory, the elements of the language system are 'floating signifiers', which acquire different meanings in different situations. However, it is possible to fix meaning momentarily, whereby the floating signifiers obtain a privileged position in a given discursive field; they become nodal points (Laclau and Mouffe, 1985: 113). In the process, elements are linked in 'chains of equivalence', where differences between some elements are diminished, while their opposition to other elements becomes more clear. An example of a chain of equivalence could be 'university people – constructivist perspectives – complexity'. The chain of equivalence becomes constructed by a continuous linkage between such concepts along with an operation where other notions become constructed as the outside of the system. An 'outside' to the abovementioned chain of equivalence could be 'other people – realist perspectives – simplicity'. This kind of argument – that identity is always constructed in opposition to an 'other' – is well known from poststructuralist writings on identity (e.g. Laclau, 1996a, see also Phillips and Jørgensen, 2002, Woodward, 1997), but the concept of chains of equivalence extends the idea. When we talk about identity constituted through the establishment of chains of equivalence, it is not necessarily linked to an individual or a group, but can consist of a *range* of elements, which have become aligned – *against* another range of elements.

The political dimension of language use

According to Laclau and Mouffe, the discursive field is partly structured by 'the hegemonic logic', whereby the elements of a system try to gain a position where they

represent the whole; where they become empty signifiers, which are so devoid of shared meaning that it becomes almost impossible to disagree about them. An example could be the imperative of 'communication of research to the public'. This can be thought of and done in so many ways that a wide range of people can agree that it is important, and it is only if people are forced to define it and act upon this definition, that the empty signifier stops to function as such. The theorization of subject positions, articulation processes and hegemonic struggles (and thereby an emphasis on power and the political) represents a valuable addition to the ANT perspective in the present context. This is not to say that language, power and politics cannot be theorized from an ANT perspective, but that the conceptual framework of Laclau and Mouffe is more specifically aimed at addressing these issues.

Discourse theory pushes us to reflect on language use, and the focus on language use *across* the different sites chosen for the present analyses allows us to reflect upon some common 'matters of concern' (Latour, 2005: 114) across and beyond these sites. And even if discourse theory goes beyond the very empiricist, local account that the ANT perspective stands for, it does not do so to point to a set of fixed structures. Rather, it sheds light on contingent discursive formations around certain nodal points. This is a rather important point for the generalizability of the findings of a study such as the present, in so far as it claims to address matters of concern which are shared beyond the confines of the empirical cases.

With the theory of Laclau and Mouffe, a rather strong claim about the connection between language and politics and between language and identity is introduced to this study. This comes with their notion of the hegemonic logic and their view on the necessary strive for closure within any kind of system (Laclau, 1996b: 40). The assumption that there exists such an 'universal' mechanism is at odds with the ANT perspective, which is highly suspicious of any mentioning of 'mechanisms', 'logics', etc. In Latour's view, such explanatory devices are simply put to work when the empirical study does not say enough in itself. In my view, taken to their extreme, both positions are debatable, and can serve as easy straw men to position a more 'balanced' position against. On the one hand, Latour's radical emphasis on description (in his words, a description that needs an explanation is a bad description (Latour, 2005: 137)) has been seen as a return to empiricism, a move which has been criticized for avoiding to engage with explanation, generalization, and critique. On the other hand, it could be questioned why discourse theory needs a universal mechanism, which is supposed to be underlying very different – but, according to discourse theory, structurally similar – phenomena. This 'universal mechanism' stands out

as an oddly stable and structural necessity in a non-essentialist, poststructuralist theoretical universe. This paradox has not, to my knowledge, been addressed by Laclau and Mouffe. Throughout this study, Latour's comment that 'invisible entities are invisible' – and cannot, therefore, be accounted for unless they leave visible traces – has served as an important reminder to avoid explanation, generalization and critique, which is not strictly empirically grounded.

From these more general observations regarding the methodological position of the thesis, the chapter will move on to spell out which kinds of empirical material I have produced, how I have done it, and which problems I have encountered.

Research design

Since the empirical investigation was meant to shed light on construction work within and around media texts, two broad working questions guided the construction of the research design: 1) How do actors associate to construct media texts? And 2) How are particular media texts constructed on the basis on different elements? This led to the production of two (related) sets of empirical material: 1) interviews with actors involved in the mass mediation of social scientific research and 2) collection of media texts, which were the outcome of associations between those actors, along with related texts, such as academic articles and replies in form of letters to the editor. The research design can be called multimodal because it integrates several types of data production (Dicks et al., 2006), and multi-relational because it encompasses many types of relations.

The production of data

As noted in the introduction, Denmark has experienced an increase in science communication initiatives and talk about science communication in recent years. Therefore, there were many possible entry points to producing the empirical material for this thesis. Through several months, I was following various mass media's use of social scientific knowledge or expert statements. Also, I read policy documents and looked into debates among science journalists and professional communicators on how to deal with the new political demands for more and better science communication. With regards to the actual production of empirical material, the research phase began with a detour. I had chosen a single case, a research 'network of excellence' with a democracy theme and a well presented communication strategy, which emphasized communication to the public via the mass media. My intention was to follow the network activities through three years, to

see how associations were formed and how communication policies were institutionalized. After one year of keeping an eye on the network activities and its media hits, I found myself confronted with a situation where networking ought to be happening, but nobody took care of media relations – and media coverage was virtually non-existent³⁶. I decided to search for the sites where negotiation takes place already. As I left the idea of sitting with one group of researchers waiting for them to ‘go public’ with their research or being phoned by journalists, it seemed reasonable to try to enter different communication networks by focusing on central actors. I needed to construct a purposive sample (Denzin and Lincoln, 2000), seeking out groups, settings and individuals where communication of research in the mass media was most likely to occur. And then I would use a ‘follow the actors’ (Callon, 1986: 201) approach in recruiting respondents, to be able to say something about relations and networks in the mass mediation of research. Consequently, I began my empirical investigation with an interview with the head of the communication department at one of the Danish universities. I had heard him give a talk about the relations between experts and the public, and I knew that he was active in writing on and debating these issues. The interview questions were aimed at getting him to talk about his professional relations and the people he thought of as actively engaged in the communication of research in the mass media. He mentioned a range of researchers, colleagues and journalists. Out of that range, I contacted a former colleague of his (who had been in charge of the communication office’s relations with researchers and journalists) and two researchers. In the interview, one of the researchers had been characterized as overly eager to contribute with expert statements on any kind of topic – and thus very accessible and engaged – the other as quite difficult to get to interact with the media on their terms. From the interview with these researchers, my attention was led to concrete texts – and to another researcher, who had just been through the ‘media machinery’ and had a lot to tell about the interactions in and around the production of a radio program. I chose to analyse this media text, along with other texts produced by the same researcher, and continued my empirical investigation with interviews with the other parties involved in the production of the radio program.

At the same time as I followed the actors as described above, I chose a new kind of entry point to the field by talking to editors and journalists at the two Danish newspapers which have the greatest amount of expert-based stories and the most extensive coverage of

³⁶ I figured that if I became engaged in the network, I could actually contribute to constructing these research communication activities and media relations, since the practical interest of the network and my theoretical interest would be overlapping in certain ways. But instead of making this kind of interactivist experiment, I decided to search for the sites where negotiation takes place already.

research. The interviews were aimed at making these actors talk about the relations they were engaged in, and to give examples of cooperation with researchers, which had resulted in specific texts. I followed these leads, and talked to a range of researchers about their experiences with media relations. In total, I conducted 19 interviews – talking to seven communication officers, six researchers and six journalists or editors³⁷. I have chosen to analyze media texts, which can be seen both as traces of the associations formed between the abovementioned actors, and as examples of the ways in which research-based mass media texts are constructed. Besides these texts, I have analyzed conference papers, e-mail correspondences, letters to the editor, a journalist's manuscript, researchers' popular articles, discussion forums on the internet, minutes of meetings and communication policy documents³⁸. These texts were connected to the actors and media texts in different ways. As such, I combined the media texts and interviews with other media texts and policy documents. This was another strategy to get beyond the limited scope of what the interviewees told me. By searching the internet, I got access to a set of documents, which dealt with researchers' public performances, or with the afterlife of their knowledge claims as those became debated in public fora. As Latour has stressed, ICTs provide previously unheard of possibilities when it comes to the traceability of social interaction: the most ephemeral social phenomena, like conversation and the circulation of rumours, are documented and archived (Marres, 2004: 134). Using the internet as a resource also extends the idea of doing multi-sited ethnography, or, as Hine (2000) prefers to call it, mobile ethnography. Such an approach is geared towards looking at connections rather than locations. As she puts it, "The object of ethnographic enquiry can usefully be reshaped by concentrating on flow and connectivity rather than location and boundary as the organizing principle" (Hine, 2000: 64). As explained in the previous chapters, I have had the ambition of focusing on processes of assembling actor-networks rather than delineating and describing distinct entities. Accordingly, my empirical investigation – and analysis – has tried to avoid privileging a particular type of constellation, but has given attention to the thickest linkages made by the different elements in the mounting collection of empirical material. Moving across sites and types of data means that we can avoid constructing individuals as expression of location, (Law and Urry, 2004: 398). For me, it also means that individuals do not necessarily stand in the center of the analyses – sometimes media texts do, sometime significant types of relations do, and sometimes technologies do. Consequently, my analyses are not comprehensive in their coverage of specific sites of communication or particular individuals and their work practices. They aim to be comprehensive with regards to their description of different types of

³⁷ See appendix 1 for a list of interviewees

³⁸ See appendix 2 for an overview of the text corpus

assemblages where the thick connections are made between different types of elements – such as technologies, ideals, or academic issues.

I have searched for maximum variation in the sampling of my cases, with regards to the types of human actors and the types of media texts involved. I have talked to young women, elderly men, phd-students, professors, experienced journalists, unexperienced journalists, people with positive and negative experiences with science/media relations, and so on and so forth. And I have looked at news stories, essays, a radio debate, letters to the editor, and discussion forums on the internet. This has allowed me to say something about the complexity of the field, and to capture many different versions of the science/media story. In so far as my research design was intended to lead the attention to different types of *relations*, it could be argued that such a sampling strategy was some kind of a detour – leading to a focus on types of individuals or types of texts. But I have not generalized on the basis of the different kinds of human actors or different kinds of texts. I am not trying to say anything about ‘young, inexperienced researchers’ view of the media’ or ‘typical uses of experts in particular media formats’. Human actors and texts offered an inroad to looking at ‘different types of relations’, which are difficult to search for. Instead of generalizing with respect to individuals or texts, I generalize analytically along the lines of the concepts of assemblages, actants and translations – so the cases become exemplars of how mass mediation of research can be understood in these terms.

I have analyzed the material of five cases in great detail (I will get back to this in the final section of this chapter). If I had based my analysis on more material related to each case, I could have created much thicker descriptions of them. But the ideal of the ultra thick description of ANT is impossible to meet when the aim is to investigate a number of sites and texts. According to Latour, we should strive after ‘internalist’ explanations (Latour, 1991: 121) of phenomena, i.e. produce descriptions which are good enough to stand alone. In this perspective, my single cases may not be strong enough to explain anything by themselves. Instead, the picture must be assembled from the analyses of all five cases. They should be considered exemplars that contribute to a cumulative development of knowledge (Flyvbjerg, 2006: 241) about mass mediation of research-based knowledge. In the section on analytical generalizability, I will come back to the issue of case selection. In that section, I will also describe more thoroughly how I believe they shed light on different types of translations, different types of relations, different kinds of positioning work, different kinds of controversies, and different kinds of actants.

2. The production of interviews

The interviews were all meant to generate knowledge about work practices and relations among actors involved in the communication of research in the mass media. A smaller portion of the questions were directed at getting people to position themselves in relation to the political demand for communication of research-based knowledge.

The interviews with researchers all had one or more media texts as starting points for the talk. This could be an article written by the researcher, it could be one in which the researcher participated, or it could be articles where a media performance of the researcher was commented. Or it could be a combination of such texts. The questions would go: 1) Can you tell me how this text was created? What happened before, under and after its publication? 2) Can you tell me about your relations to media people and communication people at the university? 3) How do communication policies – the University Law and local policies – influence your participation in the mass mediation of your research?

The interviews with journalists and editors had four themes that I wanted to cover: 1) Your contact with researchers and communication officers at the universities (including the use of networks, press releases, conferences, personal contacts, etc.)? 2) Examples of stories where you incorporate social scientific knowledge? 3) Do you have an editorial strategy regarding the communication of research? 4) Do you have an image of the people you are writing to?

The interviews with communication officers also began with the introduction of four themes: 1) How have you reacted to political demands about more and better communication of research? 2) Who are you cooperating with, professionally (journalists, researchers, external consultants, etc.)? 3) Can you give some examples of communication of research, which stand out either because they are successful or the opposite? 4) What do you think about the quantitative measurements of communication of research?

The very broad themes were combined with a number of follow up questions, which were very detail-oriented. For instance: How do you do that? Can you give an example of that? Who said so? How did you get in touch with this particular person? Where did this idea come from? How do you normally do? This way of probing was chosen as an inroad to 'following the actors' own ways' by asking them to elaborate on their stories. I also saw it as a way to get to the nitty-gritty, maybe overlooked aspects of mass mediation of research. As I will show later, this method had the unintended consequence that more

abstract, reflexive observations of the interviewees tended to be neglected, and the interviews became an overly smooth affair.

The interviews lasted 1-1½ hours, and were transcribed in entirety. In the analyses, the names of the interviewees have been changed. No complete anonymity can be achieved, since the analyses rely on media texts which can be obtained via a media search³⁹. All interviewees have accepted this, except one, who is rendered completely anonymous.

Overlapping realities: Interviews as accounts of practice and as construction work

Interviews represent the main method of data production, and interview transcripts represent the main type of empirical material for analysis in this thesis. I am asking people about their practices and relations on the basis of specific media texts. To a large extent, I am analyzing those interviews as ethnographic interviews, i.e. as accounts about practices. This implies that I can say something about practice outside of the interview situation without (for instance) observing practice outside the interview situation. But what is the status of these interviews? From a social constructivist position, they should be seen as a social construction, i.e. a product of the researcher's interaction with the field or specific interviewees. But in ANT, the 'social' is (rightly, I think) problematized, hence a more appropriate way to conceive of the interview in my study is as a *construction*, building on concrete texts and relations with other persons (who are also interviewed), and try to reflect on the realities my interviewees and I co-produce. With Law's idea of method assemblages (Law, 2004), we can theorize the interviewees' versions of their reality as an assemblage, which includes particular elements of their reality. These assemblages do not map their practices outside of the interview in any precise way, and neither do my assemblages, which again draw on elements of their assemblages. We construct different realities, but these are not disconnected. Instead, they can be seen as overlapping – and this overlap as partly constructed throughout the interview process.

I am trying to establish a position where the interviews of my investigation are neither seen as the interviewees' objective reports on a reality 'out there', nor (just) as rhetorical events, performing identity/ideology work. The practices which my interviewees generously tell me about are of course framed in certain ways. And their descriptions of their mundane everyday activities come with categorizations, in- and exclusions, colorful

³⁹ However, I have chosen to refrain from mentioning the names of the newspapers where the analyzed texts originated from, because I have no interest in making the identity of my interviewees obvious.

stories, and the like. My knowledge interests imply that I must see each interview simultaneously as an inroad to the construction of actor-networks in and around the mass mediation of research *and* as performative accounts. When interviews with two actors (regarding the production of a specific media text) result in sets of statements such as ‘I normally phone him’ – ‘and then I phoned him’ – ‘we can just as well do that on the phone’ (the journalist) and ‘she phoned me’ – ‘I’m usually on the phone with journalists every afternoon’ (the researcher), I see no reason to speculate about these statements’ relation to ‘reality’, or to dig into possible ideational or ideological implications of them. I take them not only as articulations – which I am eliciting – of otherwise tacit practices, but also as linkages made by some actors to other actors in the process of assembling an actor-network. I have no basis for concluding that the phone is actually an essential element in everyday practices, but I can argue that it is an essential element of a given actor-network. Latour has a triangulation-like idea of checking informants’ versions of a phenomenon against successive informants’ versions. It sounds similar to the example I just referred to, but it differs in that he wants to draw another kind of conclusions than I believe I can. He states that we “do not have an outside referee to test the credibility of a claim. The degree of alignment or dispersion of the accounts will be enough to evaluate the reality of a claim” (Latour, 1991). I will not draw on the concept of triangulation to indicate that there is a unitary world, which we can describe properly if we add up different observations. Rather than treating different versions in an additive way (Atkinson and Coffrey, 2003: 115), I will maintain the view of different methods as constitutive of different realities. Despite differences in how ANT scholars deal with this issue, it is a shared assumption in ANT – borrowed from ethnomethodology and shared by all constructivist approaches⁴⁰ – that method is not simply researchers’ toolbox ensuring that reality is discovered and depicted in the most accurate way, but that we all apply methods which contribute to the enactment of reality. Atkinson and Coffrey, who argue along the same lines as Law in this respect (and use the concept of enactments as well) argue that this makes it even more important to look at what people say. What people say is a constitutive part of practice.

Ontological politics

The above described idea of method assemblages⁴¹ has political implications. If different methods are not only different *perspectives* on a single reality existing ‘out there’, but contribute to the construction of different objects (Law, 2004: 55), this entails some

⁴⁰ The idea that the object of knowledge is constructed in interactions between researcher and researched is also shared by symbolic interactionists like Mead, Blumer and Goffman, as well as thinkers like Berger and Luckmann, Bourdieu, and feminist scholars like Harding. For an account of this, see, for instance, Holstein and Gubrium (2004)

⁴¹ Briefly stated, the idea that in different sites, we encounter distinct practices and methods, which produce different versions of reality.

responsibility in terms of what we want with our research. Amongst others, Law and Urry (2004: 396) use the term 'ontological politics' to capture the idea of responsibility ensuing from our choice of methods:

The issue is not simply how what is out there can be uncovered and brought to light, though this remains an important issue. It is also about what might be made in the relations of investigation, what might be brought into being. And, indeed, it is about what should be brought into being

Just like ANT is often accused of being apolitical or, even worse, on the side of the powerful with its focus on action, alliances and alignments (Law, 1991: 13) – this study can be questioned with regards to its focus on active, often positive actors involved in the communication of research in the mass media. The consequence of choosing engaged individuals and accomplished mass mediation of research as primary empirical material, and to focus on details of the co-production of texts, could be that my story becomes one of success and unproblematic compliance with top-down communication policies or political demands. A story that ignores researchers' unsuccessful attempts to approach journalists (and vice versa), and forgets about distortion, silence, ideology, and so on. Those objections to the choice of research questions, research design and analysis design are reasonable. But the choices were actually made in order to tell what I consider a different story of mass mediation of research, namely one of productive negotiations and translations rather than one of breakdowns, suppressing structures or an anonymous media machinery processing completed research results in problematic ways. I had the ambition of showing the complexity of what takes place in processes of mass mediating social science, not of telling negative or positive stories. And although the thesis has a tendency to focus on activity and successful enrolments, the resulting story is not a smooth, uniform account of how the communication of research in the mass media is productive and positive. Expectedly, since any practice is likely to be full of ambivalences, critique pops up, controversies abound, and the resulting picture is quite complex. So in my version, mass mediation of research is about creating actor-networks that depend on common ideals, communication technologies and symbolic elements, about navigations between stabilities and instabilities, and about inclusion and exclusion processes. This is the kind of reality my methods contribute to enacting:

...if method is interactively performative, and helps to make realities, then the differences between research findings produced by different methods or in different research traditions have an alternative significance. No longer different *perspectives* on a single reality, they become instead the *enactment* of different realities (Law and Urry, 2004: 397)

The rather pragmatic view of methods as different tools that do different jobs does not imply that that anything goes – epistemological reflections are necessary, regarding the choice of methods and the consequences of this choice. Besides the reflections regarding the political aspect of the methods chosen, it is also appropriate to reflect upon how other types of data production could have resulted in another study. In the case of this thesis, for instance, an ethnography of mass mediation would have provided another kind of understanding of practice. I chose interviews because the mass mediation of social science is difficult to locate in specific sites, as noted above, but ethnography-envy has hit me more than once throughout my research process. But the question is, when we are investigating practice, need interviews be seen as opposed to ethnography? Within the ethnographic tradition, a reflexive turn has disturbed the conception of observation as a more ‘pure’ form of investigation, as well as the possibility of a ‘pure’ description. Atkinson and Coffrey (2003: 119) have stated that “By acknowledging that accounts, recollections, and experiences are enacted, we can start to avoid the strict dualism between ‘what people do’ and ‘what people say’”. It is also a central tenet of discourse theory that discourses should be seen as a form of social practice, and the interview as a social practice among others. Although not highlighted as a primary method to produce knowledge, the interview is obviously an important part of ANT studies:

Just as actors are constantly engaged by others in group formation and destruction [...] they engage in providing controversial accounts for their actions as well as for those of others. Here again, as soon as the decision is made to proceed in this direction, traces become innumerable and no study will ever stop for lack of information on those controversies. Every single interview, narrative, and commentary, no matter how trivial it may appear, will provide the analyst with a bewildering array of entities to account for the hows and whys of any course of action (Latour, 2005: 47)

I have managed my dual concern with peoples’ practices and discourses by conceiving of them as interwoven in actor-networks, or more precisely, as constituting the actor-networks I am interested in looking at. By making discursive linkages to elements of practice, they draw the contours of assemblages that are comprised of values, people, texts, positions, mundane practices, technologies, and the like.

But there was an important shift in emphasis from the stage of empirical investigation and the first analyses to the later stages of the analyses. I set out by giving priority to peoples’ linkages between practical and material entities rather than to their evaluations and interpretations. At a later point I realized that giving attention to actor’s abstract

interpretations and analyses would not remove focus from practice, but give a richer picture of practice. In the analyses, accounts of practices and interpretations are sought given an equal status. This was primarily inspired by Mike Lynch's critique of reflexivity as an epistemological virtue (Lynch, 2000). I will introduce and discuss these issues in the following section.

Reflexivity as inherent to accounts

In the introductory chapter, I discussed how the language and objects of knowledge of the social sciences create a special condition for social scientists' interaction with the media. Here I will highlight some of the similar intricacies of doing research interviews with journalists and fellow sociologists. I call this 'studying sideways', with references to Latour's critique of sociologists for always 'studying down', and seeing their research subjects as less rational, less objective, less reflexive and less scientific than themselves (Latour, 2005: 101). Latour argues that such an arrogant approach towards the subjects of sociology has been challenged most vehemently and visibly within Science and Technology Studies (STS), because natural scientists did not accept having their explanations reduced to irrational, contingent knowledge claims by sociologists of science. It could also be argued that Latour is arrogant here, forgetting to mention how action researchers, feminist sociologists and others have gone to great lengths to give voice to their research subjects' voices, agendas and explanations. But here, the point is, what happens with our interpretations and interactions when we 'study sideways'? When, throughout our interviews, boundaries between different areas of expertise are broken down, and a production of intimacy and commonality takes place? My interviews have demonstrated that carrying out sociological research in relation to journalists and fellow sociologists involves a particular set of problems. This research experience is marked by a commonality of vocabulary, ideas and 'common sense', and by the fact that we are, in a sense, each others audiences. We have – maybe vague – ideas about each others' occupations, concerns and practices, and even if we stand in a 'lay' relationship to other particular forms of expertise, we volunteer with our interpretations and critiques vis-à-vis each others' fields. Journalists discuss and assess sociology, sociologists discuss and assess journalism, and I – the interviewer – engage in those discussions and assessments both as a sociologist and as a lay person. So what does this imply for the quality of the research produced? Does this mean that the interview data become messier? That I have to be 'extra reflexive', discussing my influence on what is said and analysing the relations created between me and my interviewees? That I have to try to distinguish between the levels we move on throughout the interviews? To address such questions, I turn to the STS debate

on methodological reflexivity. Basically, this discussion is about which kind of reflexivity we should be interested in as sociologists. Should we pay attention to our own reflexivity, as a means to enhance the quality of our research? Or should we try to give reflexivity back to the agents that participate in our studies, acknowledging that their accounts are intrinsically reflexive? Such questions are widely discussed in poststructuralist methodological writings⁴². The ambitious answer might be 'both', but I have chosen to bracket the considerations about my own reflexivity throughout the analyses to come. The following sections are supposed to support me in justifying that choice.

As mentioned above, for Latour, one of the merits of STS is that it has 'studied up' – in opposition to 'sociology before STS', which mostly 'studied down'. When we suddenly have to deal with fellow scientists, it becomes harder to offer social explanations that correspond to their experiences, and it becomes more difficult to deny them the capacity to produce meaningful second-order observations or 'to be reflexive'. So STS has taken up current poststructuralist methodological discussions of reflexivity, and different STS scholars have taken them in different directions. Some have experimented with enhancing the reflexivity of their writing via unconventional or new literary forms, such as dialogue, play, or the use of second or third voices (e.g. Ashmore, 1989, Woolgar and Ashmore, 1988, Ashmore et al., 1995). This trend resonates with developments within interpretive traditions such as for instance feminism, so it cannot be seen as a minor experimental parenthesis. However, it has been subjected to critique within STS. Sismondo (2004) summarizes some of this critique on a general level. He states that such experiments rightly show that STS is in the same position as other fields, but they also display weaknesses rather than strengths. They are useful for learning about general processes of fact-construction, but do not by themselves solve any problems, and may create their own rhetorical problems. Sismondo (2004: 146-147) writes:

While they draw attention to conventional forms, and are often highly amusing to read, unconventional forms rarely change the relationship of the author and the reader significantly. Even while they appear to present challenges to the main arguments or claims, the challenges they present are in the control of the authors. Even when they appear to display temporality, serendipity, or background causes, they display these in the authors' terms.

Pinch has – in an experimental dialogue with himself (!) – made the additional point that unconventional forms may annoy readers, and produce misunderstandings about their

⁴² See for instance the edited volume by Gubrium and Holstein (2003).

status. He asserts that they may be good and fine for some playful purposes, but that they may turn sociology into a kind of literary criticism by confusing its reviewers and commentators (Pinch and Pinch, 1988: 195). In poststructuralist writings it is widely argued that unconventional forms open up for challenges to the knowledge claims of authors by foregrounding their contingency (Phillips and Jørgensen, 2002: 175pp), i.e. they are much more significant than indicated in the above. I will grant the proponents of alternative writing forms that the latter have posed a fundamental challenge to the way in which social science is produced and communicated – but I will still argue that it is legitimate to pursue the ideal of writing convincing accounts that economize with style experiments and the presence of a self-reflexive author. And this thesis contributes to the deflation of reflexivities, in contrast to poststructuralist writings that contribute to the inflation of reflexivities, which I will discuss in more detail in the next section.

The critique of reflexivity as an epistemological virtue

According to Lynch, all attempts to enhance the quality of our research by adding an amount of reflexivity share the idea that reflexivity is invested with critical potential and requires a special analytical sensibility. Lynch (2000: 36) writes:

It is often supposed that reflexivity does something, or that being reflexive transforms a prior 'unreflexive' condition. Reflexive analysis is often said to reveal forgotten choices, expose hidden alternatives, lay bare epistemological limits and empower voices which had been subjugated by objective discourse.

Against portrayals of reflexivity as linked to the research process, Lynch recommends an alternative, ethnomethodological conception of reflexivity that does not privilege a theoretical or methodological standpoint by contrasting it to an unreflexive counterpart. Following Garfinkel, he sees reflexivity as a property of accounts, thus as something we all do. Sharing this assumption, participatory researchers, including e.g. anthropologists and feminist scholars, have tried to assign more importance to the problem definitions and interpretations of their research subject. But within those traditions, this has led to what we could call an inflation in reflexivities, where reflections on the production of empirical material make up a large part of research reports⁴³. In contrast to this, Latour wants to devote less space to such issues. He states that reflexivity is interesting when given to actors and objects, but deleterious when taken as an epistemological virtue protecting the sociologist from a breach of objectivity. Of course, poststructuralists who work with reflexivity cannot be accused of striving for objectivity. Rather, they seek to enhance the

⁴³ See also Finlay (2002:).for a similar account of 'the swamp of reflexivity'.

validity of their work, as well as to alter power relations between researcher and research subjects. I consider this a valid enterprise, but it has not been part of my research agenda in this project. To put it crudely, Latour constructs methodological reflexivity as a waste of time and paper:

Instead of piling layer upon layer of self-consciousness to no avail, why not have just one layer, the story, and obtain the necessary amount of reflexivity from somewhere else? After all, journalists, poets and novelists are not naive make-believe constructionists. They are much more subtle, devious and clever than self-conscious methodologists. They did not have to wait for post-modern writing to tell stories; they are as self-conscious as those who naively believe they are more self-conscious (Latour, 1988: 170)

Self-reflexivity is obviously a strategy for articulating the situatedness of one's knowledge production⁴⁴. And while ANT studies are often meticulously describing how fieldwork and reflection unfolded, such approaches have been accused of being silent in relation to the material specificity of the researcher-subject enacting the object of study (Saldanha, 2003: 428). To put it differently: ANT tends to be very explicit about the study, not the person carrying out the study. But conversely, sometimes it seems like self-reflexivity on the part of the researcher becomes pretty counter-productive, as when reflexivity exercises end up in 'minds that went blank, paralysis and anger' (Davies et al., 2004: 374). In such cases, it is hard to see the point of introspection. The researcher is at the centre stage, and if present at all, the subject of study occupies a minor role. Of course, this is not the case for the above mentioned kind of participatory research, but according to Latour, the inquirer is always one reflexive loop behind those they study anyway (Latour, 2005: 33). Being 'one reflexive loop behind' is indeed the case in relation to my social science colleagues, who use their own sociological vocabularies to reflect upon the practices I am investigating. They actually insist on offering interpretations, which could enter my analyses in some form. I will offer one example here, from an interview with a gender studies researcher, who had told me about a broadcast radio program where she was involved in a heated debate with another researcher. From telling about the whole event, which was what I asked for, she went on to talk about positions and categories in relation to media coverage of science in general, as a lens to see her experience through. Notice that rather than probing her with regards to her second-order analysis, I share my own experiences. The chance to make use of her reflexivity is turned into an occasion of personal bonding – and we learn less about the interviewee's linkages and meaning-making:

⁴⁴ Or avoiding accusations of naïve empiricism or realism.

Interviewer: Unless you have something to add, I will let you go?

Researcher: Well, no, I guess that's something else, but which positions are possible to take up here? Which sets of categories are present? I thought about it in relation to this other researcher. His ability to claim some kind of ownership of 'science'. The premises of such debates are quite unequal. And you may ask, what is the journalist to do in such a situation? That depends on the aim – is the goal just a great debate sound? In lots of these situations you see a younger woman and an older professor, where such discussions unfold and such unequal relations are established. Where you are belittled and your professionalism is questioned in a bombastic way.

Interviewer: I had that experience myself yesterday, when I interviewed a professor and head of department. He told me that I was badly prepared, and that I could return when I had prepared my interview properly, and so on. And he wouldn't mind helping me with my project. If this were an interview, or if he were to supervise my project? So I know all about the things you are talking about. Or, you meet it everywhere. But you are right, you often see that constellation in the media. I guess it is more interesting than putting together two old professors. Or two young women. (Interview, line 369-386)

The discussions about giving reflexivity back to actors have to do with granting them interpretative authority in relation to their own practices, and allowing them to contribute with their vocabulary and explanations. Had the discourse theoretical perspective dominated throughout the production of empirical material, this would have been more obvious, because discourse theorists would always assume that people are occupied with ascribing meaning to their practices and would focus on interpretations as constructions. But, as mentioned above, I set out looking for other kinds of information from my interviews, so the concern with actors' reflexivity has been downplayed. This has resulted in an empirical material which is rich with regards to accounts of practice, and which can tell us about symbolic actants that govern peoples' relations and expectations toward one another. In the next – and last – section of this chapter, I will go more into the ways in which I approached this material, and what type of knowledge I was able to produce on the basis of it.

3. Analyses

This section deals with two aspects of the analytical process, namely the coding process and the steps towards the analytical generalizations which allow me to conclude on the basis of my analyses. The section includes presentations of the analytical questions and concepts that have guided my reading of the empirical material.

Analysis design

As I showed in the introductory chapter, the issue of mass mediation of social science has been approached from various different theoretical and methodological perspectives. By posing the question 'How are media texts dealing with research-based social scientific knowledge assembled?' my ambition has been to add to existing studies through exploring the processes of assembling symbolic/human/non-human elements into actor-networks. To produce this specific kind of knowledge, I have turned some of the central concepts of ANT into tools for coding and categorization in my analyses. Hence, the codes and categories did not emerge from the data. My knowledge interest made it evident to go through the material with an eye for 'relations', 'practices' and 'translations'. Also, I was interested in exploring the potential of the concept of 'actant', to include other entities than humans in the analyses. Finally, a focus on 'controversies' seemed an important entry point to understand the construction of facts and expertise. From the empirical material, a set of subcategories emerged; i.e. a general code such as 'actant' was split up in different dimensions that ran through the material. For instance, articulations of values and references to communication technologies became articulated throughout the material, and thus became subcategories in my analyses of actants.

To operationalize the very broad research question mentioned above, I posed a range of sub questions which were intended to shed light on central aspects of the process of assembling actor-networks in and around media texts with a social scientific content. Those sub questions worked as analytical questions to the empirical material:

1) Which types of relations are established in texts and interview accounts?

The rationale for posing this question lies in the relational ontology underpinning the overall project. It follows from the ontological position described above that relations are the most important entities to look at. As indicated in the previous chapter, the question was intended to open up the material, because it could direct the attention to 'the in-between' familiar categories of actors in the mass mediation of research. It was supposed to shed light on how knowledge, identity and texts are relationally created in mass mediation processes. More or less stable associations, assemblages, collectives or 'actor-networks' are the result of the constant linkages between elements, and those concepts are fundamental to my analyses. On the basis of the above mentioned analytical question I have tried to capture concrete, physically traceable connections or relations. An inroad to exploring what happens in the interactions of journalists, researchers, and editors is to

‘follow the actors’, i.e. let them talk about their mutual relationship and their common products – to see what they co-construct as significant. An example from my analyses could be the relation which is created between democratic ideals and the mass mediation of research. This kind of relation is articulated by different types of actors, and contributes to holding the actor-network together. Ideally, the concept of actor-networks disturbs our preconceptions about how different entities relate to one another. On the basis of this, the analyses can be based on how actors themselves relate different types of entities.

2) Which practices and routines are parts of constructing media texts?

With this question, I have sought to address how the work practices and interactions of different actors result in media texts. When I ask about how media texts are assembled, I am interested in looking beyond the text and unpacking the process of its production. In this respect, I have been inspired by STS’ focus on the practice of science rather than the product of science. I have transposed this approach to the mass mediation of research, where I have given attention not only to media products, but to peoples’ accounts of their practices and routines. Couldry (2008) has remarked that the advantage of drawing on ANT in the study of the mass media is its demystifying approach. When we look at concrete practices, ‘the media’ no longer appears as a mysterious, huge machinery of abstract forces. Latour writes that one of the main advantages of dissolving the notion of social force is that we can bring into the foreground the practical means to keep ties in place (Latour, 2005: 68). So focusing on practice also contributes to the understanding of how actor-networks come into being, often though quite mundane, unremarkable activities. An example from my analyses is the way in which specific ways of using the phone create special relationships between journalists and sources – in cooperation, they develop a routine kind of expert interview, which lasts few minutes and results in the production of expert statements and in the expert position of the source.

3) What kind of positioning work takes place in texts and interview accounts?

With this question, I wished to interrogate the significance of positioning processes (as understood by poststructuralist writers like Davies and Harré, 1990, Harré and van Langenhove, 1999, Gergen, 1999) for the construction of media texts with research content. It is linked to the first question that addresses relations, because positioning and categorizations contribute to the assemblage of different collectives. I have looked at how actant positions are created in media texts, and how actors categorize themselves and others – and thereby create inclusions or exclusions. I have been concerned with how actors enact their professional identities and ascribe to subject positions, because I have worked from the assumption that this has consequences for how they relate to others and

how they perform their job. I have also worked from the assumption that positioning processes constitute the actors involved in the communication of research. The idea that social groups do not exist a priori does not mean that they are not made. On the contrary, people are occupied with positioning each other as inside or outside different collectives. It follows from the relational view on identity, that it is always constructed in opposition to an 'other' (e.g. Laclau and Mouffe, 1985: 143-44). An example from my analyses is the discussion of how different kinds of media performance – where claims to knowledge stand uncontested or become vigorously contested – have different kinds of implications for a researcher's position. When a researcher is positioned as a prominent expert in news stories, this both gives him a prominent position in relation to politicians and journalists and ensures his future media appearances *and* places him in an illegitimate position in relation to some colleagues. Nothing definitive can be said about this unstable position. Rather, the messiness of it all primarily shows that the researcher's knowledge claims and position are not properties pertaining to his person, but co-constructions involving a lot of other actants. Here, I draw on the concepts of alignment and enrolment (e.g. Latour, 2005) to account for the fact that people seek allies in their continuous production of knowledge claims and versions of reality. I also use the concept of chains of equivalence to account for the ways in which this positioning work is linked to dominant discourses within the discursive field of the knowledge society.

4) Which types of actants make a difference in the production of media texts?

With the concept of actants, I have experimented with bracketing a priori distinctions between human and non-human actors to explore – in an open manner – the different types of elements that can be assembled in the process of producing a media text. Rather than conceiving of the above-mentioned assemblages as consisting of either textual elements or people, I wished to extend the focus on who and what could count as a member of an assemblage to comprise texts, symbols, persons, technologies, narratives, ideals, etc. The role of the material and technological would probably have taken up more space in my analyses if they were based on observations rather than on accounts. Still, I wish to emphasize how I have sought to retain the idea that when we have a group of humans (an editor, a journalist, a source), it might look like we have a set of social relations – but we should not forget that their association depends on and includes (for instance) e-mails, the phone, texts, and other entities.

5) Which types of translations take place in production processes and texts?

The concept of translations is central to my analyses because it points to the fact that media texts must be seen as so much more than information – namely the product of

negotiations and of different actors' agendas. With posing the above question, I ask how this shapes the media product. In my analyses, the concept of 'translation' – i.e. of a chain of actors shaping and changing an initial statement according to their different projects and needs (Latour, 1986: 268) – has directed my attention to the numerous changes that statements undergo in the mass mediation of research. Not only as *other* actants translate researchers' knowledge claims, as studies of distortion and studies of framing in mass mediation emphasize. We can also talk about translations when researchers themselves communicate their knowledge to new publics, audiences or users. When I use the term 'negotiation' analytically, I refer to the process of attempting to reach agreement over a definition. Hence this is closely linked to the concept of translation.

The concern with translation is linked to the above questions about relations and positioning work because translations are essential to attempts at holding actor-networks together and establishing identities. As I noted in the previous chapter, different actors and actor-networks manage to reach agreement and associate through translations. In the analyses, I talk about how allies are assembled into more or less stable actor-networks.

6) Which kinds of issues are still hot/open (controversies) in texts and interview accounts?

When I ask my overall research question of how media texts dealing with social scientific knowledge are assembled, this includes a knowledge interest in how a specific kind of knowledge is established. We could call this 'mediated social scientific knowledge'. To understand the construction of knowledge, a possible entry point is to focus on controversies. Controversies lead our attention to processes of establishing facts. If knowledge construction is a collective process, then different kinds of actors have to agree about it. As Latour has put it, controversies are an entry point to following facts in the making, where issues have not yet become cold (Latour, 2005: 116-119ml.). I am not posing analytical questions about controversies to reassert or show *that* 'the communication of science' or constructions of facts or expert positions are controversial. This has been addressed – and is continuously discussed – elsewhere⁴⁵. Rather, the analyses show *how* controversies *may or may not have consequences for how communication is done* by different actors – and for media texts resulting from such communication. For instance, my analyses show how a public controversy around a particular researcher is bracketed by a journalist who regularly uses him as an expert source. She does not touch upon the massive critique

⁴⁵ For instance in literature that contributes to reproduce the litany of differences discussed in chapter 1.

of his person or the status of his expertise, and in this way he can uphold his position as expert in particular assemblages of media texts.

The above mentioned analytical questions were chosen as means of addressing the main research question of the thesis because they point to different types of construction processes and different aspects of the process of assembling actor-networks. They shed light on my overarching research question by showing processes of co-constructing media texts, and highlight the relational aspect of mass mediation. In the following section, I will discuss the step from addressing those questions in the empirical analyses to being able to draw conclusions on the basis of those analyses.

Analytical generalizability – constructing actor-networks

As already indicated above, this kind of study does not strive to live up to generalizability criteria in a universalizing sense, i.e. it has no ambition of providing statistically valid statements about a given population on the basis of a sample. So the attempts to formulate some more general statements on the basis of the analyses do not go via participants on the basis of quantitative data, random sampling and statistical calculation. Instead, my conclusions are analytical generalization via categories and processes (Halkier, 2003: 115). The use of analytical generalizability is common in qualitative research. This should be seen in relation to my main knowledge interest, namely to be able to create detailed accounts of different types of co-constructions of mediated social science. For instance, when my analyses tell stories about specific uses of the email, the idea is to understand these as phenomena in their own right (Law and Mol, 2002: 15), differing slightly from other kinds of uses. They need not contribute to a 'general theory of email communication in journalism'. With analytical generalizations, I aim to contribute to middle range theoretical discussions within subfields of media studies and science communication studies by offering knowledge on the basis of a specific sample which is constructed to produce insight into the complexity of the mass mediation of social scientific research. Regarding the validity of the analyses, I agree with Flyvbjerg that we might learn more from concrete exemplars offered by case studies than from general, context-independent knowledge (Flyvbjerg, 2006: 226pp), and that the cumulative development of knowledge through exemplars is as important for social science as the production of general statements on the basis of large, random samples. With regards to the case studies of this thesis, different strategies to ensure their quality have been employed. The validity of case studies might be threatened by the exclusion of contrary cases, by a tendency to use anecdotal evidence to support general claims, and by attempts to summarize complex

findings (Silverman, 2005: 210pp). Since the ambition with the analyses of this thesis has been to capture the complexity of the mass mediation of social science and to follow the actors' linkages, they do include deviant cases, they offer detailed stories that cannot be summarized, and they attempt to be comprehensive in describing the heterogeneous elements of the assemblages analyzed. This implies that, taken together, the four case studies are heterogeneous in content and shape – and somewhat messy (Law, 2004). This messiness can be seen as a disadvantage for the overall argument of the thesis, but it can also be seen as enhancing the validity of the thesis because the material has not been forced into an orderly story which disregards contradictions and variation.

To reach beyond the scope of this empirical study, I have – of course – drawn comparisons with similar studies of the actors involved in the communication of social scientific knowledge in the mass media (Evans, 1995, Fenton et al., 1998, Haslam and Bryman, 1994, Weiss and Singer, 1988). On the basis of this, it becomes possible to discuss differences and similarities across a number of settings (Silverman, 2005: 129).

Another way of arguing that my specific stories ought to make sense to a wide range of actors is to consider how the language and categories of my material are not the property of my interviewees. Given that certain instances of language use are possible in a certain case, there is no need to believe that this is not possible in another case. It could be argued that such an assertion is somewhat at odds with an ANT perspective, which opposes the idea of universal mechanisms or patterns, and would have little interest in a generalizability based on the assumption that those generate the same kind of phenomena across different sites. But giving attention to the common discursive resources we draw on does not necessarily entail a commitment to revealing 'underlying structures' or 'overarching mechanisms'. Discourses are part of the broader situation of communication of research in the mass media, and specific situations are full of widely shared discourses.

Overall, my cases have become examples of complexity in mass mediation of research. But when it comes to specific themes within the material, the generalization problem has posed itself again. For instance, with regards to communication technologies, one case shows that the email is important as an intermediary between researchers and journalists, another case shows that the telephone is important. The question arises, would a third case bring up a third technology? Or contradict the other cases? How do such thematic, small entities relate to one another? In the instances where I have little empirical material regarding e.g. 'what email does to the work practices of journalists', I have chosen to conceive of it in general terms as one communication technology, which works as an

actant in broader actor-networks. In this way, I have refrained from generalizing about such a communication technology by looking at its function in a particular situation.

On the basis of the analytical questions I posed to the material, my conclusion has come to formulate some statements about

1) Different types of relations

In the analyses, I describe relations between journalists and researchers as held together by phone communication, as held together by common interest in speaking for practice, as nurtured through email communication and as strengthened by common communication ideals.

2) Various mundane practices that influence the media production process

Although they do not occupy so much space in the analyses, I have included a range of mundane practices that make a difference in the production of media texts – the train ride home that allows an editor to browse international peer-reviewed journals, the bike ride which is saved for meetings with untrained media sources, the conversations at the bus stop that are a kind of prerequisite for selling your idea of a media product

3) Different types of positions in and around media texts

In the analyses, I talk about the communication officer as translator between journalists, the public and researchers, about the communication officer as the right hand of management and politicians, and the communication officer as a technician. I talk about the journalist as a routine user of a news model, about the journalist as an attentive listener, and the journalist as 'the public's advocate'. Finally, I talk about the researcher as a public intellectual, the researcher as opposed to 'the media logic', and the researcher as a 'quote producer'. In the material, we also have the researcher as a writer, the researcher as an expert source, the researcher as an interviewee, and the researcher as an arbiter.

4) Different kinds of actants that make a difference in the production of media texts

My material has highlighted such heterogeneous actants as communication ideals, democratic ideals, historical examples, political gossip stories, information and communication technologies and different means of transportation. They all make a difference in the establishment of actor-networks in and around media texts with social scientific content.

5) Different kinds of translations in the production of media texts

Examples of translations include instances where information is omitted or added, where examples are inverted in order to prove different points, or where interests become aligned though extensive negotiations about the point of a given media product.

6) Different types of controversies

Controversies over knowledge claims and positions abound in my material. Of more general controversies, I can mention social science versus natural science, social science versus politics, social science versus the media and social scientists in disagreement over knowledge claims and media performances.

The thesis constructs these elements as part of assemblages or actor-networks in the mass mediation of social scientific research. Before presenting the analyses of the different assemblages, I will discuss their constructed character.

The problem of constructing actor-networks analytically – my research as a construction

As should be clear from the above, the analyses of this thesis rest on the ontological claim that actor-networks make up 'the social'. My analyses can be seen as experiments with 'seeing the media text as a trace of associations' and seeing the production of a media text as the establishment of an actor-network. I have been troubled by the fact that my identification of 'an actor-network' is both the starting point and the outcome of my work. Latour talks about 'the inherent topography of specific networks' (Latour, 1991: 121) and wants to use thick descriptions to offer 'internalist' explanations, as if actually existing networks explain themselves if we look carefully. In contrast to this, I have had the ambition of producing an account, which emphasises actor-networks as analytical constructs. In this respect, I am more eager than Latour to practice research which is consistent with the fundamental insights of *epistemological* constructivism.

But although I distance myself from the epistemological realism of ANT at this point, the actor-network *ontology* has still informed the focus on how people involved in the mass mediation of research relate, compare, and organize (Latour, 2005: 150) issues and events in their professional practice, and produce actor-networks in this way. And I believe that letting my analyses revolve around how media texts are outcomes of associations and translations has indeed offered a means to answering the question of how mass mediation can be understood as negotiations/associations. With a non-essentializing, open approach to the empirical field, it would have been more obvious to wait with the definition of the size or composition of the meso-level entity until a later stage of research – but at the same

time, I have not pictured my research as a presuppositionless activity, which could go in any direction. So to questions about how I know what to include in my analysis of a network, and about what it takes for me to judge that there is a network, the reply would be that maybe there are no networks, apart from the ones I presuppose and create analytically. To construct them, I have focused on references and connections that my interviewees recurrently make and on entities that are most prevalent in the texts. These elements could also have been theorized with other meso-level concepts – as making up cultures, social worlds, or the like.

I have not supplemented my empirical material to get a 'fuller' picture of my actor-networks. I considered establishing my actor-networks analytically, and then presenting them to my interviewees to discuss them as analytical constructs – and relate this to their reflections on their practices and reflections. For time reasons, I left this idea. I also realized that with my research design, saturation is not really an option. Actors' distributed and extremely varied practices combined with an analytical focus which is more concerned with going in different directions, where connections are made (maybe unexpectedly, in messy ways) has a tendency to produce unsaturated accounts! As I focus neither on groups nor on individuals, but on linkages between different kinds of actors (for instance, linkage to ideas, reports of connections, connections between practices/time issues/events/politics), saturation becomes less obvious as a validation criteria. As I mentioned above, the validity of my analyses is a product of accounts that make no attempt to jump to general conclusions and provide illustrative examples of these, but stay close to actors' complex practices and articulations. Furthermore, I have attempted to be transparent with regards to the production and analysis of empirical material, so that it should be clear to the reader how the thesis has come to offer the knowledge claims it does.

A final issue, which should be mentioned in relation to my construction of actor-networks, has to do with time and space. In my analyses, I have tried to dissolve the chronology of events. Instead of analyzing the production of a media text as a process that evolves over a period of time, a given text has been the starting point of my analysis. In that sense, time is no longer a 'fixed, regular framework' within which the observer must tell a tale. "The observer has no more need for a regulated time frame than for actors with fixed contours or predetermined scales" (Latour, 1991: 119). Like we let actors create their respective relationships, transformation and sizes, we let them mark their measure of time: we even let them decide what comes before what. As a consequence, since the passage of time

plays a minor role in my particular interviews, time is not a factor in my delineation of actor-networks.

As already mentioned, to experiment with another analytical line of thought than the very local account of particular media texts and their creation, I have added another type of account to the thesis in chapter 8, namely an analysis of discourses and positions in the cases as well as additional empirical material. This has allowed me to reflect upon some of the 'missing elements' of my cases. It should not be seen as an attempt to map the 'external context' of the cases, but to deal with some of the non-articulated elements inherent in the broader situation. As such, different kinds of empirical material have gone together to inform my analytical construction of actor-networks as well as my creation of a broader situation.

Now that I have presented the methodological approach of the thesis, as well as the strategy applied to produce and analyze the empirical material, I turn to the analyses of four different assemblages which shed light on my overarching research question in very different ways.

CHAPTER 4

A researcher translates his research-based knowledge claims

This chapter addresses the overarching research question of how media texts with a social scientific content are assembled by looking at how a researcher's long newspaper essay emerges on the background of a relationship with an editor, established over time, and on the background of an academic paper. The chapter draws the contours of a type of assemblage where important entities highlighted by interviewees comprise communication ideals, distinctive symbolic entities and email communication. The analysis presents these as actants. The assemblage is held together by co-constructed media demands which influence how a researcher translates his knowledge claims into a long newspaper essay. The chapter describes the work required for a researcher to establish and uphold associations with a newspaper editor and to enter a position as a sort of public intellectual. The researcher's and the editor's common adherence to particular ideals can again be linked to how the text is assembled. Here, other entities such as gossip stories, colorful examples and current events are aligned to produce a particular type of text where a researcher is assigned space to communicate his research and in turns acts according to criteria normally not associated with being a researcher. The researcher's cooperative approach to the communication of research-based knowledge entails that a journalist accuses him of having gone too far to accommodate the media's supposed demand for the colorful and the possibility for identification and entertainment.

In this chapter, the analytical focus lies in the involved actors' interpretations of their relations, as well as on the symbolic entities that make up the media text. Analyzing the researcher's translation of an academic paper into a newspaper essay, the chapter has a relatively strong textual focus. It also broadens out the analysis to cover controversies that followed from the researcher's translations, to point out the work involved in maintaining associations and to follow the re-translations that may take place after the publication of media texts. Approaching the controversy as a site for studying science/society relations, we can see this controversy as a demonstration of the blurring of boundaries between academics and journalists and the ease with which social scientific interpretations may be contested by non-scientists. The analysis of this assemblage thus shows how particular alignments of elements (news values, examples, and a researcher) are part of the establishment of actors' identities, and how they may be sought destabilized in a controversy where the researcher's legitimacy is questioned.

The chapter is divided into three sections. The first describes the establishment and maintenance of interpersonal relations, the second is a textual analysis of how the essay is assembled, and the third follows a number of negotiations of the essay following its publication.

The empirical material underpinning this analysis consists of a newspaper essay, an academic paper, two interviews, an email exchange and a letter to the editor. The first interview (with a newspaper editor) led to the second interview (with the researcher) because the editor continuously used this particular researcher as an example of collaboration with researchers. The second interview then led to all the other texts, where the researcher appears either as author or otherwise. As I explained in the previous chapter, I have let the empirical material direct the investigation.

A collective of common ideals, email communication, and good stories

A long essay on anti-Americanism appears in a weekly newspaper in spring 2007, on the front page of a section devoted to 'ideas'. This section tells the story of how it got there; a story trying to shed light on the associations that were made before it could materialize. Out of the complex web of actors and associations present in the material I have made a pragmatic choice (Søndergaard, 2005) to limit my analysis to deal with three kinds of associations in this section. First, I will discuss how the actor-network associated to create this media text includes different communication ideals. Without these ideals, the text would not come into being. Then I will focus on email communication as an actant affording the establishment of particular kinds of connections. This technology allows other entities in the actor-network to strengthen relations, it replaces face-to-face interactions and letters between editor, journalist and researcher, and it creates distinct working practices. Finally, I show examples of how associations are made with various symbolic actants, which are included in the actor-network in order to create a media text.

Communication ideals as connecting people

The analytical design of this thesis was not aimed at addressing norms or ideals, but from the empirical material, ideals emerged as significant actants linking entities and pushing people to write in particular ways. In this sub section I will show how three different ideals are articulated. First, there is the ideal of communicating important (research-based) knowledge to a wider public. Second, there is the ideal of doing this in a way so people

understand it. Third, there is the ideal of remaining accurate and trustworthy as knowledge is translated from one site to another. These ideals are essential to holding the newspaper actor-network together. I present them as powerful actants because they manage to continuously enroll a lot of actors, as science communication studies have also shown. Power, in an ANT perspective, only comes into being when different actors enroll, convince and enlist other actors (Latour, 1986: 274). By associating with powerful communication ideals, actors both reinforce their power in the newspaper actor-network, and they take a shortcut to associate with the other actors of this network.

Communicating important knowledge

The researcher, Carl, who wrote the essay on anti-Americanism articulates the value of communicating important knowledge in different ways, both as a natural thing, as a professional achievement and as a strategy for gaining all kinds of merits. According to him, knowledge does not make much sense if it is not communicated, both amongst colleagues, with students, and to a broader public. He “cannot understand that researchers want to become knowledgeable and not share their knowledge”⁴⁶. He expresses appreciation of the transgression that lies in transcending narrow professional roles to contribute with knowledge claims in public fora – and this goes for both academics and journalists.⁴⁷ But he not only subscribes to ideals of sharing and transgression, he also appreciates the value of going public. For him, this has been a strategy for gaining academic merits. For instance, to make himself interesting in the eyes of an academic job committee, he wrote a newspaper essay and sent it to the professor in charge. Also, it has given recognition from colleagues, who comment on his frequent media appearances. Finally, it has been a way of creating himself as a knowledgeable person in relation to a wider public, as well as in relation to private connections.⁴⁸ However, he stresses that his frequent appearances on the department’s homepage as a result of his media performances do not give a kind of recognition worth running after. Media coverage has to have meaningful impact, not just result in hits in a search engine: “You know, if someone calls me an idiot, it is also registered as a press hit. Should that count?”⁴⁹ Even if he could be characterized as a success according to university demands for media hits, he dissociates himself from the communication unit at his institution, whose communication of research is tied to search engines and quantitative measurements.⁵⁰ Among all the

⁴⁶ Interview with Carl, 27.07.07, line 732

⁴⁷ Interview with Carl, 27.07.07, line 363

⁴⁸ Interview with Carl, 27.07.07, line 128-148

⁴⁹ Interview with Carl 27.07.07, line 758

⁵⁰ Interview with Carl 27.07.07, line 812-830

reasons to communicate knowledge to a wider public, the ones connected to a sense of obligation are invoked the most in this interview. Many communication courses, the Public Understanding of Science tradition, and communication policies similarly articulate and appeal to precisely this sense of obligation on the part of researchers (Dickson, 2000: 921, Horst and Poulfelt, 2006, Jasanoff, 1997: 355, Fenton et al., 1997: 6). In chapter 8, I will discuss the relation between this articulation of obligation to what I call a discourse of usefulness through transgression and a discourse of accessibility.

For the editor of the section on ideas, Tenna, opening up a hitherto closed world of research-based knowledge is interesting both as a democratic endeavor and as a way to get access to stories with a certain profundity. For her, the newspaper's emphasis on research-based knowledge is part of a general trend:

There is a lot of talk about the knowledge society, so [knowledge] becomes an interesting thing to pursue. Once, in the puritanical 1970s, people turned their nose up at elitists, but now it is okay, all the abstract issues that are dealt with inside the universities⁵¹

The same kind of linkage between the emergence of 'the knowledge society' and an increase in interest in research-based knowledge is made in the literature on the communication of research. For instance, it is stated that in a knowledge society, knowledge becomes a product, and universities face public demands concerning transparency, usefulness and influence (Arnoldi, 2006: 58, see also, e.g. Mautner, 2005, Nowotny et al., 2003, Slaughter and Leslie, 2001). Both in my empirical material and in scholarly literature on science communication, knowledge and the knowledge society are invoked as agencies that require a normative investment. The knowledge society is also treated as an actually existing phenomenon, which can explain a range of actions, initiatives and policies. Tenna recalls how all the major newspapers and important electronic media began to devote special sections and programs to research-based knowledge in the course of a couple of years. To her, the media were frontrunners in the trend towards more communication of knowledge to the public – and the politicians confirmed and formalized this trend by making policies in the area.

⁵¹ Interview with Tenna 19.04.07, line 591-594

Wanting to be a good communicator

Both the researcher and the editor involved in the production of the essay on anti-Americanism articulate criteria for being a good communicator. The researcher, Carl, talks about writing in a compelling way, and gives an example:

I'm inspired by the Anglo-American way of writing books [...] Kagan's book, it is written in capital letters, right? It is not difficult to read. For instance, 'Americans are cowboys, Europeans love to say, and there is truth in this'. That's the way! Bang! It is almost a Hemingwayesque style of writing, right? But if a sociologist from [a Danish university] had written it, it would have said 'the linguistic dichotomy prevailing within the paradigm that blah-blah-blah'..."⁵²

In this way, Carl associates with what we could call the ideal of writing well, and connects with the editor's idea of researchers who can communicate. For her, writing well is a question of expressing oneself in a way so that non-intellectuals can understand it. The message does not have to be simple, but knowledge has to be "explained in plain, proper, nicely crafted language. That is, knowledge has to be unpacked"⁵³ The editor believes that writing in this way is a question of inclination:

...the people who think it's fun to write, they do it a lot. And others don't. There is an invisible selection process going on. And when I receive something which is super well-written, then I'm all happy – and they can feel that, at the other end. I ask for more. So it is also self reinforcing⁵⁴

In an interview, the editor brings up Carl as an example of such a researcher. In the past, he has delivered short counter-factual stories, and

...that has been really nice – and I have been happy because he always delivers something perfectly nice and complete. It can be printed directly, and you enjoy reading it. And then one day I asked him, just in an email, what is your own field of research? [...] And then he tells me that he is writing about French anti-Americanism, and I wrote back that I would love to get an article dealing with that, right here before the French election. And then I got this great story, and that's really nice. It's funny. I've never met the man⁵⁵

When I turn to Carl to interview him about work practices that relate to the media, it is apparent that he goes to some length to cooperate and to nurture the relation. Both at the

⁵² Interview with Carl 27.07.07, line 448-454

⁵³ Interview with Tenna 19.04.07, line 113

⁵⁴ Interview with Tenna 19.04.07, line 178-182

⁵⁵ Interview with Tenna 19.04.07, line 187-193

time of the editor's first request for a research-based contribution and at a later time, he has felt 'not quite ready' to go public, or has had other work to do – but he has chosen to deliver the stories. "And then she is really happy, because I help her. But, of course, it is in my own interest to help her"⁵⁶. I will argue that the association between Carl and Tenna is tied to their shared commitment to the production of texts which adhere to certain ideals, as well as their practice of negotiating to reach a common goal. They both tell about emails zipping back and forth between them, with the editor's red lines and yellow highlights and the writer's adjustments and cuts. Tenna recounts:

I turn [a researcher's text] into a word-file, and then I begin making red lines. First I state that I find it interesting – if I want to print it. Then I suggest 'You put that in the introduction, you throw that out, and it should be this length, you have to throw those words and expressions out, and can you give me an example of that?' And then this incredible process begins. It rarely takes long, maybe one or two days, then 'bling' it's there again. Something completely different, and now it can be printed.⁵⁷

In Tenna's words, creating media texts on the basis of researchers' texts is about turning abstract concepts into concrete ones, giving examples, and only having one or two messages. These principles are at the core of any journalism curriculum, and to Carl, who has taken courses at a journalism school, this is a perfectly legitimate professional approach. He has no problem with aligning himself with Tenna's criteria:

...sometimes when you tighten up [a text], it gets better in the sense that your argumentation becomes clearer, even if some nuances are lost [...] she is good at making yellow highlights and saying 'this is not so coherent, but that is interesting, can you spell it out a bit?'⁵⁸

As such, Carl contradicts the common sense conception of the researcher as a person committed to a specific language or to 'undistorted' or undisturbed knowledge claims. Rather than associating with an academic professional community and highly specialized language, he associates with media actors, including communication ideals commonly associated with them. He distinguishes between overly academic writing and light, easily understood writing. Although conscious of the fact that some people may find his language (also that of his academic texts) unconvincing, he prefers an intuitive writing process and a clear and engaging language to contrived, heavy lingo⁵⁹. Carl ascribes his communication skills to a mixture of common sense and a basic knowledge of the news

⁵⁶ Interview with Carl 27.07.07, line 890

⁵⁷ Interview with Tenna 19.04.07, line 141-147

⁵⁸ Interview with Carl 27.07.07, line 413+903

⁵⁹ Interview with Carl 27.07.07, line 358+440-458

criteria, which can be twisted a bit and applied in relation to the communication of research. This is in line with the extensive literature offering advice on how to borrow from journalism to make science understandable to non-experts (e.g. Jensen, 2000, Shortland and Gregory, 1991, Vaughan and Buss, 1998), and shows how the articulations and institutionalizations of 'the news criteria' make them performative.

The researcher's and the editor's articulations of shared criteria for good writing suggest that they do not ascribe to the subject positions of two different professional species with incompatible values and rationalities, as described in numerous studies on science communication (Weigold, 2001)⁶⁰. Instead, their way of relating to one another and working together disturbs the earlier mentioned "general litany of differences between scientists and journalists [which] has evolved over the years" (Valenti, 1999: 174). Valenti continues:

The list of differences, primarily pointed at professional standards, looks something like this: scientists value advanced knowledge; technical language; near certainty; and quantitative, complete, and narrow information. They are specialists; theoretical, meaning they value knowledge for knowledge's sake; cumulative and therefore slow; objective, although that has been called into question of late; past dependent; and not attention seeking. They also enjoy high professional status. Journalists, on the other hand, value diffuse knowledge; simple language; indications; and qualitative, incomplete yet comprehensive information. They tend to be generalists; applied, meaning they focus on what is relevant to society; non-cumulative and very fast; advocates, although such an accusation stabs at the core of journalistic balance; also past dependent; not personally attention seeking; and, according to most public opinion polls, at the lower ranks in terms of professional status (ibid).

In the section below, we will see other indications of how untenable this 'litany of differences' is when we zoom in on actual people involved in the mass mediation of research. What we see here is that the ideal of communicating well both has practical dimensions ('how to' literature and journalism classes) and connects to some normative debates. Actors involved in the production of media texts highlight communication ideals throughout their accounts. Ideals such as that of communicating important knowledge can be seen as actants because they make a difference in other agents' practices (Latour, 2005: 71). The ideal performs a number of actions for the researchers, journalists and editors who associate with it, gluing them together with a whole landscape of media institutions and political demands. It is thus an example of a type of actant that both holds a particular

⁶⁰ Weigold reviews a whole body of literature occupied with their differences.

association together, and links actors to other actors, discourses and institutions in longer chains. In chapter 8, I will go more into its connection to a discourse of accessibility. Here I will just emphasize that in the empirical material, I have seen no sharp separation of values between researcher and editor.

Heterogeneous contributors – connecting on the basis of ideals

In the interview, the editor tells about how researchers like Carl came to contribute to the newspaper in the first place. At the time when the section on ideas was launched, its former editor, Chris, made an effort to “*collect contacts and stringers. That is, people writing in, contact persons in different research fields [...] Carl is one of them*”⁶¹. Carl tells the story about how he became a contributor in the following way: He had written an essay for another newspaper. This essay was rejected by the editors, and at a later point, Carl sent the same text to his former classmate, Chris. The latter suggested that Carl turned the essay into a piece of contra-factual history writing, which was then to become the first of an already planned series. Carl agreed, and became a regular freelance contributor to the newspaper⁶². He has nurtured his association with this particular newspaper, expressing loyalty and an inclination to strengthen the tie rather than develop new ones:

I also feel a certain loyalty to this newspaper, now that they have been so kind as to print my articles. They have not printed them all, but they have been kind enough to print most of them, and I am grateful for that. And now my things have been printed there so many times that I consider myself a regular freelance contributor. And then I don't think I should go public all sorts of other places [...] I think I owe it to them to go there first⁶³.

At the newspaper in question here, the stringers from the universities are meant to provide stories and ideas, keeping an eye on fields such as economics, law, history, etc. They neither make up a stable network, nor do they figure on a list of sources. Instead, the newspaper section has all sorts of arrangements with all sorts of contributors, stemming from all sorts of connections. Some of the original contacts still contribute to the section, some do not, and new people have been enrolled. Some are freelance contributors on a regular basis, some write occasionally, and some just provide ideas. Some are the editor's or journalists' former sources, some are private connections, and some just present themselves – out of the blue – with an article or an idea. In this seemingly chaotic practice,

⁶¹ Interview with Tenna 19.04.07, line 205-225

⁶² Interview with Carl 27.07.07, line 165-170 + 678

⁶³ Interview with Carl 27.07.07, line 674-682

one of the things which glue together different networks assembled around different texts is the ideal of communicating research-based knowledge, and doing it well. According to the editor, people “have to have the right attitude, they have to be able to explain themselves, and they have to be willing to talk to me [...and] they have to be competent”⁶⁴. The different demands that actors are expected to meet to be included in the collective point to a need for different forms of credibility to complement each other. Researchers both need to nurture alliances with editors and journalists by showing adherence to the ideals the latter continuously articulate, and to have allies in academic types of actants by associating with other ideals. If they lose academic credibility, this weakens their ties with media actors. In chapter 8, I will argue that actors are producing a hybrid kind of academic media performer by hooking up with different kinds of actants and blurring the boundaries between professional categories.

Over time, Carl has developed a set of standards for his media performance and contributions, confining it to a certain kind of intervention (“with a knowledge dimension”). Hereby he associates with the ideals articulated by the editor. However, since he can only cover a limited area of research-based communication of knowledge, he “moves around in both time and place”⁶⁵, using generalist academic competencies to create entertaining texts with a knowledge dimension. He operates with the distinction ‘an academic context’ and ‘a news context’, and states that a media text written by a researcher should not necessarily meet academic standards. This has turned out to be a controversial position, presumably because it makes the boundaries between legitimate and illegitimate knowledge claims more messy, and calls for the policing of professional boundaries. Carl reports an unpleasant experience where another researcher attacked his academic integrity:

...there was a really pissed-off reply from a historian, who wrote that this story had already been written. That really annoyed me, because it seemed like he accused me of plagiarism. And that is the worst accusation, for a researcher [...] that was unpleasant, someone writing about me in such an evil and demeaning way⁶⁶

After this incident, Carl spent some energy on reestablishing his academic credibility, both by writing a lengthy answer to the critique and by emphasizing to his colleagues that he had had an email correspondence with the historian who admitted that the story was not

⁶⁴ Interview with Tenna 19.04.07, line 475-480

⁶⁵ Interview with Carl 27.07.07, line 182

⁶⁶ Interview with Carl 27.07.07, line 195-237

plagiarism. The entertaining counterfactual story had become a contested object because the historian knew of a similar thought experiment, and resented the fact that Carl did not mention this. Carl, on his part, regretted not having done his research properly⁶⁷. The controversy shows how blurred genres make actors engage in boundary work to categorize knowledge claims as belonging to a scientific or a media context, respectively. In this instance, where doubt can be raised about the status of the claims, Carl's contribution is not interpreted as a complex task of putting together a knowledge-based, entertaining story that lies on the edge of the writer/researcher's area of expertise. Instead, its blurred character becomes an issue of academic credibility, where judgments are made according to academic ideals. One consequence of the controversy is that Carl finds himself in the middle of an unstable aggregation of ideals such as entertainment and trustworthiness.

So this kind of communication of knowledge – where Carl decouples his area of research and the public communication activities he engages in (by treating topics that are far from his core expertise) – can be quite controversial and lead to the destabilization of associations. Even if actors are assembled to produce a certain (complex) type of texts, each text can come to stand pretty much on its own as an actant in academic controversies. In this way, its mixture of knowledge-claims and entertainment can disturb the researcher's relations to both the newspaper and his colleagues. Here, I have described the controversy as being about a clash of ideals. In chapter 8, I will go more into how such controversies are bound up with identities and positions as well. A similar controversy will be discussed in more depth in the last section of this chapter, where the point is primarily to show how such a controversy can be solved through communicative interactions via e-mail.

Email communication as an actant

The editor and the researcher of this case both establish email communication as more than a simple transporter of messages. My analysis will demonstrate how email communication creates specific types of relations and work practices. It allows people to connect quickly and informally, as shown above, and thus plays a role in the strengthening of weak associations. Other studies have asked science journalists directly how their work practices have changed as a result of using email and the web, and they report a wide range of experiences, from 'an indispensable system of keeping in touch with people' over 'an efficient way to do editing' to 'a technology that speeds information'

⁶⁷ Interview with Carl 27.07.07, line 208

(Dumlao and Duke, 2003: 293pp). This section similarly shows how the actant 'email communication' speeds up work processes. In addition, it shows how the email intensifies actors' levels of negotiation. As with the communication ideals in the section above, I call this communication technology an actant because it makes a difference in other agents' practices (Latour, 2005: 71).

Some time after having established their relation, Tenna gets back to Carl with an email asking him to go ahead and write the article they had emailed about earlier:

She said, 'oh, I would really like to print it in the next issue'. The next issue is on Friday, and she sends the email on Monday. And then, ten minutes later, she sends a new email, 'no, wait a minute, I can't see how we are going to make it' [...] And I sit down and write it, and I send it the same evening⁶⁸

In mass mediation of research, email communication becomes an extra powerful actant because it connects with other actants, namely 'short deadlines' and 'actuality'. Dumlao and Duke's study quotes several journalists telling similar stories as the one above of quick and informal exchanges, but besides changing work practices with regards to tempo and tone, it can be argued that email communication serves as a mediator which changes the relations of journalists and researchers while connecting them. The difference between intermediaries and mediators is that the former do not add anything to the things they transport, while mediators add to or transform them. And when we allow such a thing as email communication to be seen as a mediator "then a lot of new and unpredictable situations will ensue (they make things do other things than what was expected)" (Latour, 2005: 58-61). Email communication may solve some of the problems often mentioned in connection with the process of mass mediating research – that researchers detest being disturbed, detest having to give a quick answer to complex problems, and detest being used for someone else's purpose. One journalist addresses this issue, proposing that email communication can change these dimensions of the interactions between journalists and researchers:

A lot of people who won't pick up their phone will respond to e-mail because they're on their computers a lot, or they just don't like talking on the phone. A lot of times what I'll do is I'll send an e-mail to researchers saying, "Saw your paper, I'm interested in writing about it. Is there a time we can set up to talk?" ...It leaves it up to them and their discretion when they can respond (Interviewee, quoted in Dumlao and Duke, 2003: 293)

⁶⁸ Interview with Carl 27.07.07, line 883-889

The controversy over the counter-factual history piece discussed in the section above was largely negotiated via email. Only a small fraction of the controversy was public, and one could justifiably ask what purpose the email communication serves. The answer might be that email communication serves to clarify issues, settle disagreements, economize with column space, and nurture alliances between actors. What could have become a lengthy public fight is turned into an informal exchange that leaves participants in a state of at least partial agreement.

The same happens with the essay on anti-Americanism. After it has been printed, Carl receives an email from the editor, announcing that she is going to publish a letter to the editor written by the one of the paper's correspondents, Bent. The letter to the editor destabilizes the knowledge object 'anti-Americanism' created in Carl's essay. However, from Tenna's email it is not clear whether the letter to the editor should be interpreted as a correction, a critique, or a new perspective added to Carl's essay. Leaving it up to Carl to decide whether he wants to reply or not, the editor's email apparently serves as a tool to nurture the connection between the researcher and the newspaper. It prevents the alliance between the newspaper and its own correspondent from being seen as such, by emphasizing her reservations about the letter to the editor:

Dear C

Hope you enjoyed your own article.

This week, I have – after much consideration – printed a letter to the editor from our correspondent, Bent. I personally think it is very long, and I don't think that people who already have extended freedom of speech in this newspaper should be given so much space. But the theme anti-Americanism is really great...so I think it is okay⁶⁹

Carl's response similarly nurtures the researcher/newspaper alliance. It does so in four ways: It is polite and positive. It demonstrates the competence of the researcher by addressing points of disagreement with Bent's text and refuting them. It introduces a new idea for an essay. And finally, it shows a preference to extend the newspaper/researcher/editor network to *include* Bent – rather than introducing a dividing line between journalist and researcher. For instance, after having contested Bent's claims in ways which I will spell out further below, he writes

⁶⁹ Email from Tenna to Carl, 16.05.07

Having said this, I think Bent's comment is an excellent addition to my essay, and I do not conceive of it as a counter-contribution, but as a competent contribution to a topic which deserves many more articles [...] You are welcome to forward this mail to him. Then we can continue the debate via email⁷⁰.

An association between the researcher and the correspondent is thus made possible by the email:

I sent a reply to Tenna, and she forwarded it to Bent. And then Bent and I have been mailing back and forth for a while. And I have promised that he will get to see my one-hundred page definition of anti-Americanism.⁷¹

So, in his mail to the editor, Carl both reestablishes the destabilized object and mends a disturbed alliance. On top of this, email communication extends the network Carl had become enrolled in, by allowing for a thickening of the weak link to Bent established by Bent's reply to his text. This observation is not meant as part of a technological determinist argument about what the email as such performs or promises, but as an indication of its function in a particular collective.

Hooking up with symbolic actants: stories, common sense and references

Together with interpersonal associations and associations with a particular technology, symbolic elements have made a difference for the way in which the newspaper essay has materialized and will be read. This section draws out examples of symbolic actants present in the text, including a news story concerning the French election, common sense conceptions of French culture and Frenchmen, historical examples of anti-Americanism, and passages from an academic paper by the author.

The news story – that the presidential candidate Nicolas Sarkozy had been called 'an American neo-conservative with a French passport' – becomes an actant in the essay, doing several things to the text. One of the things is to couple the topic of the essay with 'actuality', thus helping to increase the likelihood that it is printed. As mentioned earlier, the news criteria (actuality, conflict, etc.) are powerful actants to associate with, because they are extremely well-connected to central actors in the business of communicating science to the public. When asked how issues are translated into stories, the editor says the following:

⁷⁰ Email from Carl to Tenna, 16.05.07

⁷¹ Interview with Carl 27.07.07, line 371-373

It is hard to be specific. It has to have some novelty. I have to think 'this is really interesting – it relates to the ongoing debate in this country right now' [...] It also needs to touch upon some sort of basic puzzle⁷².

So when a story can be coupled with actuality, its chances of connecting with journalists and editors increases. 'Actuality' is not necessarily a property of an issue – the coupling of events and actuality is often an active process, as Schultz (2006: 60) has argued. But as we could see from the discussion of news criteria in chapter 2, and as will become more obvious in the analysis in chapter 5, the co-construction of various 'media demands' are decisive in relation to a lot of choices regarding the selection of texts or textual elements for print.

The news story also offers editors and readers names and conflicts to relate to. At the time when the essay was printed, the media were full of stories about the fights between Sarkozy and his opponent, Royal. Thus, Sarkozy was a well-known name, and covering how the candidates attacked each other took up some space in news reporting.

However, the essay does not just act as an intermediary, transporting an undistorted, unmodified news story to its readers. Rather, it mediates the Sarkozy/Royal conflict, translating the conflict into an example of the object constructed in the text: anti-Americanism. In this manner, it counterbalances all the examples of journalists' texts transforming or distorting academic knowledge according to their need (thus, mediating research-based knowledge). In this case we are dealing with a researcher mediating news stories according to his need, namely to establish the existence of French anti-Americanism.

The text also enrolls a range of common sense conceptions of France and Frenchmen. It talks about 'the security-loving French electorate', 'a particular French lifestyle', 'the French model', and 'the fear of American mass culture'. They serve (like the news story) to make the text recognizable and easy to associate with, and they serve to support the central argument, that there *is* such a phenomenon as French anti-Americanism. They also work as intermediaries by transporting or helping to circulate an image of a distinctly French culture.

⁷² Interview with Tenna 19.04.07, line 14-18

The essay uses a number of historical examples of anti-Americanism to show how this is not a recent phenomenon, but dates back to the discovery of North America. The first two examples show a natural scientific anti-Americanism: In the mid 1700s, French zoologist Georges de Buffon published a comparative study of animals of the New World and the Old World, respectively. He concluded that everything was smaller 'over there', for instance by comparing the tapir to an African elephant. In 1770, Abbé Raynal described the continent as a swamp, with a climate that provoked mental and physical degeneration of all living. The next historical examples show the emergence of a cultural anti-Americanism: At a later stage, intellectuals such as Stendhal and Baudelaire described Americans as unable to conceive subtle ideas, and as profoundly materialist and deprived of spirit. The last historical example enrolled demonstrates a political anti-Americanism: the French law banning official use of English terms, following the 1990s GATT negotiations on liberalizations in the audiovisual sector. All the examples support the argument that there is a deep, pervasive suspicion of everything American running as an undercurrent in French culture. It strengthens this argument that the text states "[Buffon's] depiction of the animals of America was a catalyst for a range of scholarly work that depreciated the continent". Well-known Stendhal and Baudelaire are constructed as the initiators of "The picture drawn of America as a place obsessed with material wealth, but lacking any sense of aesthetics or arts". Again, in the sense that these symbolic constructions make a difference, they can be seen as actants. They make a difference through the establishment of past and present examples, which strengthen the argumentation, and through offering entry-points for the reader to connect with.

In this section, I have traced some of the heterogeneous associations that make up a particular assemblage, which came together around the production of a newspaper essay. The media text could not have been written only on the basis of *interpersonal* associations or associations with certain communication technologies. Recall that Latour warns against a narrow focus on the inter-subjective relations in an actor-network (Latour, 2005: 202) – since many more types of actors are at work in a given situation. And while interpersonal relations might be seen as the most obvious types of actors to focus on, the communication technologies allowing for their connections are also quite easily counted in as part of the actor-network. But, as I have tried to demonstrate in this sub-section, the analysis must be open to all kinds of actors, which make a difference for other actors in the network, including – in this case – symbolic actants.

By focusing on associations, I have shown how certain values and news criteria work to glue together actors, and I have shown how heterogeneous actors play a part in the

assemblage. Importantly, I have shifted focus from the rationalities of distinct professional communities and shown instances of professional categories being transcended. The relation between researcher and editor was not seen as an instance of two kinds of professionals interacting, but as a result of a lot of work being done, solidified by their continuous (re)inscriptions/alignments in the concrete assemblage. In line with the idea of identity as plug-ins (Latour, 2005: 204), we see how actors simultaneously subscribe to constructions and properties of 'the academic' and to constructions and properties of 'the media'. Both editor and researcher can be seen as approaching a kind of hybrid between the two.

A researcher translates his knowledge claims

The essay on anti-Americanism builds – to a certain extent – on an academic paper written one year earlier. The essay makes largely the same argument for the existence of 'anti-Americanism' as does the paper, and it is written on the basis of the same sources, uses the same examples, and even some of the same rhetorical devices. In the following, I will point to some of the similarities between the two texts, but also show three examples of the translation work done to create a media text. As I have stated on a theoretical level in chapter 2, processes of translation – i.e. of a chain of actors shaping and changing an initial statement according to their different projects and needs (Latour, 1986: 268) – not only take place as *other* actants translate researchers' knowledge claims, as studies of distortion in mass mediation emphasize. With ANT's notion of translation, we can also talk about translations when researchers themselves communicate their knowledge to new publics, audiences or users⁷³. This is demonstrated in the following.

Similarities

At a first glance, it seems like the newspaper essay is simply transmitting a number of elements from the academic article. It reproduces the abovementioned story of Buffon and Raynal with almost the exact same wording and it uses the same quote from Baudelaire. Like the academic paper, it tells about the fear of Hollywoodization or McDonaldization, and it reproduces the history of a close political and military relationship turned sore after the revolutions, and particularly after WWI and WWII. In this way, both texts establish anti-Americanism as an outcome of a spectrum of critiques dealing with nature, culture and politics. Despite these similarities, the elements undergo changes as they become

⁷³ The latter groups are not actually existing entities, but actants that make researchers engage in translations to meet their perceived needs. I will elaborate on the idea of the public as an actant in chapter 5.

dissociated from some elements and associated with new elements in production of the media text. Before proceeding to account for these translations, another kind of similarity should be mentioned. Both texts demonstrate a certain way of crafting arguments. In the section above, I pointed to the use of common sense conceptions of France and Frenchmen as a technique to make the media text recognizable and its main argument convincing. These common sense conceptions are neither translations from a well-documented analysis, nor are they transmitted from the academic text – they are enrolled from someplace else. But this does not mean that the academic text is free from using common sense conceptions to support its argument. Here are a couple of examples:

In France, where culture is an altogether serious matter, American cultural products are often scorned as light-weight in comparison with European (and especially French) products. They are commonly thought to have profound homogenizing effects on societies, limiting opportunities for diverse and original perspectives⁷⁴.

Or:

Fast-food franchises like McDonald's are seen as symbols of the American way of life substituting the traditional local businesses and threatening French gastronomic traditions⁷⁵.

Both quotes are part of longer passages of text, which have the same character of general, sweeping statements. These passages are not presented as results of research and they are not referring to literature or other sources – instead, they are woven in between other types of statements that *do* have such academic properties as references to research and existing literature. They seem unobtrusive, both because they point in the same direction as the overall argument, and because they are familiar conceptions – what we could call the black boxes (Latour, 1987: 2) of social science, which it would cost a some effort to unpack. A characteristic of black boxes is that the knowledge claim they embody has been established over time, and can be drawn upon as long as nobody opens the box and questions the content. I propose that the kinds of statements above are commonsensical in this way – few would question that McDonald's is seen as symbol of the American way of life.

The focus on similarities and differences between an academic text and a media text written by the same person tells us two things: First, that even if seems obvious that a

⁷⁴ Conference paper, p.17

⁷⁵ Conference paper, p.18

media text written by a researcher would be faithful to his or her research-based knowledge claims (the elements of the academic paper), the similarities may be superficial. The researcher actually translates knowledge claims himself. It does not require another person – such as a journalist, an editor or a communication professional – to alter, disturb or add meaning to research-based knowledge claims. Second, it tells us that the rhetorical use of common sense conceptions serves an argumentative purpose both in texts addressed to newspaper readers and in texts directed towards a more restricted research community. They are not just inferior heuristic devices making the media text edible.

Translations

The most drastic translation taking place from the academic paper to the newspaper essay has to do with the status of the knowledge object, 'anti-Americanism'. The academic paper has the title: 'Culture as a factor in foreign policy – The intriguing case of French anti-Americanism'. As the title indicates, anti-Americanism merely has the status of a case here. It is used to illustrate the main argument, that it makes sense to integrate a cultural perspective in foreign policy studies. In the newspaper essay, the whole theoretical discussion is left out, and anti-Americanism is elevated from its status of example to an object in its own right. Also, the object changes as it becomes associated with the news story mentioned above and comes to serve as an explanation of current events.

Carl explains the choices about what to include in and what to exclude from the media text as informed mainly by two kinds of considerations⁷⁶. One has to do with picking the parts of his research that relates to a present-day theme, but focusing on less-known aspects of it. Another has to do with zooming in on a single concept and allocating all the space to explaining and illustrating this concept. As we will see later, these choices imply the exclusion of a number of aspects which other people think make up relevant or necessary knowledge. In that sense, a researcher's translation of his or her own work can become almost as controversial as journalists' much resented 'distortion' of research-based knowledge claims. A 'blame the messenger perspective' has been prevalent in studies of the communication of science (Bucci, 1998), constructing journalists as responsible for misrepresentations of science. As a twist on this line of thought, the present analyses of a researcher's own translations of research-based knowledge could indicate that if we zoom in on specific instances of work relations between a journalist and a researcher, some researchers are unconcerned about misrepresentations or even actively misrepresenting his or her own research. At the same time, although the 'blame the messenger perspective'

⁷⁶ Interview with Carl 27.07.07, line 297-341

may be widely circulating, Gascoigne and Metcalfe have talked to scientists and shown that it is mostly scientists with little or no experience with the media who fear distortion or lack of accuracy (Gascoigne and Metcalfe, 1997).

Taking a closer look at the translations made when an academic article becomes a newspaper essay, I will present three different kinds of translations, which I will call 'un-framings', 'inversions' and 'syntheses'.

The un-framing of an example

As mentioned above, the newspaper essay reproduces the Buffon/Raynal example word by word. However, two omissions translate the example into something different. Firstly, the academic paper introduces the example in the following way, enrolling another scholar to give the story academic credibility:

As Philippe Roger has aptly showed, anti-Americanism was a favorite French intellectual pastime even before the creation of the United States⁷⁷.

The example which follows has five references (with page numbers) to Roger's 2005 work. The fact that this framing is omitted in the newspaper essay means that Carl is credited for the examples – they become *his* – and that the essay becomes more vulnerable to attack – as we will see in the following section.

Secondly, the newspaper essay omits a range of sections, which – in the academic paper – serve to create a more nuanced picture of French intellectuals' attitudes towards America, as well as of their impact on 'ordinary people'. For instance, the following passages appear in the paper, not in the newspaper essay:

Tocqueville and his fellow traveler in the US, de Baumont, gave another, altogether more positive description of America. But their works met mixed approval in Paris.

[...]

Anti-Americanism was the project of the elites. In France as elsewhere in Europe. While it was fashionable in certain milieus to denigrate 'America', the country attracted millions of Europeans eager to pursue the American dream. Probably very few of them had read Tocqueville's *Democracy in America*.⁷⁸

⁷⁷ Conference paper, p.10

⁷⁸ Conference paper, p.10-11

These omissions or un-framings⁷⁹ translate the Buffon/Raynal example, which at a first glance simply seemed to be transmitted. The translation renders the issue less complex, and by engaging in this translation process, the researcher disconnects himself from some academic values and creates a simpler object, which can more easily associate with media actors (for instance Tenna, who recommend that researchers restrict themselves to one or two messages).

Inversion of meaning

The concepts of Hollywoodization and McDonaldization appear in both the academic paper and the newspaper essay. So does the notion 'la malbouffe', the French expression for unhealthy, bad food. As already mentioned, they serve to illustrate French suspicion towards the American way of life. But they are used in two different ways, and the object changes in the process. In the academic paper, the fight against la malbouffe is constructed as a proof of insurrection against American values; while in the newspaper essay the same fight is constructed as just a pat on the back for critical intellectuals. The difference stems from the way in which the fight against la malbouffe is constructed: In the academic paper, it is given a primary position – and the fact that McDonald's sells well in France is delegated to the end of the section. In the newspaper essay, the section opens with a statement saying that anti-Americanism is merely the project of the elite. It then goes on to mention the fight against la malbouffe – but concludes by elaborating on McDonald's huge popularity.

This is the academic paper:

The insurrection against American culture is not limited to products that can be characterized as 'cultural' in the strictest sense of the word. Alongside the fight against *Hollywoodization*, there is widespread rejection of what is termed the *McDonaldization* or *cocacolonization* of society. Fast-food franchises like McDonald's are seen as symbols of the American way of life substituting the traditional local businesses and threatening French gastronomic traditions. Recently, a new term has been coined that represents the gastronomic values that French traditionalists try to uphold: the fight against *la malbouffe*. This reaction has been directed primarily against the fast food industry and has led to franchises of the McDonald's chain to be trashed by protesters. This often violent campaign to promote original French products towards consumers is hugely

⁷⁹ With the expression 'un-framing', I attempt to point to the fact that the common structure of academic writings is dependent on the creation of a frame for a given argument. This is also why academics are advised to turn the structure of their writings upside down when communicating to the public – instead of beginning with the background, unfolding the analysis and ending up with the conclusion, they are advised to use the news journalism model of the inverted pyramid which indicates that the conclusion should come first, followed by explanation and background.

popular. That is, when it comes to political speeches or talk over the dinner table. It remains a fact that France is the European country where most Big Macs are sold (which would indicate that not all French find *la malbouffe* so bad after all).⁸⁰

And this is the section of the newspaper essay, emphasizing the last point

However, it is an open question how much resonance [anti-Americanism] has amongst the French. Anti-Americanism has always been the project of the elites. Astérix-looking anti-globalization activist José Bové became a hero to several intellectuals when he trashed a McDonald's as a protest against what he calls *la malbouffe*. Here was an incident which could awaken the elite's sleeping resistance against American cultural imperialism. Meanwhile, ordinary Frenchmen continued unaffectedly to dine at McDonald's. The latter registers the highest European sales numbers in precisely the home-country of gastronomy. This could be an indication that Frenchmen are not that dissatisfied with *la malbouffe*. And after having their burger, they go to the cinema and prefer to watch American – rather than French – movies.

In the first excerpt, the fight against American fast-food products is constructed as an important phenomenon all over France. It is called a 'widespread rejection' and the violent campaign is described as 'hugely popular'. Also, according to the text, franchises (in the plural) have been trashed by protesters (also in the plural). In the second excerpt, in the translated version of the story, a distinction between the elite and the French people is stressed throughout, and the story of violent reactions against McDonald's is told through an example of *one* anti-globalization activist trashing *one* restaurant.

How should this translation be understood? The example is colorful, entertaining, and appealing – *both* as a symbol of insurrection *and* as a factor in a conflict between 'the intellectuals' and 'the people'. In that sense, it does not seem to matter that the same issues are used to put forward different arguments. This is not necessarily because interpretative flexibility allows for different versions of the same story (Latour, 2005: 116), but rather because realities are multiple, and making sense of this multiplicity is hard work. So it could also be that the different deployments of the example are a trial and error process whereby the researcher at some point will arrive at a sound and solid argument regarding the meaning of the example. As such, as also mentioned by the researcher himself, his media appearance does not occur at a time when he has a set of completed research results to communicate.

⁸⁰ Conference paper, p.18

As we will see in the section on methods controversies, taking a small piece of a broader research-based knowledge claim and translating it by reframing it touches upon the controversy of popularization and transgression. Accounts that draw on the abovementioned 'litany of differences' would consider such a practice a journalistic vice, which researchers have to fight against. But aligning himself with concrete and imagined media actors, Carl becomes a part of a controversy in a rather unconventional way, for instance being attacked by a journalist for pursuing the most colorful stories and omitting central aspects. Normally, we would expect it to be the other way round. This will be dealt with in the last section of this chapter. Now, I will turn to a different kind of translation in the text, namely synthesis.

Two stories become one

Both the academic paper and the media text draw on historical material to explain the rise and consolidation of French anti-Americanism. As mentioned above, both texts offer accounts of the American and French revolutions, as well as events taking place under and after WWI and WWII. Still, the newspaper story is not just the oversimplified transmission of an account presented in the academic paper. Rather, it is a synthesis of two separate accounts, and does something different than the accounts it draws on. In the following I will show what each story does.

In the academic paper, the first historical account appears in a section with the title 'A brief overview of two centuries of French anti-Americanism'⁸¹. This constructs France as a collective with a shared psychology and shows the humiliations this collective has suffered. It recounts how France had to rely on US military assistance in both world wars, how it failed to establish itself as a 'third force' on the world scene, and how it had to accept US President Wilson's moderate peace agreement demands in relation to the defeated Germany. These elements are put together to explain the rise of conservative anti-Americanism and today's Gaullism. At the same time, the story integrates some elements which point in another direction: an image of America as an advocate of idealism, and a rise in pro-American feelings in France.

The next historical account appears under the heading 'Is America France's 'other'?'⁸² This is a story of shared history and mutual interests between France and the US. It goes further back in time than the previous account, and tells the story about France as the only

⁸¹ Conference paper, pp.10

⁸² Conference paper, pp.19

military ally of the American colonists, about the commitment to democracy of the two countries, and about the close relationship between historical figures such as Lafayette and Washington. This story is used to support the theoretical argument that a nation's 'other' has to resemble it. By putting forward this argument, the paper shows how apparently contradictory historical events and relationships (such as similar ideals or a shared past) actually can be seen as a component in anti-Americanism.

In the newspaper essay, the elements of these two different accounts are put together to form a chronological story. This becomes a highly complex story, showing the tension between France wanting to be a political super-power and the mixture of US support and competition that has come in its way. It tells about their shared past and mutual military support, about the similar ideals behind their constitutions, about the rise of anti-Americanism in spite of US interventions in favor of France during both World Wars, and about the Woodrow Wilson peace conditions, which troubled conservative France. The story is framed as complex, initiated with the sentence: "Paradoxically, a large part of the French resentment towards the US is based on the fact that the two countries have more in common with each other – historically – than with most other countries"⁸³.

This analysis indicates that turning an academic text into a media text does not necessarily entail a reduction of complexity. Rearranging and synthesizing elements can also work in the opposite direction. But the translation does not only make the story more complex. The complexity of the essay becomes reduced through the omission of the theoretical argument about 'the other', as well as the omission of details in the historical account.

In this section, I have highlighted translation processes – such as un-framings, inversions and syntheses – involved in the making of a media text. As a result of these, the text comes to act as a mediator (rather than an intermediary) of research-based knowledge claims, even if it is written by the researcher himself. Using the term 'mediator' in connection with the communication of research via the mass media requires a couple of words about its relation to the concept of 'mediation' in media studies. In some sense, they are closely related, pointing to transformations of, e.g., experiences or truth claims that take place when those appear in a newspaper, a radio program, or the like. But the concept of mediation also points to aspects which my use of it has no intention of capturing. Just to mention a few, one kind of study reflects upon the signification of mediation of formerly un-mediated topics (e.g. Chouliaraki, 2007). Another kind of study addresses the process

⁸³ Newspaper essay

in a quantitative fashion (e.g. Walters and Walters, 1996). A third kind of study looks at transformations taking place from one institutional context to another, for instance by writing the *natural history* of a newspaper report, looking at its mediation by news professionals (Deacon et al., 1999).

The approach taken in this study differs from the abovementioned in several respects. Firstly, it does not conceptualize mediators or mediation as concepts particularly related to the media. Rather, it posits that mediation takes place in all kinds of sites. Secondly, it has no interest in a priori institutional or professional divisions of human agents involved in translation processes. That is, it is not presupposed that mediation is a stage in a linear communication process from researcher over journalist to reader. Instead, the analysis teases out mediations performed by different kinds of agents – for instance such disparate actants as communication technologies or examples. In this way it tries to make room for the complexities of actions and agents involved in mass communication processes. Thirdly, it reflects upon how changed wording or the like performs certain actions, rather than registering the changes as do quantitative studies. Finally, it grants the text – as a mediator – some agency. The text itself performs something – it is not a transparent medium. Its status as an actant will be dealt with in the coming section.

A methods controversy provoked by the media text

Not only *consisting* of actants, the essay itself *becomes* an actant in the sense that it makes people react and interact. As mentioned above, it provokes one of the newspaper's correspondents to write a lengthy letter to the editor, constructing a different object, namely legitimate political reservations vis-à-vis the United States. The letter to the editor begins by dissociating 'anti-Americanism' and 'critique of the United States'. Anti-Americanism is then connected to irrationality, dubious morality, and 'other anti-isms' such as anti-Semitism. And:

No thinking human being can ascribe to such an attitude, and I have never heard of anybody in France who calls themselves or see themselves as anti-American⁸⁴

Anti-Americanism becomes a contested object, rather than an entertaining entry point for the communication of political science and history. The author of the letter to the editor, Bent, disturbs the object by questioning the author's insight, and turns the essay into an

⁸⁴ Letter to the editor 16.05.07

actant to either support or question. After this, the editor and the author engage in a conversation, where mending the object and mending disturbed relations are central.

A controversy over methods

One of the techniques used to destabilize the object 'anti-Americanism' is to question the methods involved in creating the object. This allows for a reconfiguration of the assemblage making up the media text. The letter to the editor constructs a new assemblage, by enrolling some of the same examples as Carl's essay – but with new associations and actants. This section focuses on how the attempt to destabilize anti-Americanism becomes an offset for a methods controversy⁸⁵, whereas the following section focuses on the reconfiguration taking place in the letter to the editor.

In the letter to the editor, Carl's examples are acknowledged, but positioned as outdated and insignificant. Thereby, Bent avoids making a strong claim about Carl being wrong. He does not question 'facts', but their interpretation and use:

Carl's examples belong to the excessive, and if you try to generalize from grotesque instances, this only serves to draw a picture of a mentally challenged France, and to delegitimize French arguments. It does not capture the typical. If you go back to the 17th Century, you'll find a lot of naïve and pseudo scientific theories which would only make us laugh today, and the zoologist Georges Buffon and the philosopher Guillaume Raynal, quoted by Carl, do not belong to the category of enlightenment thinkers representing France.⁸⁶

Contrary to Carl, Bent constructs Buffon and Raynal as minor thinkers without influence. In the passage that follows, the author argues that a better example of important French intellectuals would be Alexis de Tocqueville, whose writings gave an altogether more positive impression of the US.

The mixture of analysis and colorful, entertaining examples makes Carl's text an ambiguous actant. It is powerful in the sense that it easily connects with news criteria and values of communicating science described above, but it makes Carl vulnerable to critique based on scientific criteria. Since the text consists of knowledge claims which draw legitimacy from a social scientific tradition, it can also be questioned with reference to its methods and arguments. And it can even be questioned on this ground by people without

⁸⁵ Horst (2005: 187) refers to studies which see controversies as condensed or exemplary empirical sites for studying the relation between science and society. In this case, the controversy points to the whole problematique concerning the position of social science in society. I will get back to this in chapter 8.

⁸⁶ Letter to the editor 16.05.07

a social scientific training, as seen above. When a media text like this becomes controversial, it has implications for researchers' relations and future actions, as will be spelled out throughout the thesis. But how come people without social scientific training feel inclined to wrestle with experts in the field? Of course, all kinds of science are questioned by non-experts, but, as noted in the introduction, social science is particularly vulnerable to critique by different kinds of actors. It is closer to everyday experience and non-experts' experience than the hard sciences, as a result of this less recognized as specialist knowledge. Also, people tend to see it as either too commonsensical or too controversial (Fenton et al., 1998). All these elements contribute to attributing social science concepts and findings a second order status (Lynch and Cole, 2005). But social science also lends itself to communication to non-experts precisely because it is (often) closely related to non-expert knowledges. So offering social scientific knowledge claims requires that the researcher can embody both the expert status and the position of public intellectual, ready to debate those knowledge claims.

Rather than responding in public, Carl chooses to engage in the methods controversy in an email sent to the editor. As mentioned above, this email is forwarded to Bent, and the two authors engage in an email exchange. The outcome of the exchange is a settling of the controversy. In the words of Carl "what Bent writes is not wrong. It is more of a supplement. So I was not angry – only I thought it was a bit strange that he wrote a letter to the editor to his own newspaper"⁸⁷ Even so, Carl's email communication does quite some work to reestablish the legitimacy of the choices that shaped the newspaper essay. Both in the email and in the interview, Carl mentions lack of space as a factor that imposes exclusion of relevant issues. In this way, the email reminds the editor and the journalist of what they already know – that communication of research in the media cannot cover every aspect and detail, and that the researcher's knowledge extends far beyond what can be included in an essay. But 'lack of space' cannot serve as a sufficient reply in a methods controversy. The essay is rehabilitated through Carl's deployment of different techniques.

The first technique is to construct a "real analysis"⁸⁸. In the letter to the editor, the correspondent accuses Carl of leaving out an important definition of 'anti-Americanism' as 'a critique taken beyond the rational'. By launching a definitional issue in this way, Bent enters the field of academic dispute. In the email, Carl grants that this definition is important, but adds that it cannot stand alone if you want to conduct "a real analysis". "A real analysis" needs to look at "the different elements, in order to dig deep enough". In the

⁸⁷ Interview with Carl 27.07.07, line 104-106

⁸⁸ Email from Carl to Tenna 16.05.07

case of anti-Americanism, a definition needs to take into account, e.g., “the whole question of hegemony”. By giving this example, Carl demonstrates that he is in the business of making ‘real analyses’, and indicates that Bent has remained on the level of commentary – even if Bent has joined the game of academic dispute. This technique can be seen as an instance of boundary work, whereby scientists attribute characteristics to the institution of science (here; conducting extensive and exhaustive analyses) “for purposes of constructing a social boundary that distinguishes some intellectual activities as ‘non-science’” (Gieryn, 1983: 782). At the same time, two subject positions are lined up; that of the academic and that of the other. By rhetorically demonstrating that he belongs to the first, Carl implies that Bent cannot claim the right to such a position – with the heightened legitimacy of its knowledge claims.

The second technique is to translate Bent’s normative concerns into a question of facts. In the letter to the editor, Bent stated that ‘anti-Americanism is an irrational and untenable position’⁸⁹. Carl does not question this proposition, but enrolls allies to show that such a normative position is superseded by a scientific fact:

Stating that anti-ism is untenable is like fighting against windmills: Researchers in the field of nationalism rarely agree. However, one of the few things they agree upon is that national identities are typically constructed in opposition to counter-identities (“others”)⁹⁰

The third technique is to counter Bent’s critique of the examples used in the essay. Reintroducing the reference to another researcher, Carl rehabilitates his own examples (while moderating their significance). He also refutes Bent’s Alexis de Tocqueville example:

The Buffon and Raynal examples were taken from Philippe Roger, who emphasizes them a great deal. Particularly Raynal was one of the foremost intellectuals up until the French revolution, so I disagree when it is said that they do not represent intellectual France. However, I admit that I give them too much space in the article – but I could not help it, the examples were too entertaining. Interestingly, Tocqueville’s oeuvre met mixed reviews in France at the time, and did not sell well. So the greatest French America expert of his time did not influence French conceptions of the USA before much later on.⁹¹

⁸⁹ Letter to the editor 16.05.07

⁹⁰ Email from Carl to Tenna 16.05.07

⁹¹ Email from Carl to Tenna 16.05.07

In my interview with him, Carl offers more examples of how influential Raynal was, and insists that this kind of anti-Americanism has meant more than Bent is willing to admit. But here, he introduces the concept of 'balancing', granting Bent the right to judge the historical examples differently, and maintaining his own insistence on their significance. In the interview, Carl says: "He just states that I exaggerate here and understate there, it is the balance, right?"⁹² Only a small part of Carl's email (and his interview statements) is aimed at upholding strict boundaries (and status differences) between the journalist and the researcher – the larger part of his engagement in the methods controversy is about reestablishing his credibility as a researcher. In that sense, this methods controversy arising from interactions between a journalist and a researcher resembles academic controversies. To Carl, the knowledge claims of a journalist are not necessarily inferior to the knowledge claims of academics: he appreciates journalists who "transgress the narrow role of a journalist"⁹³, and owns a copy of a book written by Bent. "And even if it is pretty light, well, I don't think a light book is necessarily worse than an overly academic book. Sometimes even the opposite"⁹⁴. Aligning himself with non-academic actors through such statements, Carl demonstrates that boundary work is not the only way to engage in a controversy. Still, he does assert the superiority of his knowledge by referring to its research-based status. This ambiguous position shows his embeddedness in different kinds of actor-networks.

The same is the case for the journalist. By writing non-fiction books and by engaging in the kind of controversy described above, Bent positions himself in a terrain outside of the confines of 'a narrow journalistic practice'. This can also be seen in the ways in which Bent aligns sources, new examples and critique in his construction of a new assemblage – as we will see in the next section.

Assembling an alternative collective

In Carl's newspaper essay, the contested object 'anti-Americanism' was constructed through the enrollment of present day examples, historical examples of different kinds, and a few references to other researchers. In the above, I analyzed the construction of this text both as an outcome of an assemblage of heterogeneous elements, and as an assemblage of different textual elements. When an alternative assemblage is constructed – in Bent's letter to the editor – it draws on translated versions of the elements of the first

⁹² Interview with Carl 27.07.07, line 366

⁹³ Interview with Carl 27.07.07, line 363

⁹⁴ Interview with Carl 27.07.07, line 358

assemblage. Also enrolled in the new assemblage are Alexis de Tocqueville and a troubled relationship between Presidents. This section will deal with the translations and additions that create this new assemblage. As Callon (1991: 152) has remarked, a network can link itself to external actor-networks and become an element in the same kind of translation work as was performed for it to come into being. And as the new collective is assembled, Carl's text is converted into a single node in the letter to the editor that makes up the new network.

Translations

In Carl's essay, the Sarkozy/Royal conflict was translated into an example of anti-Americanism. In a post scriptum in his letter to the editor, Bent retranslates the story in the following way: In his text, 'an American neo-conservative with a French passport' is not an example of anti-Americanism, but a "scandalous" label, conceived by a crooked politician who has admitted participating in a campaign against Sarkozy. In Bent's letter to the editor, the news story is simply an example of dirty and illegitimate political campaigning.

Also with regards to the historical examples of French/American relations, the letter to the editor consists of arguments very similar to Carl's, albeit in a translated version. For instance, Bent writes:

The American support was crucial to the liberation of France, but in the political battle to reestablish the sovereignty of France, de Gaulle met resistance from Roosevelt.⁹⁵

As described earlier, Carl's historical account of the post-war relationship tells a similar story of how France was indebted to the US, and how French politicians fought to reestablish the nation as a third power, independent of the US superpower. In Bent's translation, this issue is constructed as an issue closely interwoven with the personal relationship between de Gaulle and Roosevelt.

Another example of Bent's translations is his treatment of the academic source of Carl's examples, Philippe Roger. In the letter to the editor, Roger's work is recognized as important and influential, but not as a source of information on France of today. Roger's book is described as

⁹⁵ Letter to the editor 16.05.07

...until now, the most conscientious treatment of what he terms 'the genealogy of French anti-Americanism'. The book caused a commotion, and Roger gave a lot of interviews. His work is historical, and the phenomena he describes do not seem to belong to the 21st century. ⁹⁶

Bent could have chosen to ignore Carl's sources, aligning completely new allies. He could also have chosen to criticize them fiercely. Instead, he strengthens his new assemblage by translating them so that they support the new object he is advancing. In combination with this, he introduces new and powerful actants.

New elements in the actor-network

One new element in Bent's letter to the editor is Alexis de Tocqueville, who serves as an 'exemplary, influential intellectual'. He is enrolled in the assemblage as a much better example of intellectuals' conception of France, and since this author is still being read in political science and sociology, I will argue that his presence in the network probably strengthens it. A lot more readers will be connected to this actant, than to the intellectuals (Buffon/Raynal) enrolled to strengthen the collective established in the newspaper essay.

Another new element is the personal relationship of President Roosevelt and Charles de Gaulle. This actant performs two things. It gives the story credibility by making it easier to relate to (as Carl expresses it, "everybody who has the slightest interest in France knows of the troubled relationship"). In that sense, an indisputable fact is introduced. Carl chose to omit this element, to make room for less known – and thus, 'more interesting' – elements⁹⁷. Apart from giving the story credibility, the introduction of the personal relationship also makes anti-Americanism seem historical and contingent, related to two dead politicians. If French-American hostility can be confined to the personal relationship of historical personae, it can also be reduced to a dated phenomenon.

This section has treated the media text as an actant, by focusing in some detail on a controversy it has provoked. Carl's essay led to a series of new texts (a reply in form of a letter to the editor, and email exchanges between editor and researcher, as well as between researcher and journalist). In these exchanges, some boundary work took place, but the exchanges were also marked by a great deal of work to maintain relations and expand the collective, which Carl and Tenna had put some efforts into establishing. Disagreements

⁹⁶ Letter to the editor 16.05.07

⁹⁷ Interview with Carl 27.07.07, line 301

between journalist and researcher became translated into a matter of 'balancing', and their association becomes stronger as a result of the controversy.

Conclusions

In this chapter I have sketched how a specific actor-network, related to a specific newspaper essay, was assembled. It is an aggregate of heterogeneous types of actants – persons, communication technology and symbolic constructions – which all participate in making a research-based media text. I discussed the ideals and practices that hold together a newspaper-network; how a seemingly chaotic and chance-based set of practices and relations share the ideals of communicating important knowledge and communicating well. I looked at what email communication can do to work practices; how it produced speed and informality and became a mediator of relationships. Also, I discussed the different kinds of symbolic resources that contributed to creating a newspaper essay, namely textual resources such as news stories, historical narratives, names, etc.

As I showed in chapter 2, the ways in which research-based knowledge claims are transformed when they are communicated via the mass media have been illuminated in numerous studies. The advantage of having an analytical focus on translations in this chapter is that it disturbs the conceptual division of researchers and journalists into specialized professional communities. It does so by focusing on the translations that take place when a researcher communicates his own knowledge claims. We have seen that the researcher's communication also raises issues about truth, accuracy and the use of colorful examples, just like journalists' sometimes controversial renderings.

The focus on the media text as an actant allowed me to follow the aftermath of its publication, taking a closer look at the controversy it created. Here, the analysis also pointed to the blurred boundaries between journalist and researcher. We saw instances of how expertise was maintained, broken down, and reestablished, and saw how researcher and journalist did not quite fit conventional understandings of professional positions. Apart from seeing some boundary work in action, we saw the work done to uphold associations. The researcher deliberately included the journalist in the actor-network, and reaffirmed his strong ties with that actor-network.

CHAPTER 5

Negotiations in the production of a radio program

This chapter addresses the overarching research question of how media texts with a social scientific content are assembled by zooming in on the process of assembling people and knowledge claims to produce a radio program. It draws a picture of a collective which is held together with some difficulties, where important actants include 'the media logic', and where diverse interests have to be aligned to make the radio program work according to its pre-defined premise. I analyze what happens when professional choices governed by actants that are co-constructed by journalists are assembled with other types of elements: participants in the debate, knowledge claims and pre-produced recordings. Like the assemblage in chapter 4, this assemblage is marked by a controversy. However, it is another type of controversy, namely one that revolves around the status of social science versus the status of natural science. It is also marked by more antagonistic positioning work, but nevertheless shows that positions have to be achieved through negotiations – they are not given in advance. These negotiations are analyzed as dialogues. In the analysis, I identify two kinds of dialogue. One is an ongoing dialogue between journalists and researchers before and after the broadcast. Another is a 'pseudo-dialogue', where some actors try to frame a researcher's statements as ideological contributions, rather than engaging in a discussion about knowledge claims. The analysis presented in this chapter shows how, in the production phase of the radio program, a lot of different interests have to be translated (Latour, 1986) into a collective that can hold together, at least for some time. It demonstrates how journalists assemble allies by convincing experts to participate in relation to a theme, by framing statements, by modifying expert terms and twisting themes. The analysis also shows that not all alignments are successful – but that a great amount of energy is put into negotiations and translations by all the parties involved in the creation of this media text. So it is not possible to see this story only as evidence of a mechanistic use of expert statements by the media. It should also be seen as an occasion for feedback. Concrete interactions have consequences, e.g. leaving one of the participating researchers rather shaken and unwilling to pursue the kind of research she has hitherto done. Research is in no way left untouched by communication to the public. This has important implications for the social robustness of social scientific knowledge, an issue which I will return to in the conclusion. In addition, it can be argued that the mass media are also dialogical in a Bakhtinian sense, meaning that the other is present in all utterances. The analysis offers several examples of how journalists and researchers

incorporate considerations of the other when they produce texts. This does not tell us anything about the negotiation aspect of mass mediation, but about the relational aspect.

My analytical focus has been on the production process and the mentoring process that took place as media actors came together to assemble the collective that made up the radio program. This mentoring process turned routine procedures and intuitions into explicit norms, which the involved actors reported to me. My journey into the empirical material for this case began with an interview with the director of communication at a Danish university. I had heard him give a talk about the relations between experts and the public, and I knew that he was active in writing on and debating these issues. The director mentioned a couple of researchers, whom I contacted. From the interview with these researchers, my attention was led to concrete texts – and to another researcher, who, according to her colleague, had just been through the ‘media machinery’ and had a lot to tell about the interactions in and around the production of a radio program.

The assemblage of this radio program became the point of departure for the present case. The researcher’s story of media relations was interesting because it differed from my other cases by telling more about a researcher’s reservations towards and troubled relationship with media actors. This empirical material was supplemented with other texts produced by the same researcher, because she also told stories about engagement with science communication that contradicted the image of ‘the communication reluctant researcher’. Besides the interview with the researcher, I interviewed the person producing the program and the journalist hosting the broadcast debate. Having done this, I had talked to the main actors involved in the production of the radio debate – except from another researcher, who could not find the time to participate in my investigation. In the analysis, his voice is thus weaker than those of the others, but his position and arguments stand out as powerful, not least because they are backed up by the status of natural science established in the radio program. Apart from the interview material and the research-based texts, the analysis is based on a podcast of the radio debate, the host’s manuscript for the debate (as well as his notes for the manuscript), and minutes of meetings where the researcher has given public performances.

A radio debate as a trace of associations

In spring 2007, Denmark’s Radio ran a series of four hour-long radio broadcasts, revolving around the theme of the brain. One of them was entitled ‘The brain goes to school’. In the

following, I will give an account of how the program came into being. First, I will quickly touch upon the process of developing the concept behind it, since this was marked by a series of the kinds of negotiations and translations that I am interested in. Then I will focus more extensively on some of the actants that have governed the production of the program, as well as the translations that took place to create the text. This will tell us something about how knowledge is negotiated. The negotiations of meaning in the program – and in the interviews – revolve around a controversy regarding the status of different kinds of research-based knowledge. I analyze this controversy because it is central to the relations and positions created in course of the production process. It gives us insight into a specific instance of the type of researcher/media interactions which have given rise to the image of the media machinery mistreating its expert sources. Finally, I offer additional empirical evidence for the claim that dialogues not only take place in the debate, but also before and after the radio broadcast. I do not use the concept of negotiation and dialogue synonymously, but to point to different aspects of the relational dimension of mass mediation processes.

With a transmission view of science communication, we might see communication as commonly initiated by a researcher or a PR-professional. With an interest in distortion, we may focus on how journalists initiate contact with researchers to make the latter confirm their stories. But this instance of communication of research-based knowledge in the radio was not initiated by a researcher, it did not come out of editorial meetings in a mass media organization, and it was not conceived by a journalist. It was not even meant to be a radio program. So how come we could listen to a radio debate on the brain and the school in spring 2007?

Cecilie, who is not trained as a journalist (but has an MA from film studies and a multimedia design school), was once awarded an entrepreneurship prize for the development of a multimedia program for the Danish Broadcasting Cooperation. This led to a couple of freelance jobs, and at a certain point, she decided to design a concept for an educational television production about the brain. She tried to sell the idea as a collaborative Nordic project. It was judged 'more science than education', and it was not accepted as a TV-production. But one of her colleagues recommended her project to one of the editors on the radio. Cecilie already knew the editor, "having waited for the bus together, having been to a meeting together and meeting at the bus-stop again, going 'hey,

what precisely are you doing?’ And so on and so forth”⁹⁸. When she and her colleague were asked to produce a new concept in four days, they accepted⁹⁹.

The freelancer’s account of the production process is dominated by notions of tight budgets, time constraints, and competition. The tight budget means that the preparation of concepts must be speedy, and each concept is in competition with others, so they do not always make it to the production state. According to Cecilie, there is a very hierarchical structure in the organization, and you have to have an ‘ambassador’ editor who fights for your products and negotiates about adjustments instead of just accepting a rejection. Her series about the brain was accepted by the editor in chief, and Cecilie was commissioned to make three programs. As Cecilie made a production plan, she realized that the hour-long program on the brain and learning had to be made within the very short period of nine days. She began her research process by reading *New England Journal of Medicine*, *New Scientist* and other journals. Also, she phoned a contact she knew from another job, she phoned contacts to ask them about ideas regarding literature and other people to talk to, and she googled and read newspapers – specifically the science sections. In this way, she quickly collected a loose network of people, quotes and texts. A loose network does not make a radio program, so a process of aligning the different actants and translating statements began. This was done in collaboration with more experienced radio people, primarily the host, Simon, who played a central role in the enrolments and translations:

...[Cecilie and her colleague] did not have a lot of experience with radio production. They were science journalists, primarily, and they had a coach helping them to structure the material to turn it into broadcasting. And then I was there to link the elements together and make a studio frame. You know ‘Welcome, here we are, this is how it sounds when we broadcast this program, there is a studio and some guests and some pre-produced sound-bites’¹⁰⁰

Cecilie tells how she quickly learned to work in a quick pace and to be very precise about what she wanted from her material. This resonates well with what Schudson refers to organizational media scholars for showing, namely that “it does not matter who [journalists in news organizations] are or where they come from since they will be

⁹⁸ Interview with Cecilie, 14.08.07, line 18-20

⁹⁹ Cecilie is interesting to focus on because she is an example of a new type of player in media work: According to the International Federation of Journalists “a rotating core group of newswriters is increasingly supplemented by a growing group of so-called atypical workers – freelancers, casuals, short-term workers on rolling contracts, and temporary workers – who supply stories, leads, and ideas on a contingent basis” (Deuze 2007: 101)

¹⁰⁰ Interview with Simon, 23.08.07, line 16-20

socialized quickly into the values and routines of daily journalism" (Schudson, 1996: 149). And Cecilie reports how this took place:

Of course we also got a quick introduction to editing radio and recording sound, and then...just get out there. You know, it's quite cool, you don't just sit there, you simply get out there. Out there to record, out there to talk. Plan your interview thoroughly before going, so that you don't bring home two hours of interview, but just bring home half an hour¹⁰¹

She adds that she had in fact returned with two hours of recording after her first trip 'out there'. So Simon taught her how to define the premise of the broadcast. From her account it appears that she became aligned with some principles that were foreign to her, but which she quickly adopted, and which became part and parcel of the translation of the elements of the network. She settled on the premise 'Are our schools built in accordance with our brains?', and the built-in answer was in the negative:

...the more we know about brain research, the more this research progresses, the more we see that this is not the way we learn, at all. It has taken 150.000 years, or, we have had the same brain for 150.000 years, approximately. And what is it, about 200 years in which we have sent our children to school in the way we do it now? All considered, it does not work that well...this is not where we learn. And that is why I had to figure out, okay, this is my premise, and I also know that I need to have two guests in the studio, who have to disagree, fundamentally, a good debate has to come out of this, and this happens when they disagree. And in that respect, I am sure I am a bit different because I am not trained as a journalist¹⁰²

The last part of the quote both points at how she has learned about media production and at how she does not see herself as fully aligned in a media collective. This will be spelled out in more detail later. The point here is to emphasize the techniques by which she was partially aligned, and what this meant to the media production. In the editorial meetings, producers, host and editors were talking about different scenarios: which debates were possible? "And then at a certain point, you draw a line, and this is what we'll work on from now on, then you just have to find two debaters willing to discuss this¹⁰³. The result of the mentoring and editorial processes was that a quickly assembled mass of knowledge about the brain – which is presented as uncertain knowledge by the involved researchers, as we will see, and which can be communicated from many possible angles – is translated into a single premise. In the presentation of the program¹⁰⁴, a range of categorical

¹⁰¹ Interview with Cecilie, 14.08.07, line 138-143

¹⁰² Interview with Cecilie, 14.08.07, line 151-159

¹⁰³ Interview with Cecilie, 14.08.07, line 434-435

¹⁰⁴ On www.dr.dk/P1/p1-temaer/Hjernerejsen/Udsendelser/AndenHjernerejse, accessed on 4/12/2007

modalities indicate that we have to do with an area – brain research – which offers a set of well-established truths. Statements such as “Earlier we thought that...Today we know that...” and “The brains of girls and boys develop differently” signal an accomplished, accepted knowledge, and this almost makes the question in the end of the section seem rhetorical: “Maybe time has come to separate the children in the classroom at least some of the time?” The following sections are dedicated to disentangling how this premise was established.

‘The media logic of broadcasting’ as an actant

The accounts of the producer and the host regarding the mentoring process turn a lot of routine procedures and intuitions into explicit norms. As indicated above, professional journalists were called upon to guide the inexperienced producer, and this meant that their understanding of the right way to do radio became the rule of the game. This understanding is primarily guided by a hard-to-define professionalism – a sense of ‘what works and what does not work’ – which is not an all-round journalistic professionalism, but linked to the particular medium. It could be argued that ‘a media logic of broadcasting’ functioned as an actant governing how the production process unfolded:

Some things work, and some things do not work when you produce radio. That’s how it is. Those are the conditions of this type of medium, and you need to take that into consideration. Then you can discuss how much you need to be a slave to it, and how much you can accommodate a researcher who wants to add nuances¹⁰⁵

With training and experience in radio journalism as well as continual collegial feedback, it is no wonder that broadcast journalists operate according to a well-established ideal of how radio should be produced. I conceive of this ideal an actant because it has consequences for a range of choices in actors’ work lives. It is a hard-to-define entity, just like the more general concept of ‘news sense’, which has been described as too complex and too implicit to label simply ideology or the common sense of a hegemonic system, and ‘a specifically journalistic cultural air tied to the occupational practices of journalism’ (Schudson, 1996: 153-155). But it emerges as a significant actant in relation to the inexperienced radio producer. In her mentoring process, a special media logic of broadcasting has been articulated. Although she has no background as a journalist, Cecilie is capable of talking about the principles of radio dramaturgy: “when you talk about radio

¹⁰⁵ Interview with Simon, 23.08.07, line 482-485

dramaturgy, you have to remember that you should not have too many voices to relate to”¹⁰⁶.

She has been successfully aligned in the common enactment of broadcast professionalism in conjunction with vocational journalists. The enrolment happens through the evolving formulation of common ideals. For instance, it appears from her account that Cecilie’s thoughts about ‘the good radio debate’ came out of discussions throughout the production process. In the interview, she tells – in a categorical manner – how debaters should not agree too much:

...because Carsten and I had never produced radio before, they hooked us up, extraordinarily, with an experienced journalist. You know, one we could evaluate with and ask questions. One who joined the editorial meetings. And then there was Simon, who was to be the host. He works in the debate section, he is really good at formulating a debate, at formulating questions for a debate, you know, what kind of guests should you invite? It’s no good to match two people who almost agree. That does not result in a debate¹⁰⁷.

When I do not comment on this, she goes on to explain that the notion of ‘a good debate’ did not appear out of the blue, but was the result of negotiations, i.e. the attempt to reach agreement about a definition:

We also talked about...media products...what is a good debate? When is it good? Is it good because they fight or is it good because they agree in the end? Is it good when new things come up, which you had not prepared for? I had no experience with those kinds of things¹⁰⁸

It seems from Cecilie’s account that the experienced journalist had succeeded in introducing and emphasizing the news criterion of ‘conflict’ (cf. the discussion of news criteria in chapter 2) and giving it a specific form in the co-constructed media text. In ANT terms we can see the concept of ‘conflict’ as an actant that plays a part in how media productions are constructed. And it is also constructed as an important dimension in Simon’s account, where he talks about fights as great radio, as he reports on the unfolding of the debate and how it was frustrating to a researcher:

Now, being totally unsentimental, you may say it makes great radio when someone gets angry. Eh, it is not the goal at all, and she felt bad afterwards, so that part of it was not so great. But in principle, it is okay that

¹⁰⁶ Interview with Cecilie, 14.08.07, line 170-172

¹⁰⁷ Interview with Cecilie, 14.08.07, line 118-124

¹⁰⁸ Interview with Cecilie, 14.08.07, line 126-130

people provoke one another. And most experienced debaters get REALLY angry, and then when they walk out they go 'Hey that was a pretty cool debate', and then they have a coffee and a talk. They know it is a game. And I think that is the beauty of it, you are allowed to disagree. That is what makes it fun to live in a democracy...it is good to shed some heart-blood, and still show respect towards one another¹⁰⁹

However, there is also another dimension in the appreciation and search for conflict, namely the effort to engage people. According to the host, the debate form is very dynamic in the sense that it allows for the treatment of a complex topic in a way that engages people. When this format is used, listeners do not need to possess prior knowledge of the topic, and the aim is not to inform. The aim is to engage, and if people get some information as well, this is fine, in Simon's view:

Even if people don't know so much about a complex topic, a dynamic debate allows for a treatment of the topic which engages people and makes them want to listen. So we have to make use of that debate format. It is not an informative program, it is an engaging program. And if people get some information they can use, that is super nice¹¹⁰

As such, the journalist's appreciation of this particular radio format overshadows the ambition of communicating science. Science is positioned as something to engage in, not just 'something for experts to argue about'. The host also makes it clear that the goal of producing radio dealing with science is not to dig for 'the truth' about a given issue, but to popularize, to identify issues that are easy to relate to, and not to be afraid of *discussing* science¹¹¹:

...rather than saying, here we have some experts speaking, then we accept that and make notes in our little notebook, so that we can be examined in the statements of brain researchers, rather than this, we wanted to discuss some ethical and societal consequences of what brain researchers were telling us¹¹²

So alongside the interest in defining precise premises and setting up clear-cut pro and con positions, the journalist has a self-declared interest in engaging with scientific knowledge and having heterogeneous voices in play. The ambition is not to unpack science – the natural scientific statements about how brains work are allowed to remain black boxed.

¹⁰⁹ Interview with Simon, 23.08.07, line 415-423

¹¹⁰ Interview with Simon, 23.08.07, line 280-284

¹¹¹ Interview with Simon, 23.08.07, line 38-44

¹¹² Interview with Simon, 23.08.07, line 26-29

Besides these articulations of ideals in relation to the communication of science in the radio, there is a set of routine practices that create structure, progression and a particular feel to the radio program. In the discussion of media studies' concern with routinization, I argued that it is problematic to see routinization as an underlying mechanism that can explain practices. When I talk about it here, the concept of routinization only serves to describe a minor part of what takes place in the establishment of associations in concrete mass mediation processes. My use of the concept of assemblages can only explain the local emergence of source relations or connection with story ideas, and in this connection, routines emerge as elements in particular assemblages, rather than causes of them.

When Simon talks about how they 'normally' approach a radio program, this involves 'planting something in the middle', i.e. focusing on the central conflict: "this was where the discussion was most intense, the most obvious cross, the most obvious point of disagreement"¹¹³. From here, the work on the structure of the program is quite schematic. The host works with an alternation between rounds of debate in the studio and pre-produced recordings:

You know, in a program like this, there will be one round in between pre-recorded bites. There is a wrap up after the tape, which I have written down, and then a debate round, and then an intro to the next pre-recorded bite. And the manuscript for that debate round, when I write that, I am thinking through the whole sequence¹¹⁴

So rather than adding a debate in the end of the program, the producers tried to let the debaters relate to elements of the overall program, and tie the elements together into a coherent story:

You may say that they were holding hands with the program, and they contributed to creating the impression that the program was produced in real time, with debaters sitting in the studio and listening to it while people listen¹¹⁵

The job of the host, then, is to create progression in the debate – as Simon expresses it, "I need to feel that we move forward all the time"¹¹⁶. The interviewer's questions move from the concrete (in the first round) to the abstract (in the last round) and from the small to the large. The manuscript of the program is divided into four parts, called Studio 1, Studio 2,

¹¹³ Interview with Simon, 23.08.07, line 73-74

¹¹⁴ Interview with Simon, 23.08.07, line 209-213

¹¹⁵ Interview with Simon, 23.08.07, line 105-108

¹¹⁶ Interview with Simon, 23.08.07, line 222

Studio 3, and Studio 4, each with written introductions, indications of the pre-produced sound bites and written wrap ups. One example is:

Tape - AK

STUDIO 4:

Writer and psychologist AK told about differences in boys' and girls' brains.

You are listening to a series of broadcasts about the latest brain research. Today, the program revolves around the topic of learning. How are our brains geared to receive new knowledge?

With me in the studio, I have gender researcher Marie from (XX) University, and doctor and writer HH.

Round 1: Should boys and girls be taught separately?

Studio 4 consists of 3 rounds of questions with 4-7 questions in each. In the actual program, they only get to cover the first and the second round of questions. The one with the theme 'How do we secure gender equality' is left out because time runs out. This partly happens because the interviewer has to spend a lot of time translating statements – to make sure they suit the program – and because a controversy unfolds. The next two sections will deal with the translations and the controversy. They show examples of what may happen when elements such as the above – professional choices governed by actants that are co-constructed by journalists – are assembled with other types of elements; participants in the debate, knowledge claims and pre-produced recordings.

Translations

This section takes a closer look at the network building in and around the media text. It looks at how the producer and the host of the radio program translated different elements into useful parts of the program, and touches upon some of the unsuccessful attempts at translations. They can be called unsuccessful because closure was either unattainable or momentary.

Assembling allies

In the production phase of the radio program, a lot of different interests have to be translated into a collective that can hold together, at least for some time. Researchers or experts have to be convinced to participate in relation to a theme, statements have to be framed, expert terms have to be modified, themes have to be twisted, etc. After editorial meetings with discussions of how they should combine guests, the hunt for participants began. Cecilie gave Simon some possible names and the kind of questions she expected them to be interested in discussing. Then Simon phoned a number of different people, telling them about the program, and asking the person to contribute to the research-phase with his or her views. If a person talks well and if the statements are in accordance with the pre-defined premise of a given program, he or she will be asked if they are willing to participate¹¹⁷. A routine task for Simon is “to talk to the guests. And I talk with them at length before. Maybe I talk to more people than I end up selecting. It is kind of a casting; who will go together well”¹¹⁸ Importantly, peoples’ rhetorical performance has to be in accordance with ‘broadcast ideals’ of clarity and great sound. Also Cecilie works towards translating themes and terms into proper elements of broadcasting:

You are really focused on the flow, or the dramaturgy, in a radio program. It has to sound great, while it gives people an aha-experience. We also said we wanted to draw research out of the laboratories and into peoples’ everyday lives. And we really tried to do that, so the first program was about falling in love. We really tried to interpret the research results¹¹⁹

The process of assembling allies is not a simple one. Once two people have agreed to participate, the host has to make sure that they act in accordance with the premise of the program. The host makes it clear to the participants what he expects from them, and he lets them listen to the pre-produced parts, so they can relate to them. In a meeting before the debate, the guests are given coffee and rolls, and the host presents them with the opening questions in the following way:

‘The first question will sound like this, and *you* will get to answer that’ ... ‘What are you going to say, if I ask you’ ... In this way I make sure that...because I have been translating a phone conversation into a manuscript, and when I have my manuscript, I have to make sure that if I ask about this or that, the person will answer in a way that I expect. If not, I will have to change my question. Or make an agreement; ‘could

¹¹⁷ Interview with Simon, 23.08.07, line 149-155

¹¹⁸ Interview with Simon, 23.08.07, line 93-96

¹¹⁹ Interview with Cecilie, 14.08.07, line 832-837

we do it like this for now, then I will let you answer that question later on'. So it is...there is a negotiation there. It varies a lot, how much people let me steer them¹²⁰.

After framing the 'problem' in an efficient way during the research phase, through the alignment of interests of host, producer and insights from brain research (obtained through the establishment of the premise of the program), the process of translation consists in the host making sure that the involved actors' statements can be aligned alongside the other statements of the program. As the remainder of the analysis will show, the producers of the broadcast succeeded quite well in translating most elements into a coherent story about brain research – in the sense that people play their part and statements revolve around the established premise. However, not all alignments were successful in terms of contributing to the strengthening of the network. One of the debate guests questioned the premise of the program before, during and after the broadcast, and quite some work had to be done to make her statements work with the others rather than against them.

In my interview with this researcher, she told me a story reminiscent of other researchers' accounts of unfortunate meetings with journalists, where researchers come to play a pre-given role. But rather than merely seeing her account as evidence of a manipulative use of expert statements by the media, I want to emphasize the huge amount of energy put into negotiations and translations by all the parties involved in the creation of this media text. The outcome of the program might favor one kind of research over another, it might set up dilemmas in simple terms, but the communication processes by which it arrives at this is in no way simple, and does not leave the parties untouched.

By accepting to participate, the researcher enters a dialogue where she explicitly questions and destabilizes the chosen take on reality:

Well, a journalistic researcher phoned me, and we talked for half an hour. It began over the mail, and then she phoned me. And she began telling what the take on the program would be. And she starts by saying 'Well, we know from brain research'...and, you know, 'brain research shows that...' and we talk for half an hour, and I try to disturb that one-dimensional understanding of brain research: 'you need to know that it is not so one-dimensional, what brain research says'... and try to lay out some of those arguments about...arguments that counter the 'truth' of Ann Elisabeth Knudsen [one of the expert voices of the pre-produced parts of the program] . And in fact I have the impression that we communicate, and that she takes

¹²⁰ Interview with Simon, 23.08.07, line 182-192

in some of my arguments and moderates some of her statements. But also that she has adopted that discourse. I said that it was important for me...or, I tried to challenge the idea behind the program, that Ann Elisabeth Knudsen represents brain research¹²¹

A large part of the interview with the researcher is her analysis of the ways in which the framing of the program became sharpened not only by the introduction and the creation of two oppositional subject positions, but also the cutting out of modifications of the two opponents. I will get back to this below, but the main point here is the researcher's experience of entering two very different kinds of dialogues: One which we could call a pseudo dialogue, where the researcher's statements are translated into ideological contributions, and another, ongoing dialogue with the journalists before and after the broadcast. The researcher recalls what happened after the debate:

When the interview ended there was [an episode] with my opponent and the journalists. He continued discussing, but I told him I could not discuss with him because he intimidated me. And then I walked out. I got my stuff and I met the journalists, and I said I was sorry...I was annoyed with the fact that I had not been able to find my arguments, but I had been intimidated. But they could not understand that. They had obtained a great sound. A debate sound. They could not hear that he attacked my professionalism. They were just in the process of producing great debate sound.¹²²

The quote shows how the researcher found it difficult to destabilize the premise and disturb the collective which so much energy has been put into establishing. At the same time, it shows that the journalists' translations are not allowed to stay unchallenged when we look at the communication processes around the media text. According to Simon, journalists would normally avoid talking people into participating, because this rarely works well¹²³. The alignment work is too hard and entails both extra work and second thoughts following the encounter. Of course, in a debate there is a need for someone to take up an oppositional position. The point here is that when someone has the ability to engage in interpretations and critique of the premise of the program, this becomes much more troublesome than if the person is simply opposing the other debater.

Translations from research to manuscript

While talking to potential debaters on the phone, the host produces several pages of notes on the computer. Together with the notes he has taken from the pre-produced parts of the

¹²¹ Interview with Marie, 13.04.07, line 70-80

¹²² Interview with Marie, 13.04.07, line 253-259

¹²³ Interview with Simon, 23.08.07, line 163-165

program, these form the basis of the manuscript of the debate. Far from being exact transcripts, the notes are a curious blend of informal language, detailed examples, and unfinished sentences. In the following, I analyze notes and manuscript, to give an idea about the translation processes involved in turning this complex mix of statements in the notes into a very structured manuscript.

First, a short excerpt¹²⁴ from the notes Simon made as he talked with Marie's opponent, the psychiatrist Hans, on the phone before the recording of the debate:

Talked about it before Ann Elisabeth Knudsen [the expert voice referred to above] was born. Look at it in the same way. She is more biologically oriented. We agree in conclusion. Many in Europe agree. Lots of places you return to single sex classes. Different opinions about whether this is good or bad.

We are both right. I think both and. Not only after the sociological and the biological... We need to look at it with two eyes rather than one.

Both theoretically and practically: theoretically, there is a lot which speaks in favor of conceiving of development processes of the two sexes as two processes. Think about the world of sports: do you want boys and girls to play against each other. If you suggested that you would be admitted [to a madhouse?]

But to say that a 6-year old girl is ready for school earlier because their brains develop differently. That is science.

This excerpt makes up the first quarter of the notes. The rest of the notes contain a variety of statements. A lot of statements are about how the division of boys and girls has to be partial. Also, we see numerous references to feminism/feminization as 'the enemy', along with statements about the ways in which others relate politically to the issue of dividing boys and girls in school, such as "Now time has come to help the boys. And then the equality people come running..." Finally, we see several arguments for softening the sharp division: "Of course we see girls who have the same profile as boys. [...] Girls who are extrovert and boys who are intellectual".

¹²⁴ The notes are quickly jotted down – they are as difficult to understand in Danish as in the translation above. I have kept the translation close to the original to keep the impression of their quality.

The notes are turned into questions for the manuscript. A recurrent technique is to take a statement from one of the participants and phrase it as a question to the other. For instance, one of the above-mentioned statements becomes:

1c) Marie,

In the world of sports, boys and girls are divided. They are also different when it comes to the brain, although this is invisible. But since it is scientifically proven, shouldn't we draw some consequences from this knowledge?

Notably, about a fourth of the notes from the research interview with the psychiatrist deals with ways in which the division between boys and girls may be blurred, and with the significance of the social in relation to the biological. Hence, in the preparatory notes, the psychiatrist does not have a clear-cut position as a gender essentialist. This part of the material, which shows that the psychiatrist does not want to draw strict lines between boys and girls, is *not* turned into questions to the opponent. Instead, it is phrased as the opponent's point of view and turned back against the psychiatrist in the following way:

1d) Hans,

By dividing the children into boys and girls, you force them into a stereotypical – and simplified – image of what gender is about. Individuals are much more different than indicated by the one-sided image drawn by brain researchers?

The knowledge about the brain which the host refers to throughout the hour-long broadcast is presented as a set of well-established and agreed-upon facts. ('We know from brain research'). One way of establishing the certainty of this knowledge is to refrain from including researchers' markers of uncertainty in the notes for the manuscript. In a pre-produced recording with a 'specialist in the brain and learning', the specialist says that there is no knowledge about a direct correlation between the maturity of the brain and achievements in school. Such a statement does not enter the notes for the manuscript.

The same goes for the modifications of the most radical participant in the program, Ann Elisabeth Knudsen. She spends most of her time talking about the differences between boys and girls, but in one of her first statements, she makes it clear that she is only talking about the average girl and the average boy. Also, she remarks that knowledge about the maturation processes of the brain does not justify that we separate boys and girls in school. But in emphasizing some elements in the preparation of the program, the journalists 'shape statements in accordance with their own project', i.e. they translate the

knowledge claims of the participants. It is important to note that the journalists do not pursue a totally one-dimensional story by cutting out all nuances and modifications, but let the pre-produced recordings contain statements that soften the otherwise clear-cut positions or discourses. For instance, there is a passage where the above mentioned radical contributor to the program talks about how boys and girls should not be divided too much, or for too long. Only half of the time in some classes, and only during the first years: “I would like to separate them a little bit, some of the time”¹²⁵

To conclude, in the process of turning journalistic research into a manuscript and creating the recordings that the rest of the program relates to, translations are not equal to violations of peoples’ statements. They are not necessarily edited so that they *only* point in the same direction as the program. Rather, the shaping of statements happens through the crafting of the interviewer’s questions, both in advance, and throughout the host’s management of the discussion – as will be shown in the following section.

Translations from manuscript to actual program

In accordance with the premise of the program, one of the debaters, a psychiatrist, has been enrolled to represent brain research and argue for a separation of boys and girls in school. But even if the producers’ expectations have been articulated pretty clearly in advance, the first question of the debate addressed to the psychiatrist results in a ‘wrong answer’, which shows too much affinity with the other participant, i.e. Marie who takes an oppositional position to the program’s premise. The following happens:

Host: Hans, it is a bad idea to teach boys and girls separately. Even if our brains are different, this is only an average observation, as Marie says here. You find lively girls, and you find quiet boys?

Hans: I agree with Marie for a great part of the time, because the depiction Ann Elisabeth Knudsen puts forward can seem a bit too fundamentalist and crude and mechanistic, electrical, like. And it is also true, as I know Marie is saying, that you have as many variations between girls and boys as you have between boys and boys and girls and girls.

Host: But still, you have often argued that it may be an advantage to separate boys and girls when they are taught? ¹²⁶

¹²⁵ Ann Elisabeth Knudsen, podcast 34.30

¹²⁶ Podcast 36:24 - 37:05

Also this attempt to steer Hans' contribution in the direction of 'differences in the brain' is unsuccessful. Hans goes on to talk about the tempo of children's development, and does not want to talk about left and right parts of the brain. He holds that we should not restrict the discussion to the small areas of the brain, but this argument is interrupted by Simon, who wants him to talk about why it is a good idea to separate the children. At this point, it is hard work for the host to produce the kind of clear positioning supposed to create the proper kind of radio debate, which is easy to relate to. But after a while, when the interviewer seems to have temporarily given up the establishment of two clear-cut positions, Marie comes up with a statement which provokes her opponent, Hans. She states that the discussion about tailoring education according to biological differences becomes 'a bit weird', and that both boys and girls may learn from playing and jumping, depending on the learning situation. The interviewer simply sums up her statement, and passes on the microphone to her opponent, who begins to line up a confrontation between the alleged political position of his opponent and the knowledge-based position he takes up:

Host: So the girls could also benefit from a method of teaching which was directed towards boys?

Marie: Yes, indeed.

Host: What do you say, Hans?

Hans: First, let's make it totally clear: Ann Elisabeth Knudsen and I and others are talking about a *partial* division according to gender. We are not talking about a total separation. It is important to understand that. The other thing is, when I hear these arguments, it reminds me of the old problem of ideology versus *knowledge*. I think you are talking a lot about ideology, it is important that they are together, it is important they get to know each other, it is important that you mix them. And that is against the *knowledge* we have [...] about brain development and maturity [...]¹²⁷

This is the starting point of the controversy, which I will address in the section below. It arises out of the insistence on talking about differences and the categories of boys and girls, a set-up which in the end seems to provoke the psychiatrist to take the role of advocate for the boys and position his opponent as the girls' protector.

¹²⁷ Podcast 40:06 - 41:09

The passage above is followed by a report from a school where children are talking about gender. Both boys and girls are good at characterizing boys as wild and dominating and girls as quiet and concentrated – but they also tell stories about crossing these borders. For instance, one boy offers an account of himself as ‘a quiet guy’. After listening to the report together, it is interpreted (by the host) as proof of the fact that boys and girls are different (‘differences that even a kid can identify’) – but Marie challenges this interpretation, noticing the complexities that the children account for, and noticing that the teachers who have experimented with division according to sex actually let girls participate in the boys’ room (with the blue carpet) and the boys participate in the girls’ room (with the red carpet).¹²⁸ Still, the host insists: but they *separate* them? Marie acknowledges that they put up a dividing line between boys and girls, but points out that this line is dotted. Hans joins ranks with her by similarly appreciating the idea of flexibility. He states that it makes no sense to send the children through the same meat grinder, i.e. treating all girls alike and all boys alike. This agreement leads to quite a long silence, broken by the host who asks, ‘can you develop on that a bit?’ By this innocent question, the host somehow kick starts a new talk about ideology. And the conflict between the two debaters escalates. Hans calls it a myth that we can create single-sexed individuals by keeping them together in the school. The host catches the opportunity and asks Marie if this is her plan. She angrily asks what Hans is accusing her of, and he aggressively states that he has a plan of action, whereas she only has diffuse ideas about equality. Here, time is running out, and the host concludes that a bit of division of boys and girls is okay, as long as it does not become too rigid.

All the radio producers’ translations discussed above are aimed at constructing brain research as a solid body of knowledge, where several researchers agree that differences in boys’ and girls’ brains warrant that they are taught separately. This understanding is established in the negotiations between the journalistic researcher and the host in the process of preparing the program, and the contributions of brain researchers and representatives of brain research are translated in accordance with this understanding – first in the notes that are part of the basis for the manuscript, then in the framing of questions to the debaters, and finally in the follow up questions which actively construct brain research as a unified field and its results as pointing in one direction. All the involved ‘experts’ talk about modifications and partial agreements – dotted lines and flexible ways of dividing children – but, paradoxically, it is only the host who is allowed to end the program with a ‘compromise conclusion’. Had this been the starting point for the

¹²⁸ Podcast 49

whole discussion, translations would have been much simpler and alignments in the media text collective much more solid and stable. But as the analysis (of both the media text and interviewees' accounts) has indicated, the debate form becomes an important mediator in the actor-network assembled to produce the media text, and researchers' statements are translated so as to fit this form.

A science/politics controversy

As indicated by the analysis above, the participating researchers initially had very little interest in creating antagonistic positions and conflict. Actually, according to the producer and the host, it is quite often the case that researchers do not want to debate against one another, because they prefer not being enrolled in a fight with colleagues. This means that it is often hard to find participants, and hard to convince them to participate¹²⁹. This again means that in the preparation for the program, participation is framed (by the producer) as a question of contributing with a specific type of knowledge, not as an invitation to argue with a colleague. The researcher recalls:

I had not prepared for a discussion with him, or for having to have an opinion about him. I imagined that we were to have each our opinions, and discuss [the issue] from each our perspective. But the way they set the ball rolling forced us to discuss with one another. Of course I should have known that, but I was prepared for the wrong thing. I did not conceive of him as a player before I went in there. We had not discussed him at all in the preparations for the program¹³⁰

The impression that the idea is to shed light on a given topic from different angles is supported by the way in which questions are posed. The journalist occupies the position of a neutral host, who plays the devil's advocate in relation to both participants – throughout the whole broadcast. He poses questions in the following way:

To the gender studies researcher: There are great differences between the brains of boys and girls – and between their abilities to learn when they begin to attend school. That's why we ought to separate them according to their sex, according to brain researcher AK. What do you think about that?

To the psychiatrist: It is a bad idea to teach pupils separately. Even if our brains are constructed differently, this is just an average – we also have lively girls and quiet boys, as it is said here?

¹²⁹ Interview with Cecilie, 14.08.07, line 336-353

¹³⁰ Interview with Marie, 13.04.07, line 141-147

However, as we saw in the section above, the conflict is built into the questions, and is inherent to the structure of the program. Moreover, even if the central question of the program – should children be separated according to gender, or should they not? – can be addressed from a number of perspectives, the radio program positions brain research as authoritative. This was also the aim of the producers. Neither the producer, nor the host wanted to question brain research as such. The program was not meant to open any black boxes. The producer, Cecilie, wanted the gender studies researcher to question the political conclusions drawn from brain research, not brain research itself, and she did not accept Marie's questioning of the premise of the debate and the presentation of the research area as settled.

I don't think she was qualified to put forward that critique. I think she ought to relate to what the program communicated. And then, as a gender researcher, take the debate about the societal consequences and say 'hey, why this genuflection to biological research?' Maybe there is a biological difference, but it is not at all clear what the environmental effects are¹³¹

With the translations of texts, preparatory interviews, etc., Cecilie had established brain research as a unified area with a set of new discoveries that we need to relate to. This implied an approach to brain research which did not seek to destabilize it, but to let 'it' be confronted by another type of knowledge, namely gender studies. In her view, the two knowledge domains were both perfectly legitimate, but only in so far as they did not cross each other's borders.

Simon had the same conception that the program was about completed research results, and wanted to interrogate what we do with those results. We should do this 'because we are political, emotional, thinking human beings'¹³², not because we have the right to enter the domain of scientific argumentation, according to the journalist. In that sense he thought that Marie was right in questioning the dominant reading of brain research, even if she felt that she was not allowed to do that. Simon recalls that she was furious, with a tearful voice and the need to talk the whole thing through: "she was shaken afterwards. That was not necessary, but that is easy for me to say. I think she did well"¹³³. The host interpreted her interventions as appropriate political, emotional responses, but took the side of the hard sciences throughout the program. The above-mentioned pre-produced recording from a school, where emphasis is on children's and teachers' definitions of

¹³¹ Interview with Cecilie, 14.08.07, line 560-567

¹³² Interview with Simon, 23.08.07, line 329-333

¹³³ Interview with Simon, 23.08.07, line 379-382

typical characteristics of boys and girls, together with the long interview with the above-mentioned brain researcher contributed to the whole framing of the interview as supporting the discursive linkage between 'gender research – ideology – blurred gender categories' and between 'brain research – knowledge – differences in girls' and boys' abilities and needs.' And when one of the debaters accused the other of engaging in an ideological discussion, rather than an unbiased and factual discussion, the conflict turned into a controversy about legitimate knowledge versus illegitimate politics. So rather than remain a discussion between two kinds of research-based knowledge, the discussion becomes a matter of positioning; the participants take up the position of being for or being against separation, and they can take up the position of being research-based or being ideological. The position offered to the gender studies researcher was that of being against separation and being ideological. Deacon et al (1999) have described how journalists – while living up to the convention of balancing by integrating opponent voices in a story – tend to mention the scientific support of the dominant source only, and leaving out the opponent's support. This problematique becomes even more pertinent when the subject matter can be enacted as both political and research-based; both researchers and journalists can have a hard time handling the researcher's gliding in and out of the position of 'professional' and the position of 'social critic' (Fenton et al., 1997). Although this also happens for natural scientists, it is particularly obvious that social scientists risk being positioned as ideological when they appear in the media.

If we broaden out the investigation to cover other public performances by the gender studies researcher, we see that the politicization of her research-based knowledge is not necessarily constructed as a problem. In some sites, knowledge claims are aligned with political arguments, in other sites, they are kept in a denser network of academic arguments. The science/politics controversy arises in specific relations where the accusation of being political is performed as an insult rather than a recognition of the poststructuralist idea that all knowledge is political. In the radio program, where the researcher is confronted with this accusation, she insists on engaging in an academic debate, and to be judged and addressed on a purely academic basis. It can be argued that her non-reductionist proposition with regards to sex and gender¹³⁴ is not in and of itself political, even though gender studies can be seen as a political, emancipatory project.

¹³⁴ That the physical differences in boys' and girls' brains are so small and insignificant that they do not warrant a separation into two distinct groups – children come in many more varieties than such reductionist categories would suggest

Still, the knowledge object constructed by the gender studies researcher may feed into political debates on gender inequalities, organization of the school, the state of feminism, etc. And this is what happens in other situations, where her arguments against reductionist gender categories are enacted as political statements. The researcher has participated in different kinds of political arrangements. To be mentioned here are two examples, a feminist meeting and a debate evening arranged by a student organization and a political party.

In the first situation, according to the minutes from the feminist meeting, the research-based knowledge claims were framed as feminism “which is now to be discussed, not defended”¹³⁵. Emphasis is on the humor used by the researcher, who “tried to come up with a humoristic angle on the limitations men and women live with when it comes to gender and sexuality” ...and “it became totally grotesque and hilarious when...” At the meeting, the researcher picked out highlights and examples from a text she wrote on the reproduction of heteronormativity in voice-overs of animal programs on television. This form could function as an analogy for everyday experiences which often go unnoticed.

In the minutes of the meeting, the writer offers the same kind of translation as journalists are often criticized for making: A constructivist analysis is presented as a descriptive, realist account of how animals behave – for instance, we read about a heroic male frog and an exhausted female frog. The second order analysis may be left out to make the text funny, or maybe it is left out because everybody agrees on the abstract (academic and political) statements behind the narrative of the animals. Decades of articulatory practices within feminist movements have established a critique of essentializing gender categories as a nodal point, to which numerous discourses now refer. The minutes align everyday accounts and humor in the construction of feminist knowledge claims, which are both different from and similar to gender studies knowledge claims.

In the minutes of the other political meeting, we see a less ‘translated’ use of the latter kinds of knowledge-claims – an alignment of political and academic discursive and rhetorical figures is apparent in the minutes: The researcher

...introduced the research on gender equality in the school, and offered empirical examples of how schoolteachers treat boys and girls differently. She discussed the socially constructed division into the

¹³⁵ Article downloaded from www.kvinfo.dk/side/561/article/57 4/13/2007

categories of boy/girl [...] She repeatedly stressed reflexivity as a tool for the breaking down of gender inequality, and this became a central topic of discussion throughout the night¹³⁶

The point here is that the object of gender differences is not enacted in the same way in these different situations, and is not a unified, singular object. One of the conclusions we can draw from these observations is how capable one individual – and a field of research – is of translating knowledge claims and making sense to different people, in different situations. The fact that these translations are dependent on specific situations or interactions, could be seen as an illustration of the Bakhtinian point about the dialogic character of all communication (Gergen, 1994); that ‘the other’ is built into the utterance, and that the language user is capable of drawing on many kinds of linguistic resources and of adjusting his or her language use according to the people addressed. Not because he or she strategically or consciously chooses a particular terminology, but because there are subject positions suitable to take up in different situations. At the same time, it demonstrates how the assemblage of collectives depends on translations of their elements.

The analysis raises doubts about the view of science communication as ‘articulations’ of the researcher which are ‘translated’ by public relations-practitioners and ‘transmitted’ by journalists, as many studies of science communication have put forward (see for instance Walters and Walters, 1996). Instead, it proposes a view of the mass mediation process as thoroughly dialogical, with actors incorporating considerations of ‘the other’ into their accounts – and with numerous occasions for feedback. In the next section, I will unpack this view of the dialogic aspects of mass mediation.

The dialogues of mass mediation processes

In the above, I have highlighted how translations and negotiations can be part of aligning heterogeneous actors into a collective of components of a radio program. Now I want to argue that if we look at mass mediation processes with an eye for the relational, it also makes sense to talk about mass mediation as dialogic. The so-called dialogic turn in communication studies has stirred an interest in forms of communication of research-based knowledge, which do not rely on the mass media, but – often in creative ways – integrate communication with publics or interest groups in various stages of the research process. From this perspective, mass mediation is either ignored as an object of analysis (Pauly, 2004) or (sometimes implicitly) constructed as a one-way, top-down process, without possibilities for feedback, and not easily reconcilable with democratic ideals of

¹³⁶ Article downloaded from www.socialdemokraterne.dk/print.aspx?site=ligestillingsudvalget 4/13/2007

inclusion, interaction and dialogue. Leaving the question of democratic ideals aside, I want to highlight the moments where two-way communication takes place. The involved actors' accounts of the practices and interaction going on around the radio program make it obvious that the entirety of communication of science through mass media does not take place within the media text itself. There are opportunities for negotiations of meaning both before the technical production of the text, throughout the production, and after the production.

To hold onto an image of mass mediation as one-way communication, we would have to stubbornly hold onto the differences in scale between the individual and the monstrous media machinery, a difference in scale that

...arouses special concern. How does one encourage mutuality, active listening, and responsiveness among newspaper, magazine, radio, movie, and television audiences that range from the thousands to the tens of millions? Scholars have often judged such gatherings as incapable of producing dialogue [...] the phrase *the media* still denotes much the same set of social practices as mass once did. When they talk about 'the media', most Americans mean massive, heavily capitalized, technologically sophisticated, professionally managed, star-driven systems of communication (Pauly, 2004: 244)

Pauly, who is a media theorist, seeks to offer inspiration as to how media representations can open up spaces for dialogue. I prefer to use his diagnosis of our common way of conceptualizing 'the media' as an occasion to propose thinking differently about scale (Latour, 1999a: 258) in relation to the media. If we avoid thinking in terms of micro (the individual) and macro (the media machinery), we are able to see how mass mediation consists of a number of concrete interactions and manifestations. Here, the large ('brain research') and the small (the red carpet of the girls' class room) co-exist and co-produce meaning. Also, a focus on huge, anonymous audiences can be replaced with a concern with concrete individual users of a given media text, or with 'the audience' as an entity which is rhetorically constructed. Finally, when we refrain from seeing 'the media' as a one-way, top-down communication apparatus, it is also possible to see how concrete interactions have consequences for concrete individuals, and, by extension, for researchers' concrete science communication contributions:

I become totally exasperated in those situations, because there is no learning taking place [...] I had gender research as an entry point for my PhD-project, but I have toned down that dimension, in order not to run into the same stuff again. In that sense, my engagement has vanished. Because it feels like fighting against windmills, right? And because I could not see myself taking the same discussion again and again. And that

is also why I have stayed out of debate land. But now we are considering writing a debate book for use in the school. A debate book, not a research project...It is exhausting when research is politicized in that way¹³⁷

While it might be inappropriate to talk about the dialogic aspect of mass mediation in relation to the quote above, because the researcher talks about a lack of mutual understanding, at least it can be argued that it shows how mass mediation of research can have a significant feedback function. While the researcher has the experience of not being able to engage in a 'real' dialogue, she is so disturbed by the experience that it works back on her choice of future research topic. It is generally acknowledged that mass mediation does influence the production of scientific knowledge, e.g. by providing ideas and metaphors that are picked up by scientists (see Bucchi, 2008: 63pp for references to such studies). Lewenstein refers to studies which "argue that media presentations are not merely part of the social context in which science exists but instead are the direct causes of some aspects of scientific work". He remarks that such studies "support a model of science communication more complex and interactive than the traditional, unidirectional model" (Lewenstein, 1995: 357)¹³⁸. The type of influence of mass mediation I have been discussing above is less productive, and has more to do with interaction than with representations. Nevertheless, the example of feedback in mass mediation can be seen as additional evidence of the two-way communication between 'science' and 'the media'.

Subject positions as actants

The relational view of identity shared by constructivist approaches entails that we look at how people position themselves in relation to one another. We assume no essential identities, but look at how identity is constantly under construction. In accordance with this view, one of the aims of this thesis has been to interrogate taken-for-granted professional identities and account for variations in how people perform 'being a journalist' or 'being an academic'. But whereas the other cases show a lot of blurring of categories and border-crossing, the present case demonstrates 'the reality of common sense professional categories'. In the interview material of this case, academics and journalists/the media are primarily positioned as two distinct species – the story as we know it from public discourse, policy discourse and research on science communication in the media (Valenti, 1999). Below, I will offer a few examples of how academics are positioned as unable to communicate, but I will also show how Cecilie, who is an academic, experiments with categorizing herself interchangeably as academic and in

¹³⁷ Interview with Marie, 13.04.07, line 397-422

¹³⁸ This is different from STS-discussions of how knowledge can be understood as co-produced in a process where lay people are not only listened to in relation to technoscientific developments, but actively engage in building up a body of knowledge of something which concerns them. ((e.g. Callon, 1999))

opposition to academics. The important point here is that even if specific persons are gliding in and out of particular categorizations, their momentary attachment to a position has implications for practices and relations. Another kind of position in this case is that of 'the public'. The public works as an actant in the sense that both researchers and media people address a general public when they communicate science. But actual people also make up publics, and the last part of this section reflects upon the connections between the public as an actant and the public as actual people.

The dry academic and the impatient journalist

Not surprisingly, Simon, who is an experienced journalist, has quite an elaborate idea about what researchers are like when they interact with the media. Primarily, he finds them 'difficult', but he also talks about the kind of researchers who have a point of view and dare telling about it in clear terms. The latter are the ones who become visible in the media, while the former are so used to being in control with regards to their knowledge claims that it becomes a hindrance for their participation¹³⁹. In Simon's view, they have to learn to let go of that control if they want to communicate. Interestingly, in the journalist's account, researchers have many more facets than just being aloof academics. He also sees them as lay people vis-à-vis other academics, and as having the same needs for popularization as other listeners. As he remarks, when academics are in the position of media consumers, they do not want to read or listen to extensive, specialized accounts. So whereas the position of the academic is constructed as oppositional to the media and media users, it is acknowledged that academics are not academics all the time:

Simon: ...a lot of researchers want to add nuances, and they are afraid of being restrained by a conclusion, which is too harsh, because you can look at things from several angles. But still, we know that the same researchers can be quite bombastic in private – but when they go public they are scared as hell of their colleagues and the rest of the research community [...] That is why the media love the researchers who dare draw a conclusion and defend it

Interviewer: Does that go for you as well? Not just 'the media'?

Simon: No, that goes for me as well, for sure. Because that is the most exciting – it is not captivating to listen to the radio if you feel you are doing homework.¹⁴⁰

¹³⁹ Interview with Simon, 23.08.07, line 444-446

¹⁴⁰ Interview with Simon, 23.08.07, line 516-531

The academic gone radio producer, Cecilie, positions the experienced journalist as advocate of clarity and simplicity, and herself as more willing to accept – and capable of understanding – abstract thoughts and specialist terms. She recounts how the journalist got frustrated with the repeated use of specialist terms (e.g. ‘synapses’) in the expert interviews. In her view, such language use is only enriching. It comes with a cost, but you cannot be too impatient if you want to gain something:

...several times, I had the experience that Simon said ‘this is too boring’, you know, the things the researchers said, it was too boring [...] well I, as an academic you learn to take a book and read it and understand it, no matter how badly written it is, how inaccessible it is. You just have to understand it. And that also meant that we embarked on reading some scientific articles [...] A journalist puts himself in the position of the receiver all the time, ‘Mrs. Smith cannot understand this’¹⁴¹

Still, Cecilie has been quite successfully aligned with the media collective, from which she has adopted two discourses. First, that of the ‘dinosaur audience’. She agrees with the idea that radio has to be renewed – less dry, less based on conversations with experts – so that it no longer addresses a soon to be extinct ‘dinosaur audience’. Second, that of receiver orientation. She subscribes to journalism’s conventions about what it takes to be receiver oriented:

You cannot sell a message, which is up here, with a lot of little details. You simply can’t, and definitely not on the radio [...] And as a journalist, you work a lot on meeting your receiver, and the moment of reception¹⁴²

Cecilie repeatedly uses the concept of ‘angling sharply’¹⁴³, a much used verb among Danish journalists. By this, journalists refer to the necessity of ‘cutting into the bone’ and leaving out disturbing nuances in order to create a very clear storyline. This has consequences for the choice of participants for the radio program. For instance, Ann Elisabeth Knudsen is selected as the representative of brain research, not because she is a researcher (she is not), but because she is a great communicator and delivers provocative statements.

Juggling with the two positions of the dry academic and the impatient journalist puts Cecilie in some awkward situations. She was perplexed when the knowledge/politics

¹⁴¹ Interview with Cecilie, 14.08.07, line 181-207

¹⁴² Interview with Cecilie, 14.08.07, line 399-406

¹⁴³ In Danish: spidsvinkle

controversy evolved as it did¹⁴⁴, and she was not able to identify fully with the impatient journalist:

I must admit I am a part of two worlds at the same time, because the journalist looks at the product more than the process: 'It was a good debate, it was a good product'. Whereas I felt bad for her¹⁴⁵

But even if Cecilie could not identify fully with the position of the journalist, neither with regards to the simplicity/complexity issue, nor with regards to the evaluation of the emotional aspect of the debate, she was positioned as such by others. Talking to her, Marie, the researcher, had the experience of talking to a 'typical journalist'. Also, Cecilie herself recalls how she was positioned as a stupid journalist in an interview with another researcher. Although she found it unfair, this researcher annoyed her so much that she readily identifies with the position of the journalist:

...you know, he sighed when I was posing stupid questions. He wanted to include ALL the details, and I said you cannot include all details, you have 20 minutes to explain these five things. But he could not live with this kind of research communication¹⁴⁶.

In this phone interview, it made no difference that Cecilie was an academic. She occupied the position of the stupid journalist, even when she posed some complicated questions only to show him that she knew about the area:

Cecilie: I could clearly feel that he was annoyed and that he thought I was a bit stupid

Interviewer: It didn't help to that you were an academic?

Cecilie: Yes, but I had to, you know...

Interviewer: You were still the stupid journalist?

Cecilie: Yes...at a certain point I posed some questions only to show him that I knew precisely what I was talking about within this area. But he wasn't interested in disseminating his research¹⁴⁷

¹⁴⁴ Interview with Cecilie, 14.08.07, line 520-521

¹⁴⁵ Interview with Cecilie, 14.08.07, line 534-535

¹⁴⁶ Interview with Cecilie, 14.08.07, line 379-390

¹⁴⁷ Interview with Cecilie, 14.08.07, line 380-389

The antagonistic positions lined up by the interviewee made her conclude that he was a typical academic, for whom international conferences and citations by other researchers are seen as more important than communicating your research to a broad audience. Against this, Cecilie prefers researchers who are good at making one-liners, because this is where a freer, receiver-oriented journalistic elaboration can begin.

In the accounts of what 'journalism' is about and what 'research' is about, two opposite positions are constructed. Such pure categories are maintained through a continuous boundary work (Gieryn, 1998) among researchers, journalists and other professions involved in the communication of research. Some of this positioning work surfaces in my empirical material, and supports the maintenance of shared, commonsensical ideas about professional borders. As Gieryn has shown, there are no stable criteria that absolutely distinguish science from non-science, but a lot of activity is put into defining and maintaining professional borders. Whereas some of my material shows a blurring of boundaries and more complex professional identities, it is important to keep in mind that both processes of purifying and blurring professional identities take place in various sites of communication of research.

A researcher in dialogue with imagined others

When journalists want to be receiver-oriented, this rarely relies on being in direct contact with media users – although numerous interactive formats and citizen journalism of course make this possible. On the questions of how we know what 'ordinary people' or 'media users' want and understand, and which concepts journalists need to translate – and how – Simon talks about a dynamic process of negotiations in between colleagues, and an extensive amount of analyses and media research describing target groups. A lot of feedback comes from focus groups and a lot of the above considerations about how to address particular audiences are distilled from such research and written into the format of a given medium or program. In this way, discussions of media research as well as articulations of rhetorical techniques go into the establishment of 'routine' practices and 'professionalism'. Simon describes the practices of taking 'the other' into account with imagery such as setting out hooks and opening doors. And 'the other' is constantly present in his work as a horizon that he must navigate in relation to:

It is super important that we make ourselves clear. Like translating loanwords, constantly being clear about what we are talking about and not shifting to insiders' language. We need to make sure that we turn to the audience and ask 'are you following us?'¹⁴⁸

The first question/answer part of the radio program makes it clear how Simon is constantly judging whether expert language is understandable or needs to be translated:

Simon: And Marie, there is a huge difference between boys' and girls' brains, and the children's ability to learn when they start school. That is why we have to teach boys and girls separately, according to the researcher Ann Elisabeth Knudsen. What do you think about that?

Marie: First, you need to pay attention to the leaps between the levels in Ann Elisabeth Knudsen's argumentation here. You see, we jump from a level, which is a statistical entity, namely an average boy's and girl's frontal lobe, and so on

Simon: She applies the same yardstick to all boys and the same yardstick to all girls?

Marie: Yes. And then we jump to another level, which is the class room, or anecdotes about the class room, which are performative of versions of girls and boys that we can recognize, but also very reductionist, I mean, distorted in relation to what reality is also like

Simon: That means she draws some stereotypical images of boys and girls. But why is it wrong to educate boys and girls separately, if there is a difference between their brains?¹⁴⁹

So this kind of constant concern in relation to what the media user might understand is common for journalists, but it is not only a skill of journalists. Also researchers use different discursive repertoires in different situations. While being positioned as a somewhat inaccessible researcher in the above, Marie can in fact be used as an example of a researcher who works with a lot of different communication formats which take different kinds of users into account. As I noted above, I am not talking about a completely deliberate choice of terminology, but of the capacity to use an appropriate language in different situations. In my interview with her, she pointed out how she had been engaged in different kinds of communication of research. When we turn to some of these contributions (in this case a chapter in a non-academic anthology and an article for a teachers' journal), we see that her communication of knowledge implies different

¹⁴⁸ Interview with Simon, 23.08.07, line 613-617

¹⁴⁹ Podcast 35.11–36.00

alignments of various rhetorical strategies. In those texts, it becomes clear that academic (social scientific) language is not a fixed set of attributes or techniques to be applied by a researcher. In between the 'traditional', condensed, technical writing (characterized by abstract language, specialist terms, long words and sentences, nominalizations, categorizations, etc.) and the experimental writing inspired by post-structuralism and feminism (characterized by the inclusion of subjective experience, sentiments, dialogues, etc.) there is a whole range of possible rhetorical strategies. In the anthology chapter, the researcher deconstructs a dominant 'cultural reading' of nature (in a BBC animal program) by contrasting it with other possible interpretations of biological 'facts': the program shows how male seahorses carry the eggs of the female seahorse, nurtures them and gives birth after several months. The TV program explains this in the following way: the male "can be sure that he is the father of the off-breed. Such a guarantee for his fatherhood makes it attractive for the male to identify with the father role". The researcher analyzes the voice-over in the following way:

So the male makes a strategic choice, to ensure the reproduction of his genes...And while he is taking care of the off-spring, the female seahorse is not engaged in new adventures. No, she is seeking food and producing more eggs. And whether she is (aggressively) spreading her eggs to other males – and in fact spreading her genes in all directions – this is left out of the story.¹⁵⁰

Much of the analysis is kept in such a polemical, ironic, conversational tone. These sections go together with more generalizing, abstract and categorizing passages such as the following:

[BBC's animal programs] support and reproduce, rather than render complex or break with, the dominant account. A dominant account, where special gender codes, that is, special understandings of gender, gender differences and nature, circulate and are reproduced hand in hand with a Darwinist and natural scientific tradition for causal explanations and categorizations.¹⁵¹

The second text, the article written for a teachers' journal, is rather short. It has no references, and there is not a lot of black-boxing going on in it. The interest seems to be in producing a type of communication which does not compromise the researcher, but which is at the same time understandable, using examples and visualizations, and involving the reader with the use of second person singular and first person plural:

¹⁵⁰ Anthology chapter on gender and sexual normativity in animal programs, p.101

¹⁵¹ Anthology chapter on gender and sexual normativity in animal programs' p.97

If you take a look over a school class, you will probably notice that there are children of different 'kinds' [...]

If we consider this problematique from the point of view of a position called poststructuralism, we realize that 'kind' is not something you are, but something you become, though a huge number of micro-processes and negotiations through which it is settled who belongs to a category, and who does not [...]¹⁵²

These passages demonstrate that 'academic language' is not a singular thing, even if it is often characterized by a lot of nominalizations, abstract concepts, passives, and the like. Also, there is no necessary connection between being an academic and using academic language. Just like we can choose to focus on the blurred borderlines around the subject position of the researcher, we can have a de-essentializing view of the 'nature' of academic writing. This is also why it makes sense to look at communication as a process, rather than as a toolbox (by which I mean views put forward by e.g. Gascoigne and Metcalfe, 1997, Shortland and Gregory, 1991, Steinke, 1995, Vaughan and Buss, 1998), which can be put to use to solve problems of deficit and understanding. Of course, the toolbox approach to communication offers valuable insights about different rhetorical styles – and the deliberate switching between them – but it says little of the capacity of the language user to produce texts which contain a complex mixture of different rhetorical strategies, wordings, and levels of abstraction by addressing different 'imagined others' (or 'target groups', or 'model readers'). This point has been emphasized through the choice of texts analyzed above; had the analysis dealt with a journal article, it would have shown a greater correlation between being a researcher and using academic language¹⁵³. This means that if we want to understand how research-based knowledge is enacted by researchers, we need to work from an understanding of 'scientific knowledge' which goes beyond e.g. the definition of Mcineray et al, who propose that it be seen as "those reports of [experimental] research that appears in the peer-reviewed journals read by scientists" (2004: 49). 'Scientific knowledge' is enacted in many more sites and many more ways than such a definition indicates.

When Publics in General become Publics in Particular

In the analysis above, we saw that people who are engaged in communication of research via the mass media adjust their communication according to an abstract conception of the

¹⁵² Article in a teacher's magazine on 'gender hostages in the class room'

¹⁵³ This is not even necessarily the case – lexical analyses of popular science texts, textbooks and specialist articles have found that levels of technicality are not always higher in specialist texts than in other types of texts (Bucchi 2008: 73, note 1)

capacities and interests of 'other people', 'the surrounding society', 'people outside', etc. As indicated in the theory chapter as well as throughout the analyses, such constructs may work as actants in particular assemblages. Media actors' views of 'the general public' may be formed partly by research and professional discussions, partly by people drawing on their own experiences of constant interaction with people who have no professional relations to the media. For instance, Cecilie talks to people – like her hairdresser – about the program she is producing, and notices what they find interesting¹⁵⁴. In that way, private relations strengthen the network-building she is part of in the production of the radio broadcast. So there are many ways in which the interests and language of media users can influence the way in which science is communicated in more or less diffuse ways. But how do these general conceptions about what 'the general public' is like relate to actual publics formed around particular issues? Michael (2008) has devised the concepts of PiGs and PiPs (Publics in General and Publics in Particular) to think about such differences. One of his concerns is to show how members of the public perform themselves as members of the public. Here, I am more interested in the different ways in which particular publics enact knowledge about gender differences and division according to sex.

The homepage of the radio program on the brain links to a discussion forum connected to a teachers' magazine. Here, parts of 'the people outside' – probably mostly teachers – communicate about the issue of gender separation. Although they can be considered part of the public, the empty signifier 'the public' has no meaning for the actors involved, because people have not come together to form a public. Rather, they align themselves with different, particular actors and draw on varied linguistic resources. In the discussion forum, some discursive patterns are closely connected to everyday knowledge and to action. Others are more or less political or academic. Examples¹⁵⁵ of the first include: "Of course the school should not separate boys and girls. We have to deal with one another the rest of our lives, right?" Or "Now I will do some experimentation with separating boys and girls in chemistry/physics in 8th grade. A colleague has tried it – with good results". The 'object' (of brain differences and gender categories) gets very little attention in both statements; emphasis is put on the action it ought to or will entail. In contrast, we see an example of the set of arguments produced by gender studies reproduced with linguistic detail in the following excerpt:

¹⁵⁴ Interview with Cecilie, 14.08.07, line 257-281

¹⁵⁵ Downloaded from www.folkeskolen.dk/debate 4/12/2007

Apart from that, the division can contribute to the maintenance of established gendered structures, where girls are expected to be quiet and nice and boys are expected to be wild, so that the children who do not fit these categories will feel that they are wrong, and it will have an enforcing effect on children who see themselves as parts of these categories¹⁵⁶

In this situation, where members of the public (teachers) debate the issue communicated in the radio program, it is not possible to discern a single version of what 'gender separation' is or should be. We are not dealing with the construction of knowledge within a scientific community, but with the (distributed) discursive construction of related – but different – boundary objects. The concept of boundary objects have been put forward by Star and Griesemer (1989). It designates something that different people can communicate about and work with, in spite of differences in understanding – both of the object, and each other in general. As already noted, it is a general condition of social science that numerous concepts are taken up by non-academics and discussed in other situations than academic circles, and given meaning in many different ways. The different actors in the discussion forum are not aligning themselves as a unified 'public' with a certain agenda, but align themselves individually with a range of other types of actors. We both hear voices which disregard reflections on 'gendered structures', 'categories', etc., and voices which engage with these issues. Likewise, it is impossible to talk about a shared level of understanding. Some participants align themselves with the 'pure' research-based knowledge-claims; fully capable of understanding and reproducing difficult, and maybe even counterintuitive, statements. Others articulate a practical involvement in the issues raised by researchers, even if they do not reproduce academic discourse.

Conclusion

The focus on how a set of knowledge claims about gender is negotiated by the different parties in the preparation of a media text has shown how negotiations and translations are integral dimensions of the communication of research via the mass media. The focus on assemblages, actants and translations has led to a sensibility towards aspects of mass mediation which are neither purely textual, nor institutional, but relational and dialogic. The analyses of this chapter has shown how the term 'dialogic' can lead the attention to moments of feedback in the mass mediation process; and how it can account for the varying language use of actors involved in communication of research – on the basis of the idea that all utterances are inherently dialogical. The dialogical is, in this connection, to be understood as one dimension of the relational aspect of mass mediation.

¹⁵⁶ Ibid.

As described in chapter 1, other studies of the mass mediation of social scientific knowledge have similarly attempted to avoid giving primacy to either the production, the text or the consumption part of mass mediation through a broad focus on – respectively – researchers, journalists, texts and media users, from the point of view of an updated version of the encoding/decoding model (Fenton et al., 1998). Still, there is a tendency to describe them as nicely delineated groups of senders, mediums, and receivers, where researchers are seen as the origin of the communication process. By contrast, the focus on relations and negotiations in the analyses above has shown how the researcher is not cut off from dialogue, interaction and feedback. Concrete encounters with individuals and texts work on the researcher; they are constitutive of new texts, they work upon the mood of the researcher, upon the inclination to engage further in communication to the public, and even upon the researcher's wish to continue doing research with a gender perspective.

Also journalists experience the dialogic, interactive aspects of the communication of research. They can neither be seen as neutral transmitters, nor as all-powerful agenda-setters, successful in achieving a discursive closure around the professional framings of their stories. Undertaking their research, they often look for experts who can perform a certain role or occupy a political, polemical position, but in this process, they are met with discursive contestations of their framings. And their media texts are not necessarily the end of the story; they are evaluated informally, sometimes criticized publicly, and they become part of a complex, intertextual resource base on the internet, where links to other sites and texts may problematize their framing.

The analysis has shed light on different possible kinds of enactment of an academic set of statements concerning gender differences. Apart from the academic, we also see for instance political and action-oriented enactments. We can see that academic and political statements are aligned to different degrees in different sites; but in the mass media, the uses of the academic language and arguments often become less prominent. They are sometimes neglected, sometimes othered, and sometimes rewritten in order to 'reach out' to 'the public', which can only be understood as an actant, since it does not exist 'out there', but is able to act upon numerable work practices.

The analysis also shows that it is not only the case that 'a media logic' takes over, and distorts academic language and analyses by translating them into political issues. Contrary to analyses which argue for a 'universal' media logic (e.g. Arnoldi, 2006) this analysis draws another kind of picture of actual practices and negotiations, for instance by showing

that the political issue of gender separation in the classroom is also enacted in a political modus by the researcher, hence politicization does not follow from mediation. Also, although journalists translate knowledge claims to suit their purposes, they do not succeed in aligning allies completely.

We have also seen that not only journalists work with simple dichotomies: the 'pure categories' work for all kinds of actors involved in the communication of research, and it would be nonsense to deconstruct the notions of 'the academic' and 'the journalistic'. Both categories are continuously reproduced, even when their boundaries become blurred. What would be interesting, though, was to create a language to talk about cross-overs and hybrid forms¹⁵⁷ with people involved in the communication of research via the mass media, and to describe how the much criticized dualistic pairs also structure the positioning work of researchers. The analysis has shown how complex the production of demarcations between researchers and journalists is, and supports Jasanoff's (2003) critique of attempts to work analytically with strict divisions between such groups. This again points to the danger of working with predefined 'problems in science communication' because it leads us to search for solutions in specific sites.

¹⁵⁷ This suggestion is much in line with Gergen's suggestion that we need to create a vocabulary for talking about the relational logic of identity (Gergen, 1994)

CHAPTER 6

The establishment and challenges of an expert position

This chapter addresses the overarching research question of how media texts with a social scientific content are assembled by looking at the processes of establishing expertise and expert positions as elements of media texts. It thus deals with a particular type of assemblage, where a researcher is enrolled as expert source alongside facts and other kinds of sources. In interviewees' accounts of their practice, the phone stands out as central to the relationship between journalist and 'the professional source' who often fills out the expert position in what I term a news story collective. The analytical focus lies on a researcher's establishment, maintenance and destabilization of relations both to media actors and colleagues at the university, because in the researcher's account, these were linked. Also in connection with this type of assemblage, controversies over transgression arise as a central issue. But whereas controversies in chapter 4 had to do with accuracy versus entertainment, here they mainly have to do with the linkage of research-based knowledge claims and policy-advisory.

The empirical investigation of the case was initiated by two interviews with communication professionals. They led me to take a closer look at the ways in which a professor in pedagogy, Norbert, communicates knowledge in the mass media. Both PR people were employed by the institution where the professor works. One of them mentioned him as an example of a very 'accessible' researcher, and the other mentioned how journalists would regularly call to get his expert comments. I found the most recent articles he had contributed to as an expert commentator, and set up interviews with the journalist who wrote them, Geira, as well as the researcher himself. Like in the previous chapters, I take the media text as starting point for my analysis, tracing some of the associations that had to be made for it to come into being. The first part of the analysis zooms in on the alignment of the expert as an actant besides other actants in the media text. By this, I mean that a common use of Norbert in the media seems to be quite restricted – letting him fill out a position in a 'fact – expert – politician – lay person' model¹⁵⁸. Here, facts and personal experiences seem to be more important than the expert commentary. Geira's news story is an example of this type of association, but other stories

¹⁵⁸ I call it a model because it is the outcome of standard procedures in journalism: in line with ideals of balanced reporting it is common to approach three types of actors for their reactions to a phenomenon – the expert, the politician and the lay person.

featuring Norbert are modeled in a similar manner. However, Norbert is not just an expert commentator – he is also what the journalist calls a ‘professional source’. The second part of the analysis shows how the professional association between journalist and researcher is dependent on telephone communication. To be included in the above-mentioned model on a regular basis, a person needs to be accessible via the phone, and needs to master a special kind of quick phone interview. The main point here is that without phone communication, Norbert would probably not appear in the text. Face-to-face communication is saved for new or untrained sources – and if researchers want to step up from being new and untrained to becoming professional sources, this implies phone communication. Whereas the two first sections of the chapter treat more technical aspects of the inclusion of Norbert’s comments in media texts, the last section turns to different types of controversies that the professor’s media commentaries feed into. In the interview with Norbert, so many associations were made to other media actors, controversies, and events that it became clear that the news articles in focus in this analysis could at best be treated as one tiny example of an extremely varied experience with the mass mediation of his research. The analysis explores some of the collectives that have been assembled around Norbert from the beginning of his interactions with mass media actors – as well as the dissociations that have been made along the way. The entry point to those collectives were elements pointed out by the professor in the interview, and they were analyzed on the basis of interviews, letters to the editor, and news reports of interpretative struggles among researchers.

The analysis is based on interviews with two university PR-professionals, an interview with a journalist specialized in school and education stories (Geira), an interview with a professor (Norbert) she regularly uses as a source, two news articles featuring the professor, and letters to the editor which discuss knowledge claims made by the professor.

A collective assembled around ‘new numbers’

On an April day in 2007, one of the largest daily newspapers in Denmark devotes most of its front page to the story of an increase in special education for school children. The cover story is followed up on page two with a report on the same topic. According to the journalist who wrote the texts (with an intern), this is a classical news story, where new statistics have been released by a ministry – offering an opportunity to write about a topic:

Several times, we have talked about how more and more children attend special schools. That tendency has been around for years, so it is nothing new. But we have been circling around it and we have been saying ‘we’ll have to write that story one day. There is a tendency there we haven’t written about’¹⁵⁹.

So the issue has gained topicality through the release of hard facts. The importance of facts becomes apparent in the way they are placed up front in the story. Already the lead of the front page text mentions a 50% increase through the last ten years, with 25.000 children now attending special education. The report on page two has fact boxes. One of them is enumerating four “archetypical” special-needs children (the retarded, the mentally challenged, the physically challenged, and those with social difficulties). The box provides percentages of the distribution of these children. The other box compares 1995/96 data with today’s data in two different areas; the number of children receiving ‘ordinary special help’ in a normal school context and the number of children receiving ‘extensive special education’. Both comparisons show the 50% increase in numerical figures.

As the journalist puts it, “the story’s angle is the tendency”¹⁶⁰, i.e. the now statistically proven rise is the primary message of the text. So numbers or statistical facts translate into a “tendency”, which is worthy of news coverage. Statistics have this ability to construct phenomena. As Porter notes

There were, of course, crimes before the statisticians occupied this territory, but it may be doubted whether there were crime rates. Similarly, people sometimes found themselves or people they met to be out of work before this had become a statistical phenomenon. The invention of crime rates in the 1830s and of unemployment rates around 1900 hinted at a different sort of phenomenon, a condition of society involving collective responsibility rather than an unfortunate or reprehensible condition of individual persons (Porter, 1995: 37)

In the same way, the rise in special education is constructed as a ‘thing’ which different kinds of actors are supposed to deal with, and even if the journalist is eager to include first hand experience accounts in her text (as we shall see below), numbers are creating the reality. Quite a bit of the journalist’s work practice revolves around getting “fresh numbers” – when researching stories or talking to sources, she makes frequent notes in her calendar about upcoming numbers, also months in advance¹⁶¹.

¹⁵⁹ Interview with Geira, 07.08.07, line 36-39

¹⁶⁰ Interview with Geira, 07.08.07, line 109 (in Danish: vi vinkler på udviklingen)

¹⁶¹ Interview with Geira, 07.08.07, line 64

An assemblage of different knowledge forms

The other actants in the texts are given a more secondary position, but are important because they help the facts make sense. On the front page, the factual introduction is connected to four different actants; an expert commentator, a government employee, a parent who heads an interest group, and a minister. First, the expert commentator enumerates a number of possible explanations for the rise in special education. The explanations mostly refer to biological issues, such as the rising number of prematurely born children who survive, the rising number of children born out of cousin marriages, etc. Then, the government employee gives another kind of explanation. It deals with the inflation in demands that children face in school, and the inflation in demands of parents who want specially tailored solutions for their children. The parent contradicts the government employees' explanation, and criticizes the school for not being able to cope with special-needs children. Finally, the minister asserts that the rise does not call for political action.

In the report on page two, another collective is assembled. It consists of some of the same facts as the cover story, of the same government employee and of the same expert commentator. Besides these, it includes a special education teacher and a pediatric nurse. The reporter has visited the teacher in his classroom, in order to be able to include descriptions and a sense of proximity or intimacy in the story. Proximity is aligned alongside the other actants to go beyond what academic knowledge may be able to say¹⁶².

Such collectives of actants are routinely assembled in the daily practice of journalism. Different actants are seen as embodying different knowledge forms that contrast and supplement each other to create a nuanced story, much in line with journalistic ideals of fairness and balanced coverage. Such ideals have more or less replaced ideals of objectivity in journalism (Weigold, 2001: 179), making room for stories that allow a multiplicity of voices to be heard at the same time. Geira describes the inclusion of actors in this particular story in the following way:

Well, they all contribute in different ways – the minister who does not want to do anything about it [...], this guy who is used more as a father than as representative of an interest group, well, you can argue that it is unfortunate that he wears two different hats here, but that is because we could not get a parent to participate, we tried all day [...] And a researcher, and some of the people who have hands-on experience with this [...] then you can cover a lot of nuances, because the special education teacher does not necessarily

¹⁶² Interview with Geira 07.08.07, line 100-103

know about the latest international research, and you would expect the researcher to be familiar with that. Or to be able to estimate where this trend is going.¹⁶³

In a story such as this one, the expert is an actant alongside other actants, with no hierarchy constructed amongst them. If anything, statistical facts and lived experience demand more attention from the reader, placed in the beginning of the two texts. The researcher is not even providing the statistical facts – they are released by the ministry of education. So why is the expert there? And how does the researcher become positioned as an expert?

In the interview, the journalist explains the alignment of actors like a kind of machinery which sets in motion when she writes a story based on new figures. The new figures “offer an opportunity to ask some experts in the field”¹⁶⁴, and routinely, she includes very different kinds of expertise, besides the research-based kind. In her account, Norbert’s expert status is ambiguous. On the one hand, he is “one of the greatest capacities” and the first person who pops up in her head to talk to about special education¹⁶⁵. On the other hand,

...even if Norbert is a wise man and even if he is well informed when it comes to this topic [...] he is not the one out there writing on the blackboard, having all the conflicts with the kids. He is not the one feeling the changes – he hears other people tell about them, right?¹⁶⁶

Reception studies have shown that readers often value (their own) anecdotal evidence or personal experience over authorized knowledge, especially if the researcher is not presented as an unquestionable expert authority (Deacon et al., 1999: 22-23). In the media texts in question here, the journalist caters to this valorization by levelling the actors and downplaying the researcher’s expertise. So in such assemblages, certified expertise is not the only type of knowledge which guarantees inclusion. What has been termed ‘lay expertise’ is equally important here. Contesting the notion of lay expertise, Collins and Evans (2002: 237-260) have called for a more conscious use of the labels ‘expert’ and ‘expertise’. The problem with ‘lay expertise’ is that it is an oxymoron, which blurs the fact that research-based knowledge often has more legitimacy in relation to a given scientific topic than that of lay people. At the same time, what they call ‘referred expertise’ (where a certified expert gives advice which lies outside his or her area of expertise) is equally

¹⁶³ Interview with Geira, 07.08.07, line 1019-1040

¹⁶⁴ Interview with Geira, 07.08.07, line 69

¹⁶⁵ Interview with Geira, 07.08.07, line 126-130

¹⁶⁶ Interview with Geira, 07.08.07, line 100-103

problematic. Collins and Evans want to offer a normative alternative to what they call a poststructuralist deconstruction of knowledge where all knowledge forms are equally valid. They would like 'the political sphere and the public' to benefit from the knowledge of certified experts – who would have to be experts in the specific field in question – as well as experience-based experts. For Collins and Evans, it is not only of analytical interest how actors who engage with scientific knowledge or decision-making are categorized. It is equally important that involved actors are able to recognize and judge the validity of different kinds of expertise. Obviously, the categorizations and hierarchies of expertise are quite subtly communicated in many media texts, and research-based expertise and experience-based expertise perform different functions. In media studies, the latter kind of expertise has been called 'consequence expertise' (Andrén et al., 1979), and it has been argued that this has become a more important element in media texts¹⁶⁷. This argument is supported by Geira's account above – here the value of a multiplicity of voices is asserted. So while a hierarchy of expertise (with the research-based kind at the top) is reproduced in some kinds of media texts, for instance when institutional affiliation, prestigious awards or academic titles are fore-grounded, it becomes more or less dissolved in the present type of media text, where Norbert's knowledge claims are aligned with other types of knowledge claims. In the second text, the report dealing with special education, his expert commentary is even placed at the end of the newspaper report, a ten-minute interview¹⁶⁸ translated into a mixture of indirect quotes and a direct quote:

Professor NN from [a Danish university] believes that referrals will continue to rise over the coming years. He considers it a positive development that children get help, but, if possible, children should not be removed from their normal class. He acknowledges that this may be necessary: "It is good to have friends like yourself – rather than being the only one who has learning difficulties. It can also be decisive to have a teacher who both has the competence to teach you *and* is passionate about it"¹⁶⁹

This is the only passage where the social scientific expert is heard. If we look at the expert as an actant, this actant is there to predict the future. Furthermore, the actant fills out an empty place in this type of assemblage, providing a research-based opinion – or, with Collins and Evans' term, referred expertise, drawing on knowledge acquired through associations to other actors, texts or discussions within the field of pedagogy. As the quote above shows, a research-based opinion does not have to make direct linkages to research

¹⁶⁷ This may again be connected to what has been termed the loss of faith in science – the scepticism following from increased reflexivity and the recognition the risks produced by science (Beck, 1992, Hjarvard, 1999).

¹⁶⁸ Interview with Geira, 07.08.07, line 952

¹⁶⁹ Newspaper report, 20.04.2007

results, and it can be expressed in quite general terms. Whereas some researchers would refuse to fill out this empty place, Norbert sees it as part of his job:

I have an obligation to have an opinion. I am professor NN, and I get paid to sit there [in numerous councils] and have an opinion – and I am happy to communicate it. It can be more opinionated things, and it can be more evidence-based, but for the most part, there is some kind of evidence behind the things I say. Apart from that, I have some opinions that I like to express¹⁷⁰.

In his work with journalists, he has quite a clear image of what they expect from him, and acts accordingly – when journalists phone him, at certain times of the year 4-5 times daily in the early afternoon, he tries to help them out with a comment on what ever topic they are researching:

Norbert: Well it can be all sorts of things [...] last week there was this general topic, how parents can support their children in getting a smooth start in school.

Interviewer: Do you comment on that sort of stuff?

Norbert: Yes, yes, it is easy to come up with something, say...Well, what can you do as a parent? Of course you need to make sure they have a nice new bag and a pencil case with all the things they need. And they also need to bring lunch. And you need to tell them what's going to happen in school, you sit by a table, the teacher tells you to take out something, and of course you do that, and when you need to go to the bathroom you have to raise your hand and ask, you cannot just walk away, you have to wait to get permission. And you can play school at home, it is okay to make it a bit old-fashioned, they think that's fun¹⁷¹

Below, I will show how this commentator practice is, at one and the same time, controversial and manageable. For now, I will just point out that filling out the expert position in a collective of actants which embody different knowledge forms does not demand a firm commitment to research-based knowledge, but rather an understanding of what it takes to create a good story. The expert has to transgress not only his or her expert language, but also the borders of his or her area of research. The concept of transgression describes a development where knowledge production has become more distributed, many kinds of expertise have become closely linked to everyday concerns and political decision-making, and experts are called upon to respond quickly on issues that lie outside of their formal competence (Nowotny, 2000: 7-12). According to Nowotny, the media

¹⁷⁰ Interview with Norbert, 15.08.07, line 602-607

¹⁷¹ Interview with Norbert, 15.08.07, line 776-788

make narratives of expertise more audience-driven, and this makes transgressivity more common (ibid.: 16). It is not only the experience-based expert who is expected to relate closely to specific political or social ‘developments’ – also the researcher is expected to communicate about these constructions in ways that take the perceived audience’s needs into consideration. As noted in chapter 1, Dijck talks about ‘the audience’ as knowledge-seekers or interpretation-demanders. Through their access to a network of tools (e.g. the internet), they become co-constructors in the process of defining knowledge. From this perspective, again, the media are not a simple mediator between experts and lay persons, and they are not ‘out there’ as an entity distinct from scientists, readers, and other actors (Dijck, 2003: 185). Rather, we can talk about a complex assemblage of actors where concerns with audience demands are widely shared. If the researcher insists too much on detaching him- or herself from this assemblage and taking up and cultivating ‘the scientist’s position’ by insisting too much on nuances, elaborate explanations and expert language, or if the researcher refuses to stray outside of his or her certified knowledge base, he or she can no longer fill out the position of the expert in a model where different actants are meant to supplement one another. In this analysis, it has been the case that the expert is capable of transgressing his expertise. On the basis of this, the journalist can make the expert actant work properly, with expert statements on an appropriate level¹⁷². If the journalist works hard on enrolling the right kinds of experts in her stories, the model can function well. The next section takes a closer look on this work, because the journalist’s choices and routines are central to how the expert is used.

Inclusion and exclusion processes around the expert actant

The journalist does not want to rely exclusively on her well-known sources (what she calls professional sources), but less trained sources are more difficult to work with; they have to be taken care of and assured that the journalist acts in their interest, they have to see and approve the texts she writes, etc. In the journalist’s account, an untrained source is insecure, often surprised that a long interview results in a very short quote, and surprised that the chronology of his or her account is broken in the media text. Also, the untrained source may have a number of reservations – even if they have not had negative experiences with the journalist in advance, and even if the journalist is employed by a respectable newspaper¹⁷³. Geira offers the following account about the difficulties of

¹⁷² As we will see in the analysis in the next chapter, transgression is not a necessary condition of all cases of expert commentary.

¹⁷³ Interview with Geira, line 374-412

enlisting new experts as professional sources with the story of her use of a particular researcher:

I can feel she is nervous when I call her. Not that I make her nervous, but the phenomenon of 'being interviewed' makes her nervous. The phenomenon of 'being transposed to newspaper'... On the occasions where I have interviewed her, she has read my texts. And because she tries to translate her own language, she goes 'in your journalist language, I guess you would say...' And then she tries to speak plain Danish. And she does not quite succeed – she still speaks researcher-Danish. But it is obvious – or I have a feeling – that she considers our work totally superfluous, and she needs to take care of her professional reputation [...] I do experience a reluctance from some researchers, where I would think, 'hey, I call you and ask you to talk about the things which ought to matter the most to you, or something you have worked on for four years, and I think it is exciting, tell me some more' – and then they are reluctant. That puzzles me, but of course they have their reasons¹⁷⁴.

Throughout her account, the journalist establishes three categories of researchers: the reluctant, the over-eager, and the ones who are capacities within their fields and gladly answer when a journalist calls. She has strategies for dealing with each of these. As described above, a great deal of resources are put into the encounters with reluctant researchers. The over-eager researchers are treated with some reservation, lest their agendas steer the stories she writes. Her "dream"¹⁷⁵ researchers demand the fewest resources, and can be enrolled in a special kind of professional association, which includes the phone as a communication technology. This will be dealt with in detail in the coming section.

The ideal researcher is not necessarily embodied by a specific researcher. This 'balanced position' can be taken up under certain circumstances. For instance, Norbert is presently in a position where he is able to 'gladly answer' the journalists who phone him, and he has no need to be pushy to forward his agenda. This was not the case when he became "engaged to the media"¹⁷⁶, as he expresses it, some twenty years ago. Back then, he took the first step towards establishing relations with journalists by responding promptly to a political issue. He pulled together a bunch of data, made research interviews on the phone, and put together a report on the issue. Then he walked into the reception of the Danish Broadcasting Cooperation and said "Hello, I have a story which I believe is exciting. It's about the school; I would like to talk to a journalist"¹⁷⁷. He made another such move, and

¹⁷⁴ Interview with Geira, line 435-448

¹⁷⁵ Interview with Geira, 07.08.07, line 460

¹⁷⁶ Interview with Norbert, 15.08.07, line 187

¹⁷⁷ Interview with Norbert, 15.08.07, line 196-197

since then journalists have been phoning him. But even if pushing his own agenda is no longer a big issue, he regularly calls his “friends” (professional relations, not personal acquaintances) to offer them stories:

I call a week or two in advance and tell them ‘I have a really good story, I believe. I’ll send you the report and you’ll get it as a solo story [...] I’ve never had anyone saying no, and if they did, I would simply call one of the others¹⁷⁸

From the interviews with Norbert and Geira it seems that the journalist faces two kinds of challenges when she tries to expand the number of people who are able to fill out the position of the expert commentator. The first has to do with finding them (I will talk more about this in the coming chapter), and the second has to do with managing the relationship in such a way that her contact can keep working as a professional source/expert commentator. She emphasizes the need to stay independent from sources, and to make sure that the relation does not become too intimate – while maintaining a pleasant tone. This requires a fine balance between, on the one hand, acknowledging the well-established character of the relationship by talking a bit longer on the phone, and small-talking a little, as in ‘did you have a nice vacation?’ On the other hand, she insists on keeping a professional distance:

I don’t mind greeting them nicely with a ‘welcome back’, but I don’t want to know if they have been arguing with their husbands or if their kids got a wart on the foot in the swimming pool. That is not appropriate¹⁷⁹

So there are at least two senses in which ‘the professional source’ has to be professional; in the sense of being able to comment on tendencies in a certain way, and in the sense of keeping a professional distance. But there is a third sense of professionalism, which can be problematic: Sometimes, actants do not perform what is expected from their position in the model, as when they become too professionalized and cross the border of the journalist’s profession:

In every second sentence they’ll go ‘what is your angle on this?’ And you think to yourself, okay, you attended the same course as the person I spoke to the other day. I can detect that, and I think it is a bit of a shame, because some of the innocence has gone¹⁸⁰.

¹⁷⁸ Interview with Norbert, 15.08.07, line 224-229

¹⁷⁹ Interview with Geira, 07.08.07, line 1079-1081

¹⁸⁰ Interview with Geira, 07.08.07, line 792-794

So it seems that this type of assemblage works best when actants perform a rather clear cut function: the numbers provide the news aspect, the expert provides estimates of the future, and the lay person provides proximity (or identification). The lay person should not transgress the border and become an expert, and the expert should not transgress the border and become a skilled communicator. So transgression – in the journalist’s account – is more about ‘content’ than ‘form’. It is not about the researcher being able to communicate clearly or adjust to the perceived language of a perceived audience. Instead, it is about being willing to let go of the research-based knowledge claims, leaving it to the journalist formulate the story. Sometimes, the journalist polices the boundaries of her profession, for instance by telling researchers not to correct her language, going: “this is my expertise”¹⁸¹.

Being an expert source is not only about contributing with knowledge, about being accessible, about refraining from pushing an agenda, or about maintaining a professional tone. It is also about communicating on the phone. This element of the assemblage will be explored in the next section.

A professional relationship on the phone

The phone is integral to the professional association between journalist and researcher. The journalist distinguishes clearly between ‘professional’ and ‘untrained’ sources, and in her account of her work practice, the former becomes linked to phone communication while the latter is connected to face-to-face communication. If a researcher or a source is to be included in the regularly produced news story collectives on social science topics, this implies communication on the phone. In this section I will trace the different kinds of work practices associated with each kind of actant (the professional source and the untrained source, respectively).

How ‘the professional source’ is linked to the phone

Recounting how the story on special education was created, Geira describes a special kind of interview. It is characterized by a high tempo, by the phone as communication technology, and by a high degree of implicit agreement with the interviewee over the form and outcome of the interview. In the journalist’s work practice, ‘the professional source’ is an actant that governs the way in which the journalist approaches the person (who may be

¹⁸¹ Interview with Geira, 07.08.07, line 774-781

a researcher, a government employee, or the like) as well as the expectations she has. This is how she recalls the interview:

I call him directly, well Norbert is very easy to get hold of, his cell-phone number is on his webpage [...] and he answers the phone, or, if I leave a number, he returns my call [...] My guess would be that I asked him ‘Why are we seeing such a development? Who are the children behind the figures? Are they the same children as the ones we’ve seen for the last ten years, or are they new children?’ And I guess I posed him five questions and said thank you and goodbye¹⁸²

When asked if the researcher is given some time to prepare himself, Geira replies that since she assumes he is familiar with the topic and knows the figures, she would expect him to be “able to reply even in his sleep in case she phoned him on some faraway place like Cyprus”¹⁸³. She would not mind giving him time to catch up on something, reading the numbers aloud for him, sending him an email in advance or the like (and, indeed, she often does so when people seem unsure about her intentions and what she expects them to provide). But

I don’t think I ever did that with Norbert. You know, maybe I have quoted a number for him one day when I got hold of him on the Faeroe Islands and he couldn’t remember it off the top of his head, but by far the most times, his answer falls within four seconds after you asked¹⁸⁴

The interaction between researcher and journalist is limited to this kind of quick communication on the phone. They never meet face to face, and the text does not travel back and forth between journalist and researcher via email. When the journalist works with other kinds of sources (less experienced or dealing with what the journalist judges to be more controversial issues), she may send a copy of the text for approval, or she may end a phone conversation by saying which parts of the interviewee’s statements she intends to use. But she would expect this to be a waste of time for the professional source.¹⁸⁵ And Norbert agrees, although this is a tacit agreement between them. In the interview, he points out how he leaves it to journalists to do their job (even if it includes omitting details or not mentioning the hypothetical formulation of a statement) – and how he refrains from checking how they transform his statements into elements of a news article:

¹⁸² Interview with Geira, 07.08.07, line 324-338

¹⁸³ Interview with Geira, 07.08.07, line 352

¹⁸⁴ Interview with Geira, 07.08.07, line 361-363

¹⁸⁵ Interview with Geira, 07.08.07, line 369-387

They need to sell a newspaper, while we have to try to say something knowledgeable, and of course uncertainties and such things totally disappear, mostly in the headlines, but also further down. That's old news, but that is also why some colleagues won't give interviews [...] and a lot of colleagues demand that they get the text for approval. I don't. [...] If I were to read all their stories, there wouldn't be time left for anything but talking to journalists and reading their texts.¹⁸⁶

In the researcher's account of his relations to the media, the phone also stands out as the communication technology par excellence. If he is not in office, calls are redirected to his cell phone, or journalists can leave a message. It is a priority to return their call:

I always return the call. I give high priority to journalists, even higher priority than I give to students. That's because I know they have a deadline, and whether I phone a student now or in four hours, that does not matter. But the journalists are sitting there with their stories, and the earlier you get back to them, the better chance of a story being produced. So they call me, they present the problem, they ask for comments, and we talk about it.¹⁸⁷

The smooth running of the journalist's work is dependent on her association with a number of such experts – what has been termed a 'net' of established expert sources whom the journalist can rely upon (Schmierbach, 2005: 271, Tuchman, 1978). They have to be readily accessible and able to engage in quick exchanges on the phone. The journalist has professional relationships to a number of experts within her area of specialization, so it is a low priority to establish new professional contacts, only to obtain the same kind of comments she already has access to. This being said, the journalist articulates the need to sometimes look for other professional sources than the ones that recurrently fill out the expert position in her news story collectives. This is constructed as an ideal which stands in some opposition to the limited time available to write a story:

...rather than checking if there are others, you just phone the ones you know. But it is naïve to believe that no new people join the ranks. Or, people who are spending four years of their lives working on a Ph.D. on some topic, they probably also have something to say. In that sense I would like to... Well, I also have a tendency to use the same people again and again. When you are sitting there on a Sunday, and you have the cell phone number of someone, you would not begin to think of someone new. On a Sunday, you would probably never begin to invent something new, but during the week you could do it.¹⁸⁸

¹⁸⁶ Interview with Norbert, 15.08.07, line 39-49

¹⁸⁷ Interview with Norbert, 15.08.07, line 134-139

¹⁸⁸ Interview with Geira, 07.08.07, line 698-704

So time pressure means that it is often crucial to be able to call a professional source. A fast-paced work practice makes the reliance on established sources – and on the phone as a communication technology – heavy. When describing her work practices, the journalist frequently mentions the phone – “Well, I phone the ministry...”, “in that case, I have to call [an interest organization] to hear what they want to do about it”, and “I make a note in my planner that in three and a half months I will have to call her again”¹⁸⁹. As can be seen from the last quote, the journalist’s work practice also involves long-term planning and a much slower pace than the daily practices my analyses have focused on so far. But leaving this often neglected aspect aside, it suffices to point out the close connections established between the telephone and the professional source.

Also, it should be pointed out that the phone is not only used for short interviews or quick comments. Quite complex negotiations take place over the phone, like when the journalist works with the expert source on the translations involved in creating a media text. Like Simon in the previous analysis, she has quite a clear sense of the language use appropriate for her readers (personified in her mind by ‘her elderly mother’). This allows her to experiment with reformulations of the researcher’s statements throughout the telephone interview. She poses questions such as: ‘You say such and such, is it possible to express it in such and such way?’ Or, ‘for people who have no experience with this, would it make sense to call it...?’¹⁹⁰ Even if researchers agree to go along with the journalist’s wording, she often feels that they are not pleased by the way she rephrases their knowledge claims. Then the negotiations continue, and she tells them that if they want people to read the article, it has to be written in this way. Or she tells them that even if she would agree to include unusual expressions in the text, the proofreader would immediately phone her, going “I don’t understand a thing here! What does that mean? We cannot run this in the paper”¹⁹¹ Even when such negotiations are necessary – when researchers are not as ‘easy’ as Norbert – the journalist normally sticks to the phone when she associates with expert sources. There is no need to move outside of the office to get their comments, probably because the comments are meant to occupy a limited and specific position in the news-model: “I have never gone to [a Danish university] to make an interview. [One of the sources] I have used a lot, I would never go out there because I can phone him, and the bike ride would be a waste of time”¹⁹².

¹⁸⁹ Interview with Geira, 07.08.07, line 62+204+234

¹⁹⁰ Interview with Geira, 07.08.07, line 482-483

¹⁹¹ Interview with Geira, 07.08.07, line 488-491

¹⁹² Interview with Geira, 07.08.07, line 845-847

The above analysis of the phone as an actant in particular types of assemblages might be subjected to the same kind of critique as Hutchby's (2001) analysis of the affordances of the telephone. This has been described as a bunch of 'highly qualified and situational assertions' about the importance of telephones for issues such as the structure of conversation openings (Rappert, 2003: 574). In Rappert's view, such an analysis does little more than stating that devices have situationally defined properties. Whereas Hutchby (2003) has replied that he is interested in what a given communication technology does to interaction, my interest revolves around what a communication technology may do to relations in a broader assemblage. This is necessarily a situational assertion, since the use of the phone may be different or it may be altogether absent in some situations – such as when the journalist deals with non-professional sources. The bike ride or the train ride is saved for untrained sources, new people, more investigative journalism, as well as reports that need 'atmosphere'. As pointed out by the journalist in the section above, journalism is undergoing a change from being centered on traditional news stories to revolve around peoples' lives directly. Therefore, scarce time resources tend to be invested in tracking down people who have real-life, first-hand experience with a given topic.

Dealing with new or untrained sources

Aligning new and untrained sources in the newspaper actor-network is necessary, both to fill out the position of the 'first-hand experience source' and to fill out the position of the expert commentator. According to Geira, untrained sources are often the ones who provide new stories¹⁹³, and it is considered illegitimate (too easy and too fraternity-like) to rely on the same expert sources in too many different stories¹⁹⁴. Contact with a non-expert is typically made if the latter emails the journalist, or when she stumbles over them while researching other stories. When the journalist tries to establish new professional contacts, this happens either by asking her established professional sources, by phoning the PR-staff at a given university, by looking at expert-databases, or by accessing the internet and checking the curriculum vitae of people she has heard about¹⁹⁵.

While it is pretty straightforward that most first hand experience sources are new and untrained (their inclusion in a news story assemblage is contingent upon their experience with a specific topic), also many researchers are new and untrained, and prefer to remain

¹⁹³ Interview with Geira, 07.08.07, line 201-202

¹⁹⁴ There is a rumor around that journalists have to get beer for his or her colleagues when resorting to phone the same old social science expert commentators when they are in need for a quick comment. (This is not based on my empirical material, but on reports of a colleague's ongoing research).

¹⁹⁵ Interview with Geira, 07.08.07, line 160-167

so – despite the political demands that they communicate their knowledge to a wider public. This dilemma of a demanding public versus reluctant scientists has been treated extensively in the science communication literature (Weigold, 2001: 173), and it is also hinted at in my empirical material. An efficient way to remain outside of media associations is to make oneself inaccessible via the phone. But this may be controversial. As head of department, Norbert insists that phone interviews be taken seriously by his colleagues. He routinely transfers journalists' call to them when a topic is beyond his area of expertise. But according to him, this does not always work:

...unfortunately, they are rarely in their office – and that's okay, they are often in the field or they are teaching – but when they get a message on their answering machine, they don't call back. And if I hear that afterwards, I tell them 'you know, I think you should give priority to this. And leave whatever you are doing for a little while. It takes ten minutes. And it is important for the institution'¹⁹⁶

In both Norbert's and Geira's accounts, researchers' accessibility via phone varies a great deal. The journalist talks about two kinds of researchers: Some are good at placing their phone numbers everywhere, or add a cell-phone number to their web pages. Others make sure that you cannot track them down at all, ensuring that their number is neither listed on the internet nor disclosed to journalists by people in their department¹⁹⁷. The lack of accessibility via phone is decisive for a researcher's inclusion in- or exclusion from the expert position in the news story collective – because they are rarely approached in other ways. But as indicated by Norbert's juxtaposition of people like himself and certain colleagues, besides being a practical problem, accessibility is also a normative issue. In chapter 8, I will return to a detailed analysis of the discourse of accessibility where I argue that it is linked to dominant articulations of applicable or useful research, and that the technical and the normative goes hand in hand.

As indicated by this section, the phone is not necessarily the most important communication technology in the daily work practice of a journalist; it is primarily important in relation to professional sources. The journalist does a lot of research on the internet, checks expert-databases for new sources, receives emails from readers, etc. But part of being an expert commentator relies on the command of a special kind of communication, namely the quick phone interview I have described above.

¹⁹⁶ Interview with Norbert, 15.08.07, line 651-657

¹⁹⁷ Interview with Geira, 07.08.07, line 178-180

The first two sections of this chapter have dealt with some of the associations that were made in order to produce the news articles on the rise in special education needs. Focus lay on the communication practices of journalist and researcher. Just from looking at specific newspaper articles such as the ones discussed above, it would seem that the researcher's enrollment in a newspaper model is uncontroversial. In those articles, the expert actant does not serve to create a conflict in the story, and is not constructed as in direct opposition to the other actants. Instead, different knowledge forms contribute to create a 'nuanced picture'. However, those kinds of commentaries – given by Norbert over the years – have fed off numerous controversies. In the interview with the professor, the discussion of specific media texts led him to mention several controversies within the academic community. He also mentioned a type of critique which is routinely addressed at him in letters to the editor. The next and final section will zoom out and look at a broader range of texts, to shed light on some of the controversies which have arisen from Norbert's performance as expert source, and from his alignment with media and policy makers.

The expert as source of controversies

I will analyze elements of the controversies surrounding the professor because controversies tell something about the formation of groups of actors (Latour, 2005: 31). A focus on controversies related to mass mediation of research-based knowledge makes it clearer not only how texts are constructed, but also how subject positions (or actant positions) are constructed. It allows us to dig into questions such as: Which kinds of positions are articulated? How are they related or dissociated? Which inclusions or exclusions take place? How is the legitimacy (or illegitimacy) of different positions articulated? The following section will look at two different kinds of controversies linked to Norbert's media commentaries – controversies over the media performance itself, and controversies over specific knowledge claims. The material for the analysis was collected through a media search on his name, covering all the Danish newspapers' articles from the summer of 2006 to the summer of 2007. Among the material relevant in relation to controversies were two critical newspaper articles and four letters to the editor.

A controversial alignment with media and policy-makers

In Norbert's account, boundaries are drawn between researchers who are enmeshed in theory and unable to communicate their knowledge and researchers who produce (politically) useful knowledge which can be communicated in everyday language. The

latter kind of knowledge is related to everyday practice and knowledge forms. By establishing these positions, Norbert aligns himself with actors outside of the university, and refrains from policing the boundaries of an academic community. In fact, it seems like Norbert, in spite of his powerful position as head of department, is rather loosely connected to an academic community. Different areas of academic territory are demarcated (Gieryn, 1983: 792) within the field of pedagogy, in an ongoing battle about the allocation of (symbolic and financial) resources as well as privileges and responsibilities related to expertise (ibid., with reference to Kohler 1982). The following section shows how Norbert's associations with different types of actors are constantly negotiated.

Breaches in the academic community

Norbert explains his frequent media appearances with an ideal: He believes that the whole business of doing research must be justified, both by carrying out research that can be applied, and by communicating it to the public. While he considers abstract, theoretical knowledge to be of little interest to anyone, he sees it as vital to communicate 'down to earth', applicable research¹⁹⁸. This distinction is also the lens through which he looks back at his academic career:

When I came here, I thought my God, what are all these people doing? None of them worked on anything which could be put to use, you might say. It was thoughts about thoughts about thoughts, which only a tiny pedagogical elite could understand. And there I came with something absolutely central – what happens when children change school? ¹⁹⁹

Throughout Norbert's account of his collegial relations, he indicates that instead of associating with the academic community he has formally been a part of, he has preferred to associate with journalists and the media. The story of his media relations is also explained with a consistent acknowledgment of the needs, practices and premises of journalists. At the same time, he has maintained a critical attitude towards the 'typical researcher', who does not acknowledge those needs, practices and premises:

...sometimes when my co-workers tell me that they'll be on the news tonight, I anticipate it enthusiastically, and then sometimes I say to myself, 'oh, no, this is just rubbish...get to the point, man, darn it! And they

¹⁹⁸ Interview with Norbert, 15.08.07, line 259-266

¹⁹⁹ Interview with Norbert, 15.08.07, line 273-277

stutter and cannot express themselves, and they come up with seventeen reservations, and we never get to the essence, because the interviewer has had enough and turns to the other person who is sitting there²⁰⁰.

The communication ideals of Norbert – as well as his conceptions of ‘typical, aloof researchers’ – can not only be considered private feelings and judgments; indeed, they have had tangible consequences for the practices and relations he engages in. His associations with media actors have dissociated him from colleagues from the beginning of his academic career. The researcher describes a history of tense relations in his academic community, dating back to his appointment as a professor. His first media performances had some quite dramatic outcomes, profoundly disturbing his relations with his colleagues. On the day after his first appearance on national television, he was summoned to a meeting with colleagues who demanded he withdrew the report he had presented. Also, his work became subject to an investigation, where his use of statistics was controlled. Finally, he experienced an ‘ice cold attitude’²⁰¹ from colleagues over a long period – where he was denied an office, a computer, and a professional community. Norbert explains these antagonistic relations not only in terms of the character of his research but also in terms of his media relations. He believes that jealousy (of the demonstration of the relevance and public appreciation of his research) was part of the reason for his colleagues’ criticism²⁰².

As opposed to earlier, it has become quite rare that Norbert is criticized face-to-face. People smile and greet him politely. However, even if his everyday work practices are no longer marked by open hostility, he tells about encountering it every once in a while: “... typically at Christmas parties or summer parties, some tipsy associate professor comes over and tells me that I am simply the worst, that it is incredible that someone like me is around...”²⁰³ In Norbert’s account, insurmountable problems in collegial relations are also tightly interwoven with the differences in approaches to pedagogy. He considers it an indirect critique – which maintains the breaches between him and other academics – when his colleagues publicly (in conferences or in the media) state that evidence-based research is an impossibility within the field of pedagogy. “Then I think, well, when will our research-grants be taken away from us?”²⁰⁴ In Norbert’s account, critique of his person (including his media performance) is thus closely linked both to issues of methodology and to issues of applicability and political relevance. It seems that the breaches established

²⁰⁰ Interview with Norbert, 15.08.07, line 568-573

²⁰¹ Interview with Norbert, 15.08.07, line 179

²⁰² Interview with Norbert, 15.08.07, line 181-185

²⁰³ Interview with Norbert, 15.08.07, line 345-347

²⁰⁴ Interview with Norbert, 15.08.07, line 343

between Norbert and his colleagues are largely linked to two kinds of problems. One problem is different definitions of research-based knowledge. Whereas Norbert works from a broad definition of research-based knowledge, many among his colleagues operate with a more narrow definition. Another problem is different understandings of the ways in which knowledge can be used politically. Although few social science researchers would consider their work non-political, the association with policy-makers has become quite a controversial position for Norbert. But he has remained in this position for years, since he does not agree that he as a researcher should refrain from participating in the public debate with the specific kinds of statements he has to offer:

...a lot of people have said to me 'hey, some of the comments you give, they are not based on your research', and I reply 'well, I have access to one of the world's largest sets of data, the PISA-data [...] and if a journalist calls me and asks how the situation is with homework in Japan and Denmark I say 'okay, give me five minutes', and I find it in my computer and give it to them. So that is one thing. The other thing is there are things you can have an opinion about on the basis of knowledge originating from different contexts. And I also give comments on the basis of that [...] I am paid by the Danish government to have an opinion.²⁰⁵

In Norbert's account, his research, his access to data, and his professional experience all legitimize expert comments. At the same time, his associations with policy-makers, his employment by the state, and his 'down-to-earth' research legitimize that he provides a wider range of comments²⁰⁶. The next subsection will take a closer look at his alignment in a policy collective, and argue that his associations with policy-makers are intrinsically linked to his associations with media actors. Not that there is a causal relation between those associations, but one type of association is affected by the other types of associations he is a part of.

Alignment in a policy collective

Besides being a researcher and a head of department, Norbert is advisor to the Minister of Education, and he is a member of numerous councils. He has been personally appointed to some of the councils by the prime minister, alongside representatives of large organizations. As such, Norbert is – in his own words – 'wearing more different hats than

²⁰⁵ Interview with Norbert, 15.08.07, line 581-597

²⁰⁶ Some scholars have argued that the most quoted experts in the media are not necessarily the most relevant or experienced researchers, but administrators and highly prominent scientists, regardless of their specific expertise (Peters 2008:137). It could argued that the extensive media coverage in turn reinforces their status and the amount of appointments and relations to other actors.

any of his colleagues'.²⁰⁷ The associations with policy-makers have not been an add-on to his research-activities, but rather established as an intrinsic part of his work-practice. From the beginning of his career, he has been employed by politicians to produce research²⁰⁸:

The work I am doing, it is commissioned by politicians, through OECD. And this makes it even worse, from the point of view of many of my colleagues. I am producing knowledge which is to be used politically. My work is meant to change the school system. To find out how we spend the resources on special education most efficiently. To find out how the resources we put into the school system are spent most wisely, so we can compete in a globalized world. I have no problem with that, because the politicians *want* me to do this, and I am happy to do it. I do not consider it some kind of prostitution.²⁰⁹

This already sets him apart from many of his colleagues, who are more tightly connected to other university people, and who have not been employed by a municipality, where politicians asked them to carry out specific investigations. But in addition to this, Norbert links the involvement with policy-makers to an obligation to communicate knowledge: "of course, if politicians pay for research, if politicians have asked for it, they have to get the results, darn it, and it has to be communicated so they can understand it"²¹⁰ From Norbert's point of view, demands from the world outside the university are perfectly legitimate. This is a source of antagonism in relation to colleagues who resent both the commissioned character of research, and the expectation that research be legitimized through communication to the public. The situation at the university is not stable, though, and neither is Norbert's position. Since 2003, where the new university law was implemented in Denmark, the communication of research has become an additional requirement for universities, to be delivered besides research and teaching. This has led to an upgrading of communication activities at many universities, and at Norbert's institution, new communication professionals came to Norbert to learn from his experience with the media²¹¹ In so far as the political requirement for communication can be seen as a demand for researchers to prove the usefulness and relevance – hence the legitimacy – of their work, such a communication policy fits nicely with Norbert's practice- and policy-related research. Policy-makers, communication professionals and researchers like Norbert make up a collective. This collective is assembled both through members' adherence to the language of 'new scientific governance' (Irwin, 2006: 304), where "modernist assumptions of sound science, institutional control and administrative

²⁰⁷ Interview with Norbert, 15.08.07, line 617

²⁰⁸ Interview with Norbert, 15.08.07, line 295

²⁰⁹ Interview with Norbert, 15.08.07, line 303-308

²¹⁰ Interview with Norbert, 15.08.07, line 271-273

²¹¹ Interview with Norbert, 15.08.07, line 254, 284, 531-541

rationality” are mixed with a language of 'taking citizen concerns seriously' (ibid.), and through more mundane exchanges of e.g. money and reports. As Latour and Woolgar have argued, one kind of recognition can be translated into other kinds of recognition – as when publication activities result in research grants, and research grants result in new publications (Myers, 1990: 63). In the case of Norbert, it may be that his associations with policy makers and the media result in a loss of legitimacy in relation to the majority of his colleagues. However, in Norbert’s account, his practice and his associations is also coupled with an increase his legitimacy in the eyes of other very important actors, namely funding agencies.

Interviewer: How much do you believe, or sense, or know, that your research grants have to do with your position in the media landscape?

Norbert: It is hard to say. I don’t think I got that money – and the other grants I have received – because I am visible in the media landscape. It has to do with the fact that it is clear to administrators and politicians that my research has concrete results. It is not the case – as for a colleague of mine who got 7 million to do some project – that the results come out more than a year late, and the results are like ‘mm, where did that take us?’ And maybe it has no results at all. They know that if I get funding, they can be sure that something results from it. And the deadline is met. And it can be put to use, because it is understandable. So the funding...it is probably mostly because I am well-known in ministerial circles. And why am I known there? Well, of course that is largely because I have been a media performer, you know²¹²

The analysis above is not meant to posit any causal relations between media performance, political appointments and the grants obtained by a researcher. But in Norbert’s accounts, the three are associated into a coherent set of factors influencing his work practice – including his relations to other academics. Those factors have lined him up in a somewhat antagonistic relationship to colleagues.

From looking at the controversial position of Norbert, the analysis now turns to some concrete examples of how Norbert’s knowledge claims become part of different kinds of controversies played out in the media.

Struggles over interpretations

Over the years, academic controversies related to Norbert’s knowledge claims have surfaced in the media. Numerous studies have treated the issue of how scientists are

²¹² Interview with Norbert, 15.08.07, line 441-455

aligned as advocates on both sides of controversies (see Peters, 2008: 141-42). They have shown that scientists “help secure access to the public sphere, they increase the rationality of the claims, they provide legitimacy drawn from scientific authority” (ibid). In addition to this, it could be added that researchers also participate in controversies where precisely their rationality and legitimacy are questioned. The first part of this section will show that whereas Norbert can serve as an uncontroversial expert commentator in one type of media text (as we saw above), he can also become a controversial, politicized expert in another. The latter type of actant is quite ambiguous, simultaneously dissociated from peers, from professionalized media relations as the ones described above, and from policy-makers. Still, the presence of this actant is largely dependent on affiliations with all these three types of actors.

One example of the interconnectedness of politics, media performance and academic debate is a news story that problematizes some of Norbert’s research results. The following account is based on two specific news articles and the interview with Norbert. During the interview, he reported how a particular part of his research resulted in media coverage, how this entailed political responses framed as methodological critique, and how this again became an academic debate – carried out both in the media, on an institutional level at his university, and in an academic journal.

In October 2007, a newspaper runs an article with the heading ‘Professor NN has concluded that large schools are better than small schools. But his methods are most dubious, according to his professor colleague’. The article lines up two issues. First it asserts that Norbert’s conclusions have been reproduced in several media, and that they are providing a convenient support for current government policy. Then it questions the validity of the conclusions by aligning a colleague (also with a professor title), who states that Norbert’s research is ‘flawed’, ‘thin’, and ‘selective’. According to the article, the problem with Norbert’s conclusions is that he has left certain schools out of his analysis. The critical professor frames some of his critique in a passive voice:

The numbers have been manipulated – and considering their influence in a situation where arguments for creating larger schools are needed, you have to be careful offering clear statements that benefit politicians’ agenda in such a way²¹³.

²¹³ News article, 18.10.06

While this passive voice is used in passages that revolve around the (problematic) politicization of research, the critique of methods have agents, namely Norbert and 'statisticians'. The colleague appears more attached to the methodological critique than to the critique of the politicization of research. Here is an example of the methodological critique:

The degree of explanation²¹⁴ in NN's model is so low that it becomes worthless. It is around 5%, and as a statistician you would reject it altogether when the numbers are so small. It is the same as saying that 95% remains unexplained. And if you account for socio-economic and gender related differences, only 0.5% of the deviation can be explained with reference to the size of the school. So it is all humbug (ibid).

Norbert is given space to defend his conclusions. Around the time of the production of the articles, there was a lot of interaction between Norbert and journalists who wanted his comments on the critique²¹⁵. In the second news article, he defends the selectivity of his research, explaining why he did not include private schools, and granting that "Of course, if you include everything, you may arrive at the opposite conclusion. But I don't think private schools are interesting in this context, because they are exempt from a number of rules"²¹⁶. His response to the question of statistics refers to the possibility of having competing – but equally valid – interpretations of the same data:

The numbers we arrive at within pedagogical research are very small. Some very conservative researchers may not want to use them when they are below a certain level. But as long as they are significant, we will use them (ibid)

But although he assigns space to Norbert, the journalist still frames quotes and questions in a rather accusing tone: 'The problem is, it is not true. Not if you ask his colleague...', or 'Norbert defends himself, saying...', or 'But when you presented the conclusion in the media [the premises] were not clear?' In this text, Norbert becomes another kind of actant than in the one where a journalist enrolled him as an expert commentator. Here, his research is center stage, and he is present to defend it against academic and political opponents, as well as against a critical journalist. According to Deacon et al (1999: 13-15), journalists are not aware of how their own views affect their coverage. But the question of the journalist's intentions is not central to this analysis. Rather, it is interesting to see how the journalist departs from some of the strategies normally used to create an objective style

²¹⁴ In Danish: forklaringsgraden

²¹⁵ Interview with Norbert, 15.08.07, line 422

²¹⁶ News article, 23.10.06

of reporting (Tuchman, 1972: 676), which allows the journalist to recede in the background. Those strategies (e.g. presenting conflicting possibilities, using quotation marks, using supporting evidence) are followed to some degree, but subjective, critical passages are also there. This creates another actant in the text, namely the investigative, critical reporter, who becomes part in the conflict between the researcher and other actants. Thereby, the conflict is raised to a higher level; it is not just an internal, academic dispute, but an issue that 'democracy's watchdog' should get engaged in.

The academic controversy does two things to the newspaper text. It provides a conflict dimension and it raises the level of complexity. The story contradicts studies which assert that the media never focus on unsolved riddles and questions of methodology when (social) science is covered (e.g. Fenton et al., 1998: 32). Schmierbach (2005: 273) has argued that media coverage of precisely social scientific knowledge is much more likely to reproduce methodological debates than media coverage of natural science, because such debates are more articulated within the social sciences than the natural sciences. So this difference between traditions of knowledge production becomes visible in media coverage. In this news story, the controversy again revolves around numbers and the interpretation of numbers. The methodological debate is then translated into a political issue – especially in the second article: Five days after the first story was printed, the same journalist writes another story on the same topic. Here he aligns a new professor and the head of an interest organization in the collective of critics. The angle of the story is 'a mounting critique of a professor'. It opens with a quote: "NN's research is simply bungling. This is how a professor colleague [...] expresses himself to describe NN's latest research results."

The article first revolves around the methodological issue, aligning new critics: "His methods were criticized in [the newspaper] last week, but now the critique is expanding". The main critical point is that Norbert did not mention how OECD calculations contradict his results. The last part of the article takes up the question of the political implications of Norbert's conclusions. The representative of the interest organization is given a lot of space:

...it is also quite striking that his results came out precisely when the new municipalities discussed school closings. It simply shows that you can always create statistical support for your political agenda. It is pure manipulation²¹⁷

²¹⁷ Head of interest organization, news article, 23.10.06

He goes on to state that Norbert's credibility as a researcher has been severely damaged, and that in the future, his organization will treat Norbert's knowledge claims with a great deal of skepticism.

Like in the first article, Norbert is given the possibility to defend himself. But the critical tenet becomes more conspicuous through different techniques. First, while the first article was introduced with Norbert's conclusions and ended with a quote from Norbert, the second starts on a critical note and ends on a critical note, with Norbert's comments in the middle. Also, the critical angle becomes explicit: "Despite the dubious methods and the large uncertainty, Norbert was quick with his announcements in the press – thus spreading the news that big schools do better than small schools"²¹⁸.

According to Norbert, this media story had quite dramatic consequences. He explains the reason for the controversy with the fact that he came out with some unpopular results, which enraged two interest organizations. They then paid a couple of professors – including one that Norbert had appointed – to come up with a critique. As the critique was not only political, but also academic, he felt the need to reply, even if it was an 'annoying' and 'strange' situation to argue publicly with one of his own employees. The publicly displayed controversy became an issue for the chancellor and the management group at his university. It was up for discussion if he were to be summoned for the council for scientific fraudulence. The controversy was also carried into an academic journal, where the participants in the public debate wrote pieces against one another²¹⁹. In the academic sites, the political controversy became reduced to a controversy over methods:

Well, they had a closer look at it, and said 'okay, it is a question of divergent opinions about the interpretation of a point five percent degree of explanation [...] It cannot be characterized as scientific fraudulence²²⁰.

Interestingly, Norbert does not attribute any blame to the journalist or 'the media logic'. In his account, the controversy is not a result of a clash between the language or logic of research versus the language or logic of journalism. Rather, as it is stated in the quote below, it is a controversy without real substance – a nitty-gritty exchange of opinions (which may have more to do with collegial relations than with the issue):

²¹⁸ Journalist, news article, 23.10.06

²¹⁹ Interview with Norbert, 15.08.07, line 424-429

²²⁰ Interview with Norbert, 15.08.07, line 386-388

...they accused me of straying outside of my field of research, using those kinds of statistical methods [...] but that is not true, either. But this is another controversy [...] if you are an old-school statistician, you would not carry out the type of regression analyses that I did on those data. But there are others, I just appointed a new professor who works precisely within that field, and he ran a PhD-course a couple of weeks after this debate, where he explained the doctoral students that this is perfectly correct, there is nothing to be said about it, it *is* like that. So it is a question of divergent opinions [...] And that's the way it is, even within hard core natural science, there will be different opinions about what you can and cannot do²²¹

Here, collectives are lined up around two different kinds of academic communities; old school statisticians and a new approach, represented by a recently appointed professor and a group of doctoral students. In this account, Norbert constructs both kinds of participants as legitimate actors in the controversy, whereas journalists, policy makers and interest organizations are not even mentioned – even if the controversy initially involved those actors.

The focus on struggles over interpretation in one specific case has both pointed at a quite conventional use of the social science researcher (as part in a conflict), and, together with the analysis further above, at the messiness of positions and relations. The researcher fills out different actant positions, controversies are transported from one site to another, and their object changes in this process. Already here, it is obvious that the researcher's knowledge claims and position are not properties pertaining to his person, but co-constructions involving a lot of other actants. This observation illustrates the constructivist take on both knowledge and identity: neither is seen as an essence, both are seen as achieved through ongoing work. The next section emphasizes this point by treating the way in which his knowledge claims and position become objects of controversies without his participation.

Letters to the editor

It may be that the professor considers methodological controversies a purely academic issue. But other actors bring them into the public realm – not only in news articles, but also in letters to the editor²²². Issues of research methods and the treatment of facts also make sense to newspaper readers, and they address the same types of critique at Norbert as his colleagues and the journalist do. This observation resonates with developments in the

²²¹ Interview with Norbert, 15.08.07, line 399-417

²²² This section contain an analysis of letter to the editor written by a retired teacher, a local politician, and two teachers.

public understanding of science tradition, where people's reflexivity about knowledge claims and their judgments about trustworthiness, usefulness and power are captured by the notion of lay epistemology. Irwin and Michael (2003: 28) write:

...lay people may not only possess knowledge, but have knowledge of how they know: they are able to reflect upon why they take on board some 'scientific facts' but not others; they are competent in accounting for why they prefer some sources of knowledge (e.g. personal experience) over others; and they can justify why they trust some expert authorities and are suspicious of others. Put differently, people are able to reflect on the fact that their knowledge is derived from the media (or some other source), are able to assess the credibility of that source and to evaluate their knowledge in terms of its contingency.

One type of text raises questions about the foundations of Norbert's knowledge claims. After calling one of the professor's newspaper essays 'an interesting analysis', a reader goes on to pose some questions:

I would appreciate if NN would inform us about the source of OECD's numbers, and about who has done the calculations? How is it possible – on the basis of the probably uncertain foundation – to calculate the average number of pupils in each class with a decimal's precision?²²³

These questions are not only rhetorical; the author is not another expert who has the answers and engages in the debate to correct the professor. Rather, the text demonstrates an interest in issues of validity and transparency. It is solely concerned with methodological issues, neither supporting nor refuting the conclusions of Norbert's analysis. This is not the case in the following letter to the editor, which questions methodology, criticizes the substance of Norbert's findings, and questions the quality of his research as such:

Professor NN has stated that the larger the schools, the better the pupils – on average. Where is the scientific proof of this correlation? [...] It is probably not possible to ask professor NN to stop his meaningless investigations, but maybe we could ask journalists to refrain from uncritically reporting his latest 'research results'²²⁴

This passage reaches beyond a specific methodological critique or question, indicating that the author has knowledge of Norbert's research more broadly, as well as of his rather extensive media coverage. The text embodies the common type of critique of expert

²²³ Letter to the editor, 05.07.07

²²⁴ Letter to the editor, 14.09.06

commentators, that their knowledge claims have a weak foundation and that they are used too much in the media (e.g. Arnoldi, 2006: 66-68).

Another type of letter to the editor deals with the politicization of expertise. Here, methodology or research is not constructed as important – rather, the professor status of Norbert is ignored. The text is a response to some opinion-based comments given by Norbert in a news article. A Danish newspaper had tested the active knowledge of Danish 9th and 10th grade students, demonstrating that they had a very rudimentary knowledge of geographical facts. Norbert was asked to comment upon the findings, and stated that it is embarrassing how few pupils know where three particular Danish towns are located. In the letter to the editor, this is seen as a critique of geography teachers. The author aligns the professor with policy-makers, arguing that they have unrealistic expectations as to how much it is possible to teach students under the given circumstances:

How long do the professor and the politicians imagine it would take little Per to acquire the ability to ‘illustrate processes of erosion, transportation, sedimentation and rock formation in a cycle’? Or to ‘know examples of conflicts that may be a result of border drawing, population minorities, access to water and other resources’. ²²⁵

Such a letter to the editor is not concerned with scientific facts or research-based knowledge, but with a lack of resources and with political choices. The author does not even comment upon the political (and not research-based) nature of Norbert’s position in the debate, but takes his alignment with politicians for granted. Since politicians have cut the weekly number of geography lessons, and Norbert refrains from criticizing this political disposition, he is constructed as part of a policy collective, which stands in an antagonistic position vis-à-vis the people who are ‘out there’ trying to make geography teaching work. The letter to the editor ends by exclaiming “Come again, dear politicians” ..., again refraining from singling out Norbert as a researcher. His expert commentary provoked the reader’s response, and his professor title is mentioned, but his comments are not at all treated as research-based. This again shows how the linkage between a particular researcher and the expert commentary position is dependent on the kind of nurturing provided by a journalist like Geira. It is open to contestation, and the knowledge claims of Norbert can be used in various ways, dependent upon the collective they are enrolled in.

²²⁵ Letter to the editor, 03.05.07. The examples are taken from the geography curriculum.

In theory, letters to the editor – such as the three examples above – could serve as a kind of feedback to the researcher. They show that opinion-based expert comments and research-based knowledge communicated in the media does make sense to readers, it engages them, and it does not just disappear into a void. Dialogue is possible. However, Norbert dissociates himself from those kinds of media texts:

...letters to the editor – I don't read them. Well, I don't even look for them, and the places where letters criticizing me would normally be [in two specific Danish newspapers] – I never read those papers [...] If I were to reflect upon all the things they write...Often, it is simply because they don't like me, or they don't like the results of my research. And I don't care about that²²⁶

Norbert's conception of letters to the editor is that they are political and not concerned with research methods (written by people who 'do not like the conclusions' of his research²²⁷). In the interview, 'like and dislike' are linked to political issues, i.e. if Norbert talks about people who dislike his statements this is because they are politically opposed to them²²⁸. Hence, the last comment in the above quote should not be seen as a statement about personal relations or conflicts. It is unclear from his account how he knows about the content or orientation of the letters to the editor, but at least sometimes editors send texts for him to comment upon (which he rarely does). It can be argued that some of his statements are crafted as responses to his imagined, critical audiences (whose texts he does not read, but imagines the content of). And, as noted in chapter 2, it can be argued that conceptions of other actors' positions and agendas are important actants when it comes to the creation of media text; they influence the tone and content of statements.

Even if the researcher is not interested in engaging in direct dialogue with readers, a lot of his media performances have a long life. His statements and his position become actants in public debates, provoking responses, initiating controversies, etc.

Categorizations and delimitations

A lot of negotiations take place around the researcher and his specific knowledge claims. As we saw above, his conclusions and methods are scrutinized and criticized by a variety of other actors both in media texts and in academic sites. However, other actors' interest is not restricted to specific knowledge claims, but also revolves around the legitimacy of

²²⁶ Interview with Norbert, 15.08.07, line 349-361

²²⁷ Interview with Norbert, 15.08.07, line 360

²²⁸ As Potter (1996: 123) has argued, invoking the interests of others is a way of undermining their descriptions. This also happened in the case of Marie in chapter 5, whose knowledge claims were called ideological.

Norbert as a researcher and expert commentator. Other actors seek to define what he is, to exclude him from certain issue-areas, or to categorize him as an expert worthy of attention. Throughout the chapter, I have highlighted inclusion and exclusion processes, and Norbert's shifting positions in relation to other actors, but here I want to emphasize how people articulate their conception of his expert status and how he reacts to people's conceptions; how inclusion and exclusion become explicit.

In different sites, Norbert is characterized as one of the greatest capacities²²⁹ and as the opposite of a serious researcher²³⁰, respectively. And his research is characterized as 'pointless investigations'²³¹, as 'pure politics'²³² and 'honest'²³³. Such characterizations contribute to ongoing struggles about the kind of position Norbert can (or cannot) take up, and the kinds of knowledge he ought to (or ought not to) contribute with. The categorizations also contribute to the assemblage of different collectives: One includes the journalist – professionalism – the expert commentator – experience – communication skills – projections – perspective – pre-eminence – neutral categorizations. Another includes politicians – political agendas – opinionated comments – critique – mixture of research and politics – interest – negative categorizations. As I also noted in chapter 5, from an ANT perspective, such different categorizations of the same object, and the alignment of the same object in different collectives, is not a proof of the relativity of truth, nor an assertion of the contextual nature of identity. Instead, they call our attention to the kinds of realities created in different sites (Law, 2004: 13, with reference to Mol). The first collective is held together through joint efforts to create a factual reality, the second is held together in their common creation of a political reality. In both cases, actors co-construct certain premises and work together in certain ways, and the result is a rather tight-woven set of conditions for other actors to relate to.

The journalist excludes all the political controversies otherwise connected to Norbert (both from her media texts and from her account of their relations), whereas other actors try to exclude all Norbert's claims to expertise. Some readers articulate a concern with 'expertise', which resonates with the above discussion about referred expertise and core expertise. In the example below, a reader argues that a professor of special education is not entitled to talk about geography teaching:

²²⁹ Interview with Geira, 07.08.07, line 127

²³⁰ Professor, news article, 23.10.07

²³¹ Letter to the editor, 14.09.06

²³² Head of an interest organization, news article 23.10.07

²³³ News article 18.10.07

Really embarrassing how professor NN makes amateurish and know-all claims about the school. You misconstrue the situation, NN, when you point at the teachers instead of showing how economy and management is the key [to solving the problem]. NN is introduced [in a newspaper article] as a professor of pedagogy, but he is a professor of special education pedagogy, not geography²³⁴.

Constantly being enrolled in different collectives by different actors, Norbert is of course aware of how inclusions and exclusions have consequences for conceptions of the legitimacy of his knowledge claims. Whereas he is ready to defend the greater part of his knowledge claims, and insist on their accuracy, he also articulates less attachment to some knowledge claims: Regarding the back-to-school stories, he says: “well, it is not rocket science, you know, but people like it. It is the kinds of stories that work well in [a Danish women’s magazine]”²³⁵. One strategy for dealing with this problem is to make the premises of his contribution clear. Then launching different kinds of knowledge claims becomes legitimate:

Sometime it is difficult. If I am on the news then [my name, title and institutional affiliation] is mentioned, and then it depends on how the story is served. If I am posed a question and I say ‘the latest research shows’, I am of course referring to that. If I say ‘my personal opinion is’, it is my personal opinion. But it is complicated to distinguish between the two when you are at the same time an opinion-maker and a professional. But it would be really problematic if I began to voice an opinion about global warming and its causes [...] I wouldn’t dream of doing that, because I have nothing to do with that area²³⁶

When Norbert refrains from straying outside of his own discipline, this ensures that he can maintain an expert status in a situation where specialized knowledge is valued. The judgment of what a researcher can and cannot speak about is neither an individual assessment, nor is it formally prescribed where the line must be drawn. Instead, it is collectively negotiated in disparate sites. It has been argued that processes of legitimation and delegitimation occupy more of public discourse than ever before, when actors try to settle which experts to grant cognitive authority and which claims to accept as facts (Turner, 2001: 144). And as Jasanoff writes, “what operates as credible expertise in any society corresponds to its distinctive civic epistemology: the criteria by which members of that society systematically evaluate the validity of public knowledge” (Jasanoff, 2003: 394) On the occasions where Norbert contributes with referred expertise, it is open to

²³⁴ Letter to the editor, 25.04.07

²³⁵ Interview with Norbert, 15.08.07, line 790-791

²³⁶ Interview with Norbert, 15.08.07, line 623-633

contestation, and as we have seen, various people engage with assessments of knowledge claims and expert status.

As we have seen throughout this chapter, the same researcher can occupy different actant positions in different media texts. In this section, I have shown some instances of the articulations that shape the actant and make it contribute to the establishment of particular realities.

Conclusions

Throughout the analyses of this chapter, facts have been an important actant in the collective assembled to make up one type of newspaper texts. They make the journalist and editors decide to write a story, and they draw together other actants who comment on them. The first part of the analysis is not a story about different expert claims competing, with the journalist as an either neutral or subjective reporter. Neither is it a story about a journalist creating conflicts by looking for controversial contradictions between researchers, politicians or other actors. Instead, the fresh numbers make news and the other actants turn the story into something more than a “boring”, classical news story. The researcher is there to provide estimates and interpretations, and he fills out the actant position of a professional expert commentator. In the second story, the same researcher fills out the position of another actant, namely the politicized expert. Here, controversies about knowledge claims and expertise abound. I conclude that a researcher can be aligned in different collectives, contributing to the creation of different realities; e.g. what I called a factual reality and a political reality. Although a contested figure in some sites, the researcher need not be used as a controversial source or a part in a conflict in other sites. I have argued that this observation cannot be reduced to asserting that identity is contextual, reality is fluid, or truth is a social construction. In line with ANT, I want to emphasize that the realities co-constructed by actants are upheld by concrete communication practices, well-established personal relations, specific media texts, etc. And legitimate knowledge claims are laboriously co-constructed by various actors, and have ramifications for what other actors can say and do. Journalists have expectations about what readers can understand and want to know, researchers have expectations about what ‘the media’ need, and readers have expectations about the kinds of knowledge claims researchers can provide. These expectations are shaped by continuous articulations by people involved in mass mediation.

In recent debates about expertise and experience, two kinds of arguments have been made. One questions the epistemic leveling implied by the social constructivist

disturbance of categories and hierarchies, and holds that a focus on the similarities between different knowledge forms has led to a conflation of expertise and political rights (Collins and Evans, 2002: 251). The result is a problematic cacophony of different voices that claim some kind of expert-status. To remedy this blurring of different kinds of expertise, Collins and Evans propose a set of notions: core expertise, experience-based expertise, and referred expertise. They suggest that core expertise and experience-based expertise is legitimate in relation to decision-making – whereas referred expertise is not. The opposing argument insists that demarcations of experts from lay-people, science from politics, or legitimate from illegitimate knowledge claims ‘is not intellectually gripping’ (e.g. Jasanoff, 2003: 398) or politically viable. Instead, we ought to show what is at stake in the production of these demarcations in everyday work or everyday language. From this perspective, expertise is acquired and deployed in ways that are dependent upon specific situations. Obviously, with its anti-essentialist ambition, this study is closest to the latter kind of argument. However, the categorizations of expertise are interesting in so far as they are made by actors. The analyses above have shown that different kinds of actors are rather occupied with policing the boundaries between legitimate claims to expertise and illegitimate claims to expertise. And a lot of critique of researchers revolves around the fact that the media ask them to contribute with referred expertise rather than core expertise. In studies of social scientists in the media, it has been noted that a rather small part of media coverage draw on the researchers’ core expertise. Instead of addressing a normative critique of this, one could argue that experts have to adapt to the needs of the public, offering knowledge claims in relation to concrete problems, which are relevant to other actors (Horst and Poulfelt, 2006: 174). Seen in this way, expertise is co-constructed by actors who ask for it, offer it, and discuss its legitimacy, respectively.

The analysis of the varied use of the same researcher in different texts has disturbed the assertion that there exists a fundamental, epistemological conflict between social scientists and journalists (Fenton et al., 1997: 3, with reference to Golding and Elliott 1979). The researcher was not particularly attached to the idea that knowledge is socially constructed and value-based. Instead, he was in favor of evidence-based research. At the same time, he felt no obligation to leave subjective experience and opinions out of his media performances. And the journalists were not necessarily ‘factual’ in their coverage, neither were they solely interested in evidence-based knowledge. There might be cases where an objective/subjective divide between social scientists and journalists is performed, but it does not exist as a priori professional codes.

I have argued that Norbert's associations with the media have consequences for his associations with a whole range of actors. Thus, it seems a bit simplistic to assert that since social scientists in the mass media often have a commentary function, they act mainly on the premises of journalists (Arnoldi, 2006: 65, Fenton et al., 1998: 29), and their contributions to the media are somewhat insignificant. Instead, they are aligned in collectives, which create different realities for other actors to relate to.

In the analysis of this chapter, we have seen how 'numbers' create certain phenomena, and how collectives of human actors, texts, and communication technologies are assembled to create media texts. These media texts again become actants in mediated controversies, political decision-making, collegial relations, etc. The ANT perspective has emphasized the relational dimension of mass mediation, by showing how it consists of a multitude of sites for negotiations and feedback. Action is not unidirectional (coming from top to bottom or center to periphery); there are many directions of action between the involved actors. Controversies arise somewhere else, are played out here, they are then transported elsewhere, and return to new media texts, and so on and so forth.

CHAPTER 7

The researcher as a link between journalists and practice

This chapter addresses the overarching research question of how media texts with a social scientific content are assembled by analyzing how a researcher contributes to defining journalists' interests and plays a definitional role in the construction of media texts. The researcher both provides access to 'practitioners' and succeeds in having complex knowledge claims reproduced in media texts. The assemblage analyzed in this chapter is characterized by the centrality of a special type of relation, namely one that revolves around the empty signifier of 'practice'. At a first glance, the empirical material of this case resembles that of the case analyzed in chapter 6, especially with regards to the types of professional actors aligned in the network: Both cases are based on interviews with experienced researchers with well-established media relations, and with journalists with an outspoken interest in research-based knowledge. What set them apart are different types of relations between these actors. In the case analyzed in this chapter, 'practice' is articulated as a very important actant in the association between journalist and researcher, and the researcher is constructed as an obligatory passage point that connects media and practice. This is possible because of another special feature of the relation between journalist and researcher, namely a common interest in a special kind of sociological take on practice. Another aspect which distinguishes this type of assemblage from the former is the less controversial linkage of research and the political, which is articulated as an important element of the researcher's job, and stands largely uncontested in the media.

Analytically, I have drawn on the notion of the obligatory passage point to describe how the researcher's translations become central to media actors – not because the researcher is central to all actors, but because he is an indispensable access to a particular kind of sociological knowledge, which he has succeeded in generating other agents' interest in. In Michel Callon's definition of an obligatory passage point, this is the central point in a network of relationships. It is established by an actor who has succeeded in determining a whole set of actors and defining their identities in such a way as to become indispensable in the network (Callon, 1986: 204-205). I will get back to this below.

The tracing of the network began with an interview with a so-called writing editor of a newspaper section²³⁷ on a niche newspaper. In her account of source relations, a particular researcher kept popping up. I decided to follow this link, and did a search on articles where he appeared. A broad selection of the most recent texts then formed the basis for an interview with the researcher. The analysis is based on the interviews with the journalist and the researcher, as well as the media texts that relate to different parts of the interviews.

Relations to practice

A special relation has been created between the journalist, Marie-Louise, and the researcher, Nicholas. Central to their relation is the articulation of 'practice' as a crucial element in their work. They both tell about how they navigate professionally in relation to this object. Marie-Louise talks about Nicholas as a source she frequently uses, especially because he is closer to practice than she is – as it is the case with researchers producing 'empirical work':

I do conceive of researchers as someone close to practice. And those are the people we are interested in: The ones producing empirical material. Their view on reality is more well-grounded than ours, because we are just getting out there for two hours. I am interested both in those who can talk on the basis of a knowledge foundation, and those who can talk on the basis of practice²³⁸

Here, Marie-Louise constructs researchers as divided into a group of well-read scholars and more empirically informed, and articulates her respect for both, while emphasizing the usefulness of the latter. When I comment that this is in opposition to the standard image of the researcher in the ivory tower and the journalist in the field, she insists that Nicholas' empirical work gives him a unique ability to connect her with the kinds of people she would not be able to find otherwise. She gives an example where he appeared in a periodical which reported from a seminar. She contacted him because she needed some private actors to tell about their visions for improving work hitherto taken care of by public organizations:

And precisely because he is closer to practice, and because this municipality had arranged a seminar on the topic, he had been talking with the leader of a care section [...] and I got hold of her [...] and she had some

²³⁷ In the following I will refer to her as the journalist, because I talked to her about her relations to the researcher in her capacity as journalist.

²³⁸ Interview with Marie-Louise, 10.04.07, line 254-257

really great ideas, she had just attended a municipality meeting [...] so in that way I got access to someone from practice via a researcher²³⁹

Nicholas is aware of his position as a mediator between journalists and 'practice':

...about my relation to Marie-Louise...she has typically had two interests in relation to me. When I have written a book, there have been interviews in that connection. And I believe that she has slowly realized that I am a good source to a lot of other researchers and I am often able to establish connections to experience-based sources²⁴⁰

For instance, he once invited Marie-Louise to a conference, and when she could not attend, he sent her a mail with the names of actors he thought she ought to get in touch with. He is trying to push forward the kinds of sources "journalists never know"²⁴¹, the kinds of people who never enter the newspapers. Nicholas sees a gap between the man in the street (the experience-based expert) and politicians, researchers and departmental leaders, both of whom are routinely enrolled in news stories, as I also pointed out in the chapter above. According to Nicholas, there is a whole level, which journalists know nothing about

...because it is more cool to write about departmental bosses and politicians at some higher level, and you never get to the dilemmas, conflicts, problems you have to deal with if you are a center manager in some municipality²⁴²

One of the things that ensure the connection between Nicholas and Marie-Louise is the journalist's interest in the particular kinds of experiences and dilemmas that Nicholas is concerned with. Marie-Louise often gets access to the people who experience such kinds of dilemmas and problems through talking to researchers. However, sometimes it is the other way around, that she encounters people and their specific problems and turn to researchers to get their view on it. The important thing is that the two kinds of actors are coupled²⁴³.

²³⁹ Interview with Marie-Louise, 10.04.07, line 226-239

²⁴⁰ Interview with Nicholas, 13.08.07, line 71-75

²⁴¹ Interview with Nicholas, 13.08.07, line 93

²⁴² Interview with Nicholas, 13.08.07, line 100-102

²⁴³ Interview with Marie-Louise, 10.04.07, line 607

Practice as an actant

In the accounts of journalist and researcher, 'practice' acquires several meanings. Most prominently, it is an important entity that neither of them is part of, but which they have a common interest in speaking for. Practice is also an empty signifier, which can cover different types of actors, and which is configured as a sort of conversation partner. For instance, practice is constructed as something you can invite to your place, an activity Marie-Louise has learned about through Nicholas. She talks about how Nicholas and his colleagues "invite practice inside, and sit there and discuss with them"²⁴⁴. As such, 'practice' becomes configured in concrete situations by the people interested in producing knowledge for, with, and about this otherwise fluffy entity. 'It' can thus become part of associations as something very concrete, namely individuals who are supposed to give voice to 'practice'.

But practice, in the accounts of Nicholas and Marie-Louise, is not just any kind of practice. They seem to tacitly agree on a certain hierarchy of practices where some activities, such as journalism and some kinds of research, are seen as too remote from 'real' practices. The section above indicated how journalism is constructed as remote from real practice. The same is the case for some internationally oriented research. Especially Nicholas articulates how the requirement to publish in certain journals – where the only point of the contribution is to relate to other very specific research contributions published in the same journal – creates a special kind of research:

...that means that research becomes totally self-referential, and in so far as it is targeted at an international audience, it becomes very difficult to understand for anybody else in society – media or other actors. It becomes a bit inconsequential²⁴⁵

Besides this, Nicholas constructs certain types of practice as illegitimate. Those are the practices of people who are loosely connected to the university (e.g. as external lecturers or adjunct professors) who offer expert statements about issues they have not been researching²⁴⁶.

So concerning the ideal of getting closer to practice, we have to do with a special kind of practice, which is to be dealt with it in a certain way in order for the journalist-researcher-practice collective to be legitimate.

²⁴⁴ Interview with Marie-Louise, 10.04.07, line 37

²⁴⁵ Interview with Nicholas, 13.08.07, line 192-194

²⁴⁶ Interview with Nicholas, 13.08.07, line 753-757

Interfaces with practice

Different kinds of interfaces with practice are co-constructed as legitimate for actors who are otherwise too distant from practice. This goes for both political interventions and everyday experiences. Proximity to political and everyday problems creates a linkage to legitimate kinds of practice.

Nicholas describes a special relation to the political system, characterized by intervention and detachment at the same time. He has given talks at political party conventions, not because he is attached to a particular political party, but because he has seen this as an opportunity to make someone react to some of his research-based knowledge:

...the debate about trust and management in [a political party] came after I had given a talk at their convention. You know, if it is like that, knowledge and power, we need to shape our knowledge production according to that, while making sure that we keep the different power games apart, and stay out of all the concrete negotiations where you become partisan. We [the research group] don't want to become partisan, but we would like to take part in the language game, in the fight to define the language which others wrestle with and make alliances with²⁴⁷

Unlike other researchers, Nicholas has not had the experience of being positioned as ideological, even though he takes part in events like the above described, and even though he has been researching heavily politicized areas. He has formulated a strategy of steering clear of 'the platitudes of the political parties' and posing other kinds of questions than political actors tend to do. In that way, the research-based contribution is aimed at disturbing common understandings, and the researcher's role is to stay on a more analytical level of observation, where political positions are analyzed as such, and not taken up by the researcher. Nicholas distances himself from the idea of taking up established political positions. The reproduction of conventional opinions is seen as uninteresting, because it allegedly inhibits self-criticism. As such, 'traditional politics' is decoupled from analytical, research-based knowledge claims.

The involvement with political actors is part of Nicholas' way of conceiving of his research in terms of 'transferability'. The latter concept is often articulated among him and his colleagues:

²⁴⁷ Interview with Nicholas, 13.08.07, line 569-575

...we have long discussions about the prioritization of research in relation to that. You know, the program, the book, the research application you have made, how is it supposed to move around in the surrounding society? How will it be a critical intervention, in which debate? [...] How will it become transferable?²⁴⁸

By extension, this links Nicholas to media actors. He is of the conviction that if you couple research to particular kinds of political practice, this automatically implies that you think in ways that address the mass media. The linkage of research and politically invested practices is also linked to economy. A large part of the department's financial support comes from external partners, who need to be able to conceive of it as something other than 'the work of nerds'²⁴⁹ For those partners, research becomes relevant if it is usable both outside academia and outside established political ways of thinking. The intertwinement of communication and research resonates with insights of science communication studies. As mentioned earlier, Bucchi (1998) views science communication as a fundamental element of the production of scientific knowledge rather than an add-on in the end of the process of knowledge production. Furthermore, it can be argued that such an understanding of communication of social scientific knowledge as outcome of a co-production of knowledge is linked to the trend towards applicability captured by the term 'mode 2 knowledge' (Nowotny et al., 2003), which I also discussed earlier. If it is generally accepted that dialogue with the surrounding society is now essential to knowledge production, researchers must ensure that their communication makes sense to other actors' life situations, practices or societal issues (Jensen, 2006: 82). And as we have seen, this sensibility is shared by Nicholas and Marie-Louise.

Just like a certain kind of political practice is legitimate to link to – and powerful because it makes sense to other actors – a certain kind of personal experience is legitimate to draw on. Just like you have to strike a balance between the non-political and the overly political in order to become interesting in a research-media collective, you can strike a balance between being too remote from experience and being too personal. When Marie-Louise describes the process through which she generates ideas, it turns out that a lot of her ideas and relations come from the fact that she is close to practice: "You know, you are close to practice all the time. I can't see...there is nothing wrong with that"²⁵⁰. She talks about how she is inspired by concrete problems in her child's preschool, how she finds sources by asking people she knows: 'do you know anybody?', and how she steps into the newspaper's secretariat and gets the name of someone's friend, who agrees to participate

²⁴⁸ Interview with Nicholas, 13.08.07, line 199-204

²⁴⁹ Interview with Nicholas, 13.08.07, line 498

²⁵⁰ Interview with Marie-Louise, 10.04.07, line 667

in an interview. A few times, she has even found it legitimate to interview her colleagues, if they possess a special kind of experience or knowledge. Also for the researcher, the personal is a legitimate element of his work. He uses himself as indicator of when something is interesting: when it strikes back at you and disturbs your preconceived ideas, you know that you are onto something that can be used out there, not only 'internal science'²⁵¹. To sum up, it seems like both the journalist's and the researcher's interfaces with practice imply that they use their own experiences and connect with politically and emotionally invested entities.

The researcher as obligatory passage point

In chapter 6, I told the story of a researcher who is often used as an expert source in the media. The researcher himself explained this fact with his ability to produce one-liners, as well as his understanding of journalists' work practices. Nicholas has the same ability and expresses the same understanding of journalists' work practices. However, as we will see below, his media performances differ from Norbert's in that Nicholas often succeeds in telling complex stories and using a complex vocabulary without particular expressions being weeded out by journalists. I will argue that rather than being used by journalists to fill out an expert position in news stories, Nicholas functions as a sort of obligatory passage point for media actors. Nicholas is not simply used a lot by journalists. Rather, as I have indicated, he has defined appropriate sources for journalists, and enrolled journalists and practitioners and got them engaged with the kinds of topics he is interested in.

Nicholas appears in the media a lot, despite the fact that he mostly speaks about his research, and tries to avoid the expert commentator function. On his detailed CV, 179 very diverse types of contributions to different mass media are listed. As indicated above, part of this has to do with the fact that he has access to a certain kind of 'practice' – and knows a wide range of actors who are potentially interesting for the media. For instance, he knows 'a very, very large part' of the social science researchers in Denmark, and leaders within the public sector. But Marie-Louise also talks about using him as a *special kind of* access to empirical material – about using him as a sort of screening device:

I know he is producing empirical material, I know he is out there. In fact I use him as a kind of colleague. Because he knows what I want and he knows me. And he knows that I need people that he has sort of

²⁵¹ Interview with Nicholas, 13.08.07, line 787

screened. You see? I could call anybody. But you prefer someone who has precisely this mindset, with this particular angle²⁵²

Because he has access to a special kind of practice, to a wide range of actors, and to a specific vocabulary (which is neither too weird, nor too banal and inconspicuous), Nicholas succeeds in configuring the interests of the journalists. In fact, I will argue that Nicholas not only 'knows what the journalists want', but has played a part in shaping their demands. Journalists then let him get through with ideas, vocabulary and abstractions, which would be hard if the journalist held on to the idea of making sure that the audience completely follows what is being said. The researcher has contributed to several radio productions, where he has been surprised with what he could get away with:

...some issues, you would really think that you cannot communicate them. For instance, I wrote this article about the undecidability of the decision [and sent it to a journalist]. And we discussed how it was possible to talk about this *super* high-theoretical issue, and at the same time integrate all sorts of very concrete political and commonly known examples of decision-making in organizations [...]. So we were discussing at a top gear, about what decisions are, you know, from the totally abstract, where I am explaining that a decision is only decisions that cannot be decided can be decided, and that kind of stuff [...] and then you can talk about meetings, that's why we opened up with minutes from meetings, just think about how much is pure talk about decisions but never becomes a decision²⁵³

He has succeeded in this more than once²⁵⁴. For instance in one article, where he is brought in as one of two experts to comment on a particular crisis. Here, he gets considerable space to analyze the phenomenon, to introduce new concepts, to tell empirical tales, and to deliver statements such as "when the entities have turned into totalities themselves, the number of decisions are doubled, because the planning of planning all of a sudden has to be planned"²⁵⁵

So how can he get away with talking about decisions that are only decisions that cannot be decided can be decided? Probably by managing to create acceptable entry points for journalists, and by creating discursive spaces where different people can feel at ease, because they can hook up with something well-known. His articulations of problems related to appropriate levels of practices or familiar kinds of actors makes him a

²⁵² Interview with Marie-Louise, 10.04.07, line 244-248

²⁵³ Interview with Nicholas, 13.08.07, line 829-841

²⁵⁴ I have found such a use of the professor in different intellectual niche media products. These are also the sites where he appears the most.

²⁵⁵ Article, 10.03.07

spokesperson for a given issue or assemblage, i.e. an obligatory passage point for journalists who want information about a given issue, or who need contacts in a given organization or group, and they buy the whole package, so to speak. Being an obligatory passage point means that you come to act as a spokesperson in a network, and are able to express in your own language what others say and want (Callon, 1986: 223). Nicholas manages to define relevant actors, namely practitioners at the appropriate level, media actors with the proper outlook and researchers with a specific research agenda. He also manages to define their interests in his own language, and through these translation processes, he has brought universes together, which previously had few means of communication with each other. In this case, as well as in the case of Carl, the researcher's position is quite different from that of researchers who stand in an antagonistic relationship to journalists, and who see their research-based knowledge as distorted by PR professionals or journalists (Walters and Walters, 1996: 165pp)

Thus, for a researcher to become an obligatory passage point for journalists, it is not only important to have an eye for opportunities, it is also, in the words of Nicholas, crucial to 'turn oneself into an opportunity for others'²⁵⁶, i.e. succeed in aligning interests in a network. The researcher's ability to simultaneously articulate his own agenda and relate and react to others' agendas makes it easier for the people involved in communication of research to gather around the core of the research and make it central to their communication.

Like Norbert, Nicholas reports being contacted by journalists several times a week. Basically, he has three strategies when this happens. Sometimes he refers the journalist to other researchers or to practitioners he has met in connection with his empirical work, as described above. Sometimes he uses the journalist to get his story out in a very particular manner. Finally, he sometimes provides an expert statement which can enter a typical news story. This is also part of his relation to Marie-Louise, which is not always about producing stories based on research. Sometimes she performs journalism in a much more traditional way, and Nicholas appears as an expert source in a couple of lines²⁵⁷. This is interesting because it shows that not only positions and identities, but also relations have a non-essential character. Together, actors are capable of gliding in and out of their co-constructed routines and ideal practices.

²⁵⁶ Interview with Nicholas, 13.08.07, line 510-511

²⁵⁷ Article, 29.01.03

Nicholas is quite cautious with the latter type of interaction with media actors. He considers it important to avoid creating 'sludge'. He distances himself from the idea of 'the big professor who has something to say about everything', and who is kind enough to provide a comment on anything. In his view, taking up such a position would be the same as undermining the knowledge claims that come from research. Too many contributions devalue the serious ones²⁵⁸. And Nicholas imagines that people are almost vomiting when the same researchers keep talking about all kinds of issues. Nicholas is ready to grant the very media exposed researchers that they come to function as some kind of public intellectual, which is not necessarily bad. However, he creates a distinction between two positions: Some researchers are both occupied with producing valid knowledge and with making this knowledge useful. Other researchers are simply occupied with producing useful knowledge, and do not care whether it is valid. This whole balancing of legitimate and illegitimate ways of interacting with the mass media is part of discursive struggles within the discursive field of the knowledge society. Here, tensions within what I term a discourse of usefulness through transgression create the conditions of identity work, as I will argue in chapter 8.

To be able to maintain his position as someone who is communicating research-based, valid knowledge, he explains that he has a strategy of not simply giving the journalists what they ask for. Instead, he often listens to the journalists to hear what they want "while I am thinking like mad about what I can use *them* for"²⁵⁹. Marie-Louise tells a parallel story about how she often talks to Nicholas, and is aware of his interest in sharing other peoples' research stories, as well as his practice of referring journalists to other researchers:

...he makes sure that he tells me about researchers in the field. I also pose him some very general questions sometimes. As a researcher you have a very detailed knowledge²⁶⁰

To demonstrate this point, Marie-Louise tells – in quite some detail – about the research project of Nicholas' wife. He has told her a great deal about it, and the journalist is planning to call her to see if she can write an interesting story about it²⁶¹

In his survey of how researchers and journalists perceive their interaction, Peters identifies a range of substantial differences, although he also sees signs of the development of a shared culture and a common understanding of journalism (Peters, 1995: 43-44). The

²⁵⁸ Interview with Nicholas, 13.08.07, line 274-287

²⁵⁹ Interview with Nicholas, 13.08.07, line 78-79

²⁶⁰ Interview with Marie-Louise, 10.04.07, line 215-216

²⁶¹ Interview with Marie-Louise, 10.04.07, line 340

differences mostly have to do with the division of labor – for instance, one of Peters’ results is that experts want to translate knowledge, whereas journalists believe that this is their job. Without going into the discussion about whether it is fair to talk about two cultures in general, I will argue that everyday interactions like the ones described in the present analysis are not marked by the existence of two different work cultures. Rather, they are marked by a common interest in academic issues and a common understanding of how these can be communicated to the public. This allows Nicholas to take up a sort of mediator position which is far from a position in opposition to the journalist. As such, the kind of relation that Nicholas and Marie-Louise have contradicts accounts that talk about the ‘well-known’, ‘long-standing tension’ and conflicts between journalists and scientists surrounding the media reporting of science (Reed, 2001: 279). And whereas Tunstall (1971: 277) once argued that journalists and social scientists have a lot in common without recognizing their mutual dependence, both Nicholas and Marie-Louise produce accounts which emphasize their common interests. I will argue that this has to do with their relative weak attachments to the kind of ‘occupational ideologies’ Tunstall talks about. Not because they do not exist (and surely, tensions among journalists and researcher can be identified in lots of other cases) – but when researching the mass mediation of science, we can choose to focus on all the elements that confirm their existence, or we can focus on the blurring of boundaries. I want to emphasize that Nicholas’ and Marie-Louise’s work lives are of course quite different – but I will also maintain that these differences are not equally significant in all situations.

The communication savvy researcher

All the above has pointed towards the conclusion that Nicholas is a communication savvy researcher²⁶². In this section, I will focus more on his own explicit articulations of this identity. I will touch upon his conception of his relations with the media as well as his articulations of his position as a special kind of expert. As I pointed out in the methodology chapter, I conceive of interviews as a site for actor’s assemblage of entities that are significant to them. In that sense, I am not interested in the degree to which self-

²⁶² Nicholas can be seen as an example of an important trend identified in science journalism studies, of changing relationships between scientists and journalists. Dunwoody has proposed that far from being uneasy with public communication, scientists are becoming increasingly media savvy, and both journalists and scientists understand the norms governing the behaviour of the other: “Now both journalists and sources come equipped to interact, with their own needs and motivations for shaping their public images. A couple of decades ago, two British researchers came up with a name for this kind of space: a shared culture” (Dunwoody 2008: 23). I conceive of this in other terms than ‘behaviour, norms and culture’, namely through the analytical vocabulary (of assemblages, actants and translations) aimed at emphasizing the relational aspect of mass mediation.

representations correspond to any real person, but in the ways in which they are assembled, and in the practical consequences of these constructions²⁶³.

Rather than being read by many in the big, daily national papers, Nicholas states that he prefers to spend time on journalists from smaller papers and radio/TV shows²⁶⁴. Over time, he has experienced the impact this has, given the kinds of knowledge-seeking readers, listeners and viewers of niche media. Such media performances result in his books being read, in emails from readers, and in certain debates being circulated widely beyond the research setting. Nicholas not only distinguishes between the big, uninteresting media and the smaller, more worthwhile media, but offers an interpretation of why the former are uninteresting:

...big newspapers are really professional, in the sense that they work strictly with that trisection in their articles, you know, that there has to be a conflict, there has to be different experience-based sources, there needs to be an expert source, and there needs to be representatives of interest groups, and that's it, it is just this position you occupy as a researcher²⁶⁵

Nicholas does not construct this more mechanical use of the researcher as 'exploitation by the media machinery', but simply as uninteresting. As mentioned earlier, several media scholars have pointed to the problem that the media dominate the relation between social scientists and media actors. Getting media attention is considered to be about framing science (Arnoldi, 2006: 63) so that it fits the media logic, or about observing the rules of media staging in a public sphere dominated by the mass media (Fenton et al., 1997: 20) by mimicking journalistic discursive strategies. Although Fenton et al acknowledge that simplification and distillation not only occur when knowledge is mass mediated, the problem is that in relation to the media, it is constructed as being the wrong types of transformations that knowledge undergoes. Contrary to this, Nicholas believes that he is sometimes obliged to occupy the expert position in a journalist's news story collective, as when it would be difficult to find other experts with the same kind of research-based insight into specific problems. As I briefly indicated above, you find this use of Nicholas in Marie-Louise's work as well. For instance, she has written a long article, where Nicholas appears with a 5-line quote about some potential consequences of a proposed political

²⁶³ This is in line with Potter's approach to descriptions (Potter, 1996: 123).

²⁶⁴ These are also the media where he appears the most, and the media which require the least translation of complex knowledge claims, cf. the analysis of how the professor is allowed to define the interests of journalists and the language applied to talk about given phenomena.

²⁶⁵ Interview with Nicholas, 13.08.07, line 346-350

bill²⁶⁶. This indicates that although Nicholas and Marie-Louise have created a special relationship, which leaves quite some space for Nicholas' interpretation, his language and the core of his research, the relationship is not confined to producing a particular kind of mass mediation of research. The two actors easily step into more conventional ways of performing journalist and expert, where knowledge claims operate at another level.

Nicholas explicitly acknowledges the necessity of being able to act in this way. In his view, a lot of researchers fail to realize that the media have their own logic. Much in line with the way in which Norbert expressed it in the analysis above, Nicholas exclaims: "...darn it, the journalists have no time for all the lines of argumentation that a researcher needs to go through only to arrive at some very poor conclusion"²⁶⁷.

According to Nicholas, the only achievement of the communication department at his university – with regards to the communication of research – has been to arrange great media training courses for researchers. He has participated in one such course, where they focused on the necessity of providing one-liners to journalists. He got a brush up on how it is important both to have prepared something and to be ready to say something in one or two minutes in front of a running camera. This preparedness and the understanding of media actors' work practices are put to use in his interactions with journalists:

...when I have a journalist [on the phone], I say okay, I have eight stories in here, listen, ding-ding-ding-ding, and this person is almost done with this project, and that fits with that. You know, I present my colleagues' research in one-liners so that it fits, and the journalist can picture the story with experience-based sources, representatives of interest groups and the expert. If I can provide all three things, he'll buy it²⁶⁸

Nicholas' explicit talk about the need to adjust your performance according to 'a media logic' seems to contradict the argument above, that he functions as an obligatory passage point, managing to contribute with very complex stories and language use in the media. But this is only the case if we expect researchers to ascribe to stable positions and practices as either media darlings or high-flying abstract thinkers. In the researcher's own account, the different kinds of translations are central to his job, not only in relation to the association with media actors. Also, the many professional networks he is inscribed in (with students, partners, etc.) all depend on similar types of translations. He performs

²⁶⁶ Article, 29.01.03

²⁶⁷ Interview with Nicholas, 13.08.07, line 125-126

²⁶⁸ Interview with Nicholas, 13.08.07, line 487-491

different kinds of adjustments according to different situations, as we saw Marie do it in chapter 5.

If communication with mass media actors seems naturalized in Nicholas' account, and is presented as a routine activity in his work practices, this is probably because research and mass mediation of research-based knowledge have been tightly coupled in discourse and practices in his research environment

...my ambition with the media is related to an ambition about creating a special kind of research environment, and on the basis of this, I constantly distinguish between what is right and what is wrong in a particular transferability situation and a particular media situation²⁶⁹

He has formulated a communication strategy where also education, research, and internationalization are thought of as communication strategies²⁷⁰. Thus, media are not defined in a narrow sense, but include students, objects of study, and the mass media. This relates to Nicholas' avowed interest in making research transferable in relation to specific groups. He distinguishes his communication strategy from an approach to the mass media as the medium par excellence for communication of research to the public. He couples the dissemination view of science communication with self-referential research:

...you only think about it in terms of dissemination when the self-referentiality of research is complete, and when it has its own life, and it has nothing to do with business, societal actors or the mass media. Then the problem is that you have to disseminate it, because basically it is produced so that it is totally irrelevant to others²⁷¹

Others have similarly argued that it is wrong to conceive of dissemination as an end point – each stage in the qualitative research process contains knowledge exchanges. This goes for the research design, the interviews, teaching and collegial discussions, and so on. Barnes et al (2003) talk about dissemination as a reflexive and ongoing conversation, which can be pictured as a spiral rather than a point at the end of a long line. The idea is that there are plenty of opportunities for feedback and interaction throughout the research process, that researchers constantly shape their work – partially – in recognition of the needs and interests of the surrounding society, and that other actors acquire knowledge of the researcher's work as it develops.

²⁶⁹ Interview with Nicholas, 13.08.07, line 323-326

²⁷⁰ Interview with Nicholas, 13.08.07, line 167-177

²⁷¹ Interview with Nicholas, 13.08.07, line 206-210

Nicholas offers a lot of reflexive observations like the one above regarding the relationship between research, media and society. He conceives of research as a system which is concerned with the production of truth. The surrounding society does not care about truth, but looks at research and misinterprets it as a ground for decision-making or as coming up with a solution to a problem. On the basis of this conception of the relation between science and society, Nicholas' strategy is to make research visible as a contribution in certain ways:

We don't want our research to look like solutions to practice or as a ground for decision-making; we want to irritate practice to reconsider what on earth this practice is all about. So what happens is that we pose unpractical questions to practice. And it is our experience that people consider that quite practical²⁷²

The expression, 'unpractical questions to practice', becomes an object, which circulates beyond the communication policies of the department and Nicholas' analyses in my interview with him. In an article written by Marie-Louise, she reproduces the phrase in a matter-of-factly way: "The goal of [the institute] is to pose unpractical questions to practice"²⁷³. The same is true for other objects, such as the phrase "Knowledge should not simply be valid, it should also be made useful"²⁷⁴, which appears both in my interviews and Marie-Louise's text. This alignment of the journalist's interest (i.e. her reproduction of Nicholas' interpretations) is possible because Nicholas functions as an obligatory passage point, as I argued above. And this is strongly related to being able to coin interesting propositions, which are open to interpretations. Moreover, Nicholas is good at crafting recognizable knowledge objects and knowledge producers. He is fully aware of the way in which he constructs his own person as a specific type of element, which can be aligned in different types of collectives.

...when it goes well, often, I believe that I manage to come forward with a 'Nicholas-point', a point that stands for something particular. You see, slowly you can see that an image is being formed [...] expectations that are connected to the concept 'Nicholas'. And then, in so far as I think it is a cool image, it is a question of letting a big part of my contributions in the mass media reflect the special kind of knowledge production I am involved in, that kind of playing with angles²⁷⁵

²⁷² Interview with Nicholas, 13.08.07, line 235-238

²⁷³ Article 17.06.04

²⁷⁴ Article 17.06.04

²⁷⁵ Interview with Nicholas, 13.08.07, line 701-706

This is his own account of how he has become recognizable as someone who produces knowledge in a particular way. Whereas some journalists just want to talk about specific themes on a realist, commentary level, others have realized that “that Nicholas thing”²⁷⁶ is a special way of producing knowledge and communicating it.

Although my rendering of Nicholas’ self-description may seem toothless and uncritical, I will insist on refraining from deconstructing his account and simply framing it as an identity construction project. It is more interesting to see how the object he creates (namely himself) circulates and becomes an element in networks. This follows from the argument I made in chapter 2 about identities and positions as empirically emerging actants. And the analysis of the assemblages he becomes part of has shown how Nicholas’ discursive construction of himself – as a thoroughly crafted public figure with a high ethos – is related to his successful associations with a variety of actors, his ability to juggle with different kinds of research communication and his goal of placing his research interest in practice in the center of it all. And by using him in the way she does, the journalist shows that the way in which Nicholas describes himself and his activities resonates with other people’s use of him. She touches upon this when she remarks, “He is a great example of a person who really knows how to act and get knowledge out”²⁷⁷

Although in opposition to the bleakest accounts of researchers’ experiences with mass mediation of their research-based knowledge, Nicholas’ positive portrayal of his media relations should come as no surprise. Quantitative studies have documented that when researchers are experienced media performers, they have few problems with recognizing the different needs of journalists from different media, and with seeing their knowledge transformed to stories that deal with the lives of ordinary citizens. They are also less concerned than inexperienced media performers about possible reactions from their colleagues, and they see communication via the mass media as important (Gascoigne and Metcalfe, 1997: 269pp).

The journalist as knowledge seeker

The empirical material does not just tell the story of a researcher with a feel for the media, but also of a journalist with a feel for research-based knowledge. Although she in no way distances herself from the conventional way of performing journalism – as we will see below – Marie-Louise’s account of her work practices gives a lot of space to other aspects

²⁷⁶ Interview with Nicholas, 13.08.07, line 814

²⁷⁷ Interview with Marie-Louise, 10.04.07, line 314

than putting together the typical news story. Apart from interacting with Nicholas in the way described above, some of her stories also draw on research reports or scientific articles. She concedes that it is hard to deal with complex knowledge in a limited space, but does not construct it as an impossibility for journalists or as in opposition to journalism. She calls attention to a colleague who often uses academic articles and books:

He has a university education, and it would be fun for you to talk to him, because I think he reads even more than I do. It is different how much you do it. I think some people don't do it at all²⁷⁸

The journalist couples her general interest in research-based knowledge with personal experiences and knowledge of specific sociological theories. She spent a semester studying sociology at the university:

...from early on, I was interested in the kind of knowledge which is not only a fly-by-night knowledge. I thought I would give the university a try, see what it is and try to acquire some more fundamental knowledge, and some of the analytical apparatuses they have there²⁷⁹

In early studies of scientists as mass media sources, it was considered a major problem that journalists consider themselves experts in areas of social science that deal with human beings and social groups. In such accounts, correct and neutral dissemination of research would be disturbed by overlaps in interest between social scientists and journalists (Dunwoody and Scott, 1982: 53). But overlap in interest can also mean something else. It seems from Marie-Louise's account that knowledge of sociological theories and methods, along with her specific interest in Nicholas' work, is a fundamental element in her association with Nicholas. When I ask her about her source relations, she does not describe a social network comprised of actors such as old schoolmates, former colleagues, established sources, and so on. Instead, she describes a special kind of relation with her sources, built up around a common interest and strengthened by her quite sophisticated insight into the sociology of work:

Interviewer: If I were to draw a picture of what you are telling me about your personal friends and the researchers you know... [...] If I were to draw a picture of your connections, not as a mob-like clan or a cultural elite interacting with each other, but...how can I understand this?

²⁷⁸ Interview with Marie-Louise, 10.04.07, line 196-197

²⁷⁹ Interview with Marie-Louise, 10.04.07, line 291-293

Journalist: Yes, but that is how it is. But it is not mob-like in the sense that you *consciously*...you know, it is more by chance... I have found an interest in this area. This particular researcher became one of my sources because – even before he began writing those books – I was very interested in the changing relationship between employer and employee. You know, that they become each other’s collaborators and that the historical confrontation is no longer there... In recent years, particular changes have entailed that we create work places where the employee’s knowledge can be used as a resource much more than earlier. In such a relationship, there are no enemies. But still, there might be new antagonistic positions. Maybe there are new lines to be drawn because people are forced into a continuous project of personal development, in a market context. The market makes new demands. The demands have changed because now they have more to do with personal development. And he [Nicholas] was also very interested in these issues²⁸⁰

So the relation is established and maintained via a common interest. This common interest can be nurtured over time because the journalist is interested in research-based social scientific knowledge, while the researcher is interested in communication. Nicholas is also conscious of the fact that journalists have other interests than producing news and that they voluntarily write other kinds of research stories than the ones reporting groundbreaking research:

It’s funny, they don’t want news, necessarily. I mean, news is not necessarily something new, often it is just the fact that it is brought up in a slightly different way, or that it is new to them²⁸¹

Marie-Louise also stresses that she is not particularly interested in solid and simple knowledge claims, but in paradoxes and issues that can be looked upon from many different angles. The trend in science communication studies, to frame the lack of newsworthiness as a problem, is very much linked to a focus on the media and the university as institutions governed by radically different logics. In this view, it is presupposed that any successful contribution to the media has a news aspect. A Danish proponent of this view is Arnoldi (2006: 60-65), who believes that getting media attention is much about framing and selling science, and that this is PR-work taken up by communication professionals at the universities. Apart from the fact that PR-professionals at the universities do not have the resources to do this, it can be argued that such an account leaves out an important type of relation, namely a relation based on common interest in academic perspectives on the world. It might be that it is easiest for natural and medical sciences to live up to the news values (because they can be related to e.g. health- and environment risks), and it might be that social scientists are often enrolled in news

²⁸⁰ Interview with Marie-Louise, 10.04.07, line 259-276

²⁸¹ Interview with Nicholas, 13.08.07, line 51-53

story collectives, but the news aspect is not always a necessity, and researchers' new angles can in themselves be news enough. This means that journalists' participation in the communication of science must be seen as more than mere reporting of news. Tuchman (1978: 204) has called news 'a theoretical activity', because journalists engage in theorizing by juxtaposing facts, categorizing, predicting, and creating theoretical relationships between and among the phenomena presented as facts. In doing so, they might create interesting stories without relying on criteria of actuality, conflict or the other news criteria.

When Marie-Louise was invited to participate in a project about research communication²⁸², where several types of actors were assembled, she occupied a position which we could call an intellectual journalist. Although her job implies that she is interested in research which can be put to use immediately, she positions herself "as a thinking human being"²⁸³, and argues that the universities' task is to make sure that "pure research" is carried out as well. In her view, the ethics of research, the practice of research, and the choice of research field should not be governed by how easily it can be sold to the media. So rather than suggesting that researchers should meet the needs of journalists, she positioned herself as someone skeptical of too much communication to the public, as well as of quantitative measurements and merits. Related to this, she raised a critique of present research policies, which chase researchers in particular directions.

Nicholas appreciates the journalists who are interested in his work and interested in looking at the world in the same way as he does. He mentions the names of several journalists who have studied at the university for shorter or longer periods of time. They are capable of reviewing his books and posing interesting, critical questions. In exchange for their qualified treatment of his work, he invites them to seminars and let them act as critics, or he brings together his favorite journalists – who might consider this a worthwhile social occasion:

...when I talk to [one of those journalists], he might say, 'well can't you invite [another journalist] as well?' You know, he himself wouldn't call him because of some professional pride, but if I was to bring them together, that would be great ²⁸⁴

²⁸² Arranged by a think tank behind a weekly magazine to decision-makers when the new university law was proposed.

²⁸³ Interview with Marie-Louise, line 396

²⁸⁴ Interview with Nicholas, 13.08.07, line 481-484

It seems as if being interested in knowledge as something more than an add-on to news gives a journalist a special position, both in relation to researchers, and in relation to other journalists with the same kind of orientation. The story of Marie-Louise's use of Nicholas (or the opposite) contradicts the idea that experts are only present to confirm the journalist's framing of a story (Wien, 2001). It is more in line with the quantitative findings in Albæk (2007: 15), where it is shown that although the researcher may function as an independent authority confirming the journalist's framing of a story, this does not imply that the researcher passively provides information or expertise to the journalist. Rather, there appears to be much interaction between researchers and journalists, where researchers not only provide background information but act as sparring partners when journalists develop the story – if it is sufficiently significant and interesting.

The place of research-based knowledge in the journalist's daily work

Marie-Louise's way of performing journalism embodies different rationalities, which seem to go along without great tension. When she tells about her work practices, the above described attachment to complex knowledge claims and the aims of the university go hand in hand with a matter-of-factly description of journalism as a particular craft. In her account, the interest in academic issues is not constructed as conflicting with short deadlines or a pressing demand for news. She constructs this non-conflict as specific for her situation – remarking that it might be a bit different to be a journalist at her newspaper than on the big, news borne papers, where they work more (she imagines) with press releases, and spend more resources on following up on the news of their nets of contacts. Sometimes she gets solo stories from sources, and these are the instances where her stories might come through as news. But, as indicated above, she does not construct the news aspect as particularly important. She defines her job more as a kind of niche journalism, while conceding that “of course we are also interested in getting some news”²⁸⁵. A lot of her ideas pop up coincidentally, as a result of her personal experiences, the reading of foreign language newspapers, and discussions with colleagues. In the editorial meetings, there are broad discussions about what is going on, and people discuss how they can come up with a special take on current issues. The big topic is ‘what is the angle going to be on this’.

The concepts of angles and sharp angles are shared by journalists from all types of media, but what might be different for the way in which Marie-Louise (and others, of course) does journalism is the position of research-based knowledge when it comes to defining an

²⁸⁵ Interview with Marie-Louise, 10.04.07, line 80

angle. A lot of work is about defining a topic and set out to find out who can shed light on this topic with some kind of substantial knowledge. In the first instance, Marie-Louise does not see her newspaper as one that has a research communication strategy “since we do not have a particular section named Science”²⁸⁶, or gives particular attention to research results. But thinking more about it, she realizes how this is not quite so, and maybe only for natural science. Social science, in her opinion, is everywhere. This is yet another example of the fact that few news organizations pay attention to social science as an authoritative, legitimate field of knowledge or ‘a distinctive way of knowing’ – e.g. by employing special social science staff or devoting a special section to social science . This has been constructed as part of a general devaluation of social science (Evans, 1995). Evans does not want to suggest that media coverage of social science is bad, only that:

Science is newsworthy in and of itself, whereas social science is largely excluded from newspaper science sections and may be considered newsworthy only when it can be linked to such symbolic complexes as Government, Family, or Education. While newspaper science sections celebrate science, social science remains relatively less visible as an approach to understanding the world. Social science appears in the news ‘disguised’ as stories about public opinion, human relations, and so forth (Evans, 1995: 173)

He believes that unless journalists and social scientists manage to show how social science can contribute to our understanding of the world, the media coverage will be frequent but oblivious to the distinctiveness of social scientific research (Evans, 1995: 175). It is noteworthy that Marie-Louise constructs social science as unnoticeable, while integrating it in all her work. As she elaborates a bit on the editorial practices of her newspaper, she realizes that social science is central to the paper. It appears in their coverage of reports and investigations of all kinds of topics. In her account, research-based knowledge is constructed as having a quality which can be transferred to her texts. The paper uses numerous expert sources, and in the words of Marie-Louise, she typically uses them to lift her stories “up on a higher knowledge level”²⁸⁷. So research-based social scientific knowledge becomes an important dimension of her work – and is not only treated merely as an add-on to ‘news’ or as material that can be used as a basis for constructing news stories. And in opposition to Evans’ account, her way of constructing social scientific knowledge as mundane is not a symptom of neglect of the special contribution social scientists can provide. In contrast, she expresses a great deal of respect for this type of knowledge, and it is so central to her daily work that it has become invisible to herself.

²⁸⁶ Interview with Marie-Louise, 10.04.07, line 12

²⁸⁷ Interview with Marie-Louise, 10.04.07, line 99-104

The story of Marie-Louise's work life is to some degree the story of balancing a 'mechanical, impersonal' kind of journalism with a more 'organic, personal' kind of journalism. Of balancing news and research-based knowledge, as well as factual and political sources. Apart from using the internet and her colleagues to find suitable researchers, she has a lot of connections, as well as her own source archive. In her view, Denmark is such a small country that she is rarely referred to someone she does not know in advance. She would like to get new sources, but often a lot of information comes from the ones she already knows – on the phone they might be telling about their current research project, and she asks them to notify her when they are done with the project.

Investing her stories with so much of her own interest, and basing them on more or less close connections, she must try to avoid becoming too intimate, which would be seen as an illegitimate kind of journalism. It is common among her colleagues to use personal contacts to reach sources – but in Marie-Louise's view, they have to be quite detached from the writing journalist. There should be no personal bonds between them and no common family names, in order for the story to be a piece of properly detached journalism.

To meet the same kind of objectivist criteria, the experts that have well-known political standpoints should be used with a certain caution: "I know that when I use them [...] it is a choice"²⁸⁸. Using such sources is a contestable choice in journalism, because everybody (both colleagues and readers) knows what kind of direction the story will take if a particular source is enrolled in a piece. But Marie-Louise still thinks that she can use those sources as expert commentators with regards to factual comments, and she believes it is unfair to politicize this. She makes an effort to counter the idea of politicization in the reporting of research-based knowledge:

I know what his position is. But I will try to make him as factual as possible, because that is more interesting. You know that's how you distinguish... Sometimes it is cool to get the researcher to express an opinion, right? But it is more serious if it is based on facts. It is less easy to refute it if it builds on factual knowledge²⁸⁹

To counter the delegitimization of her work that could arise from her use of specific researchers, she has a strategy of decoupling knowledge and politics and going for the unpoliticized part of the research-based contribution. As Tuchman (1972) has noted, the strategic procedures by which journalists attempt to attain objectivity (like framing

²⁸⁸ Interview with Marie-Louise, 10.04.07, line 455-457

²⁸⁹ Interview with Marie-Louise, 10.04.07, line 470-474

elements of the text as facts) do not actually provide objectivity, but they might protect the journalist from criticism from readers and colleagues. According to Fenton et al, journalism stands in opposition to social science with its assumption that “by presenting ‘facts’ they can reach a level of objectivity in their reporting that precludes judgment and bias” (Fenton et al., 1997: 20). In this account, journalists operate according to a professional code which makes it easiest to work with empiricist and statistics-based disciplines, which mimic the natural sciences. Still, Fenton et al also notice a contradictory trend to produce news that deal with personal experience and allow for audience identification. Marie-Louise’s way of balancing the opinion/fact problem shows that objectivity is neither an ideal, nor abandoned as a horizon of orientation. Another of her strategies is to craft ‘proper stories’ that give room for several voices – a strategy governed by the same ideal as the journalist, Geira, articulated in the previous chapter. If a story does not do so, it is not decent workmanship, according to Marie-Louise. To conclude, it seems that knowing the tricks of the trade ensures that Marie-Louise can pursue and integrate her interest in research-based knowledge, and that she can draw on the personal and the political.

Conclusion

In this analysis, I have described an association between a journalist and a researcher which was characterized by special type of relation. Central to this relation was a common interest in a particular sociological take on practice, as well as a common interest in engaging with and speaking for practice. I conceive of the co-constructed concept of practice as an actant, because it offers a particular type of knowledge object, which actors in the mass mediation of science can assemble around. In telling their stories of their relationship, both researcher and journalist constructed the researcher as the journalist’s access to practice and the journalist as removed from practice. This was surprising in light of the idea of the researcher in the ivory tower, but not when we consider the kind of practice they co-constructed as important. This special kind of practice was neither that of the elite, nor that of the man in the street, but some mid-level in between the political and the individual – which we could call the object of sociology. And as a sociologist, of course Nicholas has a privileged access to this object.

Both the researcher and the journalist constructed themselves as partially attached to the political and the personal. A certain kind of attachment to political actors and practice is seen as making research legitimate and interesting – but pure political interventions are illegitimate.

In the analysis I described how an ideal of transferability is central to the communication practices of the researcher. Transferability is achieved by a linkage to both mass communication of research, to political actors and to students and funding agencies. Although Nicholas has a consideration for 'surrounding society', this is not constructed as outside of the research situation, but as part of the research situation.

Although I have identified a special type of relation between journalist and researcher, they manage to take up other kinds of positions in relation to one another, namely that of the journalist as newsmaker and the researcher as quote producer. Nicholas is perfectly able to fill out the expert position in news stories and to provide one-liners. But, importantly, he is able to – and called upon to – contribute with complex knowledge claims, and function as an obligatory passage point to particular kinds of knowledge, topics and sources by defining appropriate actors and translating between them. Those actors are practitioners at the appropriate level, media actors with the proper outlook and researchers with a specific research agenda. He also manages to define their interests in his own language, and through those translation processes, he has created a seemingly solid collective with media actors such as Marie-Louise.

Although Nicholas' and Marie-Louise's work lives are quite different, I will maintain that these differences are not equally significant in different situations. Talk about two different work cultures is not pertinent in relation to those actors, because they have quite a weak attachment to occupational ideologies. The blurring of boundaries both comes from Nicholas' conception of the research situation as comprised of the interests of different actors, but also by a special performance of journalism on the part of Marie-Louise. She does not insist on the importance of newsworthiness. But she pays tribute to central principles of journalism – such as producing balanced stories. As a journalist, she manages to embody different rationalities and perform different kinds of journalism.

CHAPTER 8

Discourses and positions in the mass mediation of social scientific research

In the earlier chapters, I applied an analytical framework based on insights from ANT, and sketched out four different concrete assemblages by highlighting a range of their elements and linkages. In this chapter, I will look at the cases with a discourse analytical approach. The aim of doing this is to address issues that were present but unconnected in actors' explanations and practices as I have analyzed them so far, but which are interconnected discursively, and which – by their interrelations with a wide range of texts and practices – can be seen as central to the understanding of the mass mediation of social science. Thus, I turn to a different kind of conceptualization and analysis of *relations and constructions* – which remain the central object of analysis of the thesis.

In Laclau and Mouffe's discourse theory, every discursive situation is dependent on its relation to a terrain of a surplus of meaning – the field of discursivity (Laclau and Mouffe, 1985: 111). In this analysis, I shall speak of 'the knowledge society' as the field of discursivity within which discourses are constituted through constant articulatory practices. Within this field, we see hegemonic struggles between Humboldtian ideals of pure research and what Nowotny et al. (2003) have called Mode 2 ideals, of the university as a direct contributor to innovation and wealth in partnerships with business and industry. These ideals acquire their position in relation to one another, and if we follow the logic of Laclau and Mouffe, they are part of a dynamic field of relational identities which never manage to be fully fixed. But when certain regularities establish systems of differential positions, we can speak of discourses (ibid). Within the field of discursivity of the knowledge society, two discourses stand out as central in my material, namely what I call a *discourse of usefulness through transgression* and a *discourse of accessibility*. The analyses of this chapter will show how these are constituted by differential positions established around different nodal points, around which diverse subject positions appear (Laclau and Mouffe, 1985: 109-112), or, in other words, how identities are constituted in discourses. Such articulatory practices and identity work have a political dimension because these practices are linked to struggles for legitimacy and the hegemonic status of particular practices or positions.

The analytical construction of this field of discursivity does not imply that such a thing as the knowledge society actually exists. As it is the case with Latour, Laclau and Mouffe do not consider 'society' a possibility. In their theory of discourse, society is no more than a horizon for articulatory practices²⁹⁰:

If the social does not manage to fix itself in the intelligible and instituted forms of a society, the social only exists, however, as an effort to construct that impossible object. Any discourse is constituted as an attempt to dominate the field of discursivity, to arrest the flow of differences, to construct a centre. We will call the privileged discursive points of this partial fixation, nodal points (Laclau and Mouffe, 1985: 112).

In this chapter, I will look at the positioning work related to nodal points central to the above-mentioned discourses as they are performed by actors involved in the mass mediation of social science. Also, I will discuss how attempts at establishing the hegemony of natural science and 'the media logic' can be linked to the discourses mentioned above, and how they produce particular conditions for communicating social science in the media.

The analyses of this chapter are based on texts which can be seen as central²⁹¹ to the discursive field of the knowledge society²⁹². Some of them can be understood as monuments within the field; for instance, policy documents such as the university law, and interpretations and implementations of this law in local communication policies. The text corpus also includes publicly available texts dealing with the communication of research in Denmark. In light of the extensive medialization of politics (Phillips and Schröder, 2005: 276), such texts can be seen as sites of circulation of discourses on research policies. Finally, I include five interviews with PR-professionals from Danish universities, who are active in the interpretation and institutionalization of science communication policies and participate in the constitution of the discursive field of the knowledge society. This empirical material is included because it allows me to broaden the scope of the thesis and reflect upon the connection between the discourses and positions identified in the cases and the wider situation which they play into. Considering the inflation in talk about the public communication of research in recent years and the ensuing production of texts

²⁹⁰ Hence, although the discourse theory of Laclau and Mouffe does contribute with a focus on the broader situation of which specific cases are part, this is not with reference to 'the social' as an existing entity. Just like the social, for Latour, comes into being as a result of successful enrolments, the social, for Laclau and Mouffe, comes into being through the momentary, hegemonic fixation of meaning. As such, the social is not a background against which phenomena can be explained, it is the outcome of articulations.

²⁹¹ In Denmark and comparable countries. It is beyond the scope of this thesis to enter a discussion of similarities and differences across countries.

²⁹² See appendix 2 for an overview of the texts.

on this topic, the selection of texts for the present analysis cannot be comprehensive. However, since the selected texts all deal with the current situation of science communication, they articulate central concerns and issues, and thereby inevitably draw on collectively available discourses. While holding on to the ambition of capturing complexity and looking at the mass mediation of research from an anti-essentialist point of view, this chapter differs from the former with its ambition to enter a discussion of some of the conditions for the mass mediation of research in Denmark²⁹³.

1. A discourse of usefulness through transgression

The Danish university system faces a demand for both more and more useful, inclusive communication of research. This is not a uniquely Danish phenomenon – on the contrary, researchers in many Western societies have witnessed this rising demand. In Denmark, the demand is expressed in the University Law of 2003 in the following way:

As a central bearer of knowledge and culture, the university must exchange knowledge and competencies with the surrounding society and encourage its employees to participate in the public debate. The university must contribute to ensuring that the most recent knowledge within relevant subject areas is made available to higher education programs which are not research-based²⁹⁴

Taken together, numerous different ways of expressing that researchers must communicate their knowledge to make it useful to society make up what I shall call a discourse of usefulness through transgression. As we shall see below, the discourse of usefulness through transgression is interwoven with a discourse of the knowledge society and a discourse of accessibility. I use the expression of transgression to point to the fact that in the articulatory practices in question here, research is not only required to be ‘useful’, but to become useful through reaching out and meeting the demands of users or audiences outside of the university. As Nowotny has noted, the more audience-driven the expertise, the more transgressive (Nowotny, 2000: 16). This general demand for transgressive expertise (or useful, research-based knowledge as such), can be linked to the emergence of the language of Mode 2 knowledge production described by Nowotny et al. (2003). They believe that trends towards more steering of research priorities, towards increasing commercialization of research, and towards more demands for science to be accountable have given rise to new discourses on science and research characterized by

²⁹³ See the discussion of discourse analysis as a supplement to the ANT-inspired analytical framework in the sections ‘A discourse version of ANT’ and ‘The contribution of discourse theory’ in chapter 3.

²⁹⁴ The Danish University Law of 2003, § 2. My translation.

notions of application, relevance, contextualization, reach-out, technology transfer, and knowledge management.

In my empirical material, the discourse of usefulness through transgression is ordered around the nodal points of relevance/irrelevance and remoteness/overexposure, which means that other elements of the discourse order themselves in relation to these central concepts – in various ways. It is relevant to zoom in on because it is central to the field of discursivity that sets the scene for the communication of research. This field is produced or reproduced by institutions and individuals occupied with questions of what dissemination or communication is or ought to be, and it can be identified across national and institutional communication policies and the texts and talk of PR-people, researchers and journalists.

Institutionalization of the discourse of usefulness through transgression

In recent years, communication policy documents have been produced, taken up, discussed, acted upon and institutionalized in various ways. Linked to the university law was a series of communication recommendations by the so-called 'Think Tank on the Understanding of Research' of 2003, commissioned by the Danish Ministry of Science, Technology and Innovation. Among the recommendations, some were directly addressing the question of how the universities could render their research useful by securing its communication:

- 3) Research institutions must develop a strategy and policy for the communication of their research
- 4) The communication of research must be integrated into universities' development contracts
- 5) Applications for research funding must contain a communication plan
- 11) Research institutions must offer media and communication training for researchers
- 17) Research institutions must develop guidelines for the appropriate communication of research²⁹⁵

The think tank defined communication of research to the broad public as "Communication of scientific results, ways of working and attitudes within a given specialized research field to people outside of this field, as well as researchers' participation in public debate with research-based communication". As an example of how this was sought institutionalized, the University of Copenhagen established the so-called Tech Trans Unit, supposed to "ensure the best conditions for the university's co-operation with external

²⁹⁵ 'Research and tell', report from the Think Tank on the Understanding of Research, p. 15. Published by the Ministry on the 26.05.2004. Accessed on <http://vtu.dk/publikationer/2004/forsk-og-fortael/forsk-og-fortael>.

partners”²⁹⁶. This happened in 2003, parallel to the political articulations of the necessity of outreach. Also, the same university crafted a communication policy document where the dissemination of knowledge was constructed as part of researchers’ job. Communication with the public had to be “added as a natural element of the job description of researchers”²⁹⁷. This was to ensure the sharing of knowledge and to render it useful to different kinds of actors. In the words of the strategy document, the transmission of research has the potential to satisfy ‘the inquisitive citizen’, qualify the public debate and transfer knowledge about recent research to relevant environments²⁹⁸

This way of institutionalizing the usefulness of research through transgression, transmission or communication has been described as a process where “...universities and research agencies are becoming attuned to the communication society”²⁹⁹. Knowledge and communication thus become tightly coupled. This, however, does not happen in any uniform way.

Articulations within the discourse of usefulness through transgression

The discourse of usefulness through transgression is comprised of articulations which couple the usefulness and transgressivity of research-based knowledge with elements in various ways. It can be divided into four dimensions. Within each dimension, a range of concepts are linked in chains of equivalence ordered around nodal points. The practice of articulation consists in the construction of nodal points which partially fix meaning (Laclau and Mouffe, 1985: 113) and thereby offer subject positions and discursive resources for people involved in the mass mediation of research. Hence, identities within this discursive field are constructed relationally through the articulation of chains of equivalence. The elements of the discourse are drawn upon in complex ways, which I will discuss in more detail below. Some dimensions are antagonistic in relation to one another, while others are more easily reconciled in the complex positioning work of researchers, journalists and other actors. An analysis of the interrelations of these different dimensions is an analysis of the struggles over meaning whereby partial interpretations of the usefulness of research are sought established as hegemonic. That is, each of the following chains of equivalence can be seen as an attempt to fix meaning in particular ways.

²⁹⁶ Status report 2006: ‘Dissemination of research’, the communication department at Copenhagen University, p.42

²⁹⁷ Copenhagen University’s strategy for the dissemination of research and knowledge 2005, p.4

²⁹⁸ Ibid., p.2

²⁹⁹ Article in the magazine ‘Kommunikatøren’ (The Communicator), December 2005. Theme issue on the dissemination of research, p.6

The first chain of equivalence is ordered around the nodal points of *usefulness and understanding*. On the basis of the cases previously analyzed (in chapters 4-7)³⁰⁰, it is possible to tease out the coupling of the following concepts:

*Understandable research – useful knowledge – sense of obligation – satisfaction – opinion/engagement with society – commissioned research/funding opportunities – research as a legitimate job – clarity – problem driven research – quick responses – value for money – transferability – dialogue – coupling with practice – priority to mass mediation*³⁰¹

This chain of equivalence, which also includes elements such as applied research or references to the knowledge society, is dominant within the field of discursivity of the knowledge society. Some of its elements are also reproduced in various policy statements, which revolve around the concepts of transferability and transcendence:

If our research and teaching strategies are to become transferable and contribute to changing aspects of the social, if our research is not only to be valid but also to be made useful, it demands an active transformation of [existing dogmas]. This demands a proactive transferability strategy which is not content with positive media exposure, but provokes debate by posing unpractical questions to practice ³⁰²

Or:

Since its establishment in 2000, DUE [the Danish University of Education] has established itself as a central player within the field of science communication intended to transcend internal communication between researchers or between researchers and students³⁰³.

In these two excerpts, 'transfer' and 'transcend' are key words which tie in with the chain of equivalence outlined above. The second chain of equivalence, which can be seen as the difference or the outside of the first, is ordered around the nodal points of *remoteness and complexity*. It couples the concepts of:

*Complex knowledge – theoretical interest – international research/publications – abstract thinking – value of pure research – indirect applicability*³⁰⁴

³⁰⁰ Throughout this analysis, I will refer to the page numbers of the quotes which exemplify the analytical points.

³⁰¹ Case analyses, Carl p. 109, Norbert p. 191, 194, 195, Nicholas p. 212

³⁰² Strategy for a research group at Copenhagen Business School, p. 21.

³⁰³ Project description: 'Communicative research – Development of tools and competencies to strengthen researchers' credibility in their communication with the surrounding society', The Danish University of Education, p.2

³⁰⁴ Case analyses, Nicholas p. 212, Marie-Louise p. 227

This chain of equivalence can be seen as linked to articulations of Mode 1 knowledge, where science is constructed as distant from users and mostly concerned with accumulating knowledge within an advanced, international scientific community. The relationship between the two chains of equivalence has been described as a relationship between a culture of science and a culture of research. In Latour's words:

Science is certainty, research is uncertainty. Science is supposed to be cold, straight and detached; research is warm, involving, and risky. Science puts an end to the vagaries of human disputes; research creates controversies. Science produces objectivity by escaping as much as possible from the shackle of ideology, passions and emotions; research feeds on all of those to render objects of inquiry familiar (Latour 1998, 208-9, quoted in Nowotny, 2000: 2)

Although the two chains of equivalence are each others opposites, they need not be constructed as antagonistic. They contain elements that point to *different* kinds of applicability or usefulness. For instance, there is no necessary opposition between indirect applicability and useful knowledge, or between publishing internationally and doing practice-oriented research. The two chains of equivalence may be drawn upon simultaneously, as when a journalist dealing with PR work articulates a concern with pure research together with an idea identifying research which is relevant to media audiences. He says:

Well, not all research is relevant to the public, and thank God – research should not be produced to get media coverage. But some kinds of research may interest a small part of the public³⁰⁵

A third chain of equivalence can be seen as a negative set of articulations which modify the identity established through the second chain of equivalence. It is ordered around the concepts of *irrelevance and self-referentiality*. In the case analyses, there is a coupling of:

*The work of nerds – highflying theoretical knowledge – slow reactions – reluctance towards communication – need for qualifications and nuances – irrelevance – detachment from society – self-referentiality*³⁰⁶

As Laclau and Mouffe have noted, following Foucault, a discursive formation is not unified by references to the same object, a common style in the production of statements,

³⁰⁵ Interview with a communication officer, Jonas, 10.08.07, line 90-92

³⁰⁶ Case analyses, Cecilie p. 165, Norbert p. 191

constancy of the concepts, or reference to a common theme. Instead, it consists of dispersed elements that are relative to each other (Laclau and Mouffe, 1985: 105-6). Following this line of thought, the second and the third chains of equivalence stand out as oppositional in relation to one another, although they are not addressing precisely the same object. The same is the case for the relation between the fourth chain of equivalence, which can be seen as the negative articulations that modify the identities established by the first. This last chain of equivalence is ordered around the concepts of *overexposure and populism*. It makes linkages between notions of:

*Commissioned research as prostitution – realist thinking – illegitimate transgressions – incompetent contributions – illegitimate political engagement – media-driven science communication – opportunism – more quantity than quality*³⁰⁷

This chain of equivalence disturbs ideals of a Mode 2 production of knowledge, and couples this kind of usefulness with politics and economy. As such, it is an expression of a strand of critique against political instrumentalization and commercialization of research. The third and fourth chains of equivalence are strongly antagonistic in relation to one another, and point to the irreconcilable dimensions of the discourse of usefulness through transgression.

Various actors routinely articulate the quantification and media orientation of their communication efforts, but since those elements are often coupled with negative elements in criticisms drawing on the chain of equivalence described above, some work goes into explaining the detachment from this chain of equivalence. On the one hand, the head of communication at the University of Copenhagen expresses the idea that “You can say we operate within a regime of measurability”³⁰⁸. On the other hand, quantitative measurements are problematized:

...in itself, it makes no sense to compete with other universities about getting more media coverage of one more researcher in a given medium. It simply doesn't make sense, but in favor of concrete targets, what I argued back then was...I had an idea that this could provide a bit more visibility. You know, we have some goals about how much international media coverage we ought to get, and we monitor that, you know that could be part of a goal within the different departments³⁰⁹

³⁰⁷ Case analyses, Carl p. 109, 115, Norbert p. 194, letter to the editor p. 201

³⁰⁸ Interview with a communication officer, Jens, 03.08.07, line 59-60

³⁰⁹ Interview with a communication officer, Jens, 03.08.07, line 15-21

The critique of quantitative measuring is even carried into a policy document, which otherwise establishes the need to increase media coverage and set quantitative goals for science communication: “The primary vision is not to enroll the University of Copenhagen in a competition with other universities to produce the largest amount of media hits”³¹⁰

Elsewhere, the logic of measuring stands unchallenged:

We could measure [the effect of press releases]. I used to say that the things we sent out were quoted at least once [...] So it worked, absolutely. You could also see it, statistically, how much the university was quoted. And we also measured whether it was only the same three researchers appearing in the media, or if our coverage was broader than that³¹¹

In this section, I have argued that against the backdrop of the field of discursivity of the knowledge society, it is possible to discern different articulations within a discourse of usefulness through transgression. Contradictory articulations of the usefulness or uselessness of particular kinds of research are part of a struggle over meaning related to establishing different practices as legitimate within the discursive field of the knowledge society. The articulations create a field of differential positions. These are the positions amongst which actors navigate when they practice and make sense of science communication, but since positions are not fixed – or overlapping with actual actors – they are not simply reproduced. Instead, ambivalent positions are established within discourses.

Integrating ambivalences

The contradictory elements of the discourse of usefulness are faced and embraced in various kinds of texts. The dilemmas are articulated in a science communication project description when the proper kind of communication is described as “university-based, but not self-contained, geared towards understanding, but not populist, useful and transferable, but not servile”³¹². Researchers have to learn to communicate in a way that both “meets society’s demand for performance, usefulness and exposure” and “stays true to more academic – ‘nerdish’ – values of independence, search for truth and earnestness”³¹³. With the reiterations of this point with different wordings, a radical

³¹⁰ Status report 2006: ‘Dissemination of research’, the communication department at Copenhagen University, p.23

³¹¹ Interview with a communication officer, Jonas, 10.08.07, line 140-147

³¹² Project description: ‘Communicative research – Development of tools and competencies to strengthen researchers’ credibility in their communication with the surrounding society’, The Danish University of Education, p.3

³¹³ Ibid., p.2

distinction between science and society is reproduced. This can also be seen in a statement like: “Communication must be organized so that it meets society’s demands for openness while respecting the academic deeds and *raison d’être* of the institution”³¹⁴.

The hegemonic logic of the discourse of usefulness

In the discursive field outlined above, ‘usefulness’ stands out as an empty signifier. Empty signifiers are concepts which can be given meaning in different ways, and which various actors attempt to gain a definition power over (Laclau, 1996b). In my material, the way in which actors refer to the usefulness of particular kinds of research-based knowledge can be seen as part of a power struggle to occupy the space as ‘useful’ in the legitimate way. As I noted above, the articulations around the nodal points of usefulness and understanding occupy a dominant position within the discursive field of the knowledge society. It is not possible to state that the aim of the university or single research projects is to produce useless knowledge, so it becomes central to define one’s particular kind of knowledge as useful in one or another way – either because it contributes to the wealth of society at large, because it contributes directly to practice or policy-makers, or because it contributes to the accumulation of research-based knowledge, and hence has the potential to become useful.

Several parallel developments have created the particular conditions of possibility for articulations of the discourse of usefulness through transgression. For instance, there is an overlap between the political demand for usefulness and interaction with the public (for legitimation purposes, amongst others), and the action-research-inspired academic strive for usefulness and interaction with the public, which is grounded in democratic ideals³¹⁵.

At another level, we can see the articulations of usefulness through transgression as interwoven with a discourse of the knowledge society, where knowledge, expertise, the knowledge economy, etc. are nodal points. Given that the discourse of the knowledge society is pervasive, the particular discourse of usefulness through transgression can be seen as a way of addressing the general valuation of knowledge and expertise. As such, again with reference to the hegemonic logic whereby particular actors try to establish

³¹⁴ Ibid., p.1

³¹⁵ Action researchers are among the actors who explicitly attempt to give meaning to the usefulness of research in ways that oppose the commercialization and instrumentalization of research. In Denmark, the government has become established as representatives for the opposite position, where the marketization of the university is openly articulated as a goal. For instance with the policies carried out by the present Danish government under the slogan ‘from thought to invoice’.

themselves as representatives of the universal, we can see the articulations of the discourse of usefulness through transgression as attempts to construct (the particular) researchers as the representatives of (the universal) knowledge society. This happens in competition with other particular groups of people, such as consultants or other types of experience-based experts. As we saw it in the case analyses, other kinds of knowledge than the research-based are also valorized – for instance, personal experience or experience-based expertise are articulated as important sources of knowledge by several journalists³¹⁶. The establishment of these kinds of knowledge as important offers easy inroads into criticizing both useful/politically appropriated research-based knowledge and less useful/more academic knowledge. Research-based expertise is also challenged by being either silenced or contested³¹⁷. Within the discursive field of the knowledge society³¹⁸, different kinds of knowledge and expertise are constructed as crucial to society, so the privileged position of research-based knowledge is not a given.

Apart from the articulations of usefulness, an element in the construction of researchers as legitimate players in the knowledge society is the reference to researchers' engagement, sense of obligation and personal investment³¹⁹. Research-based knowledge is constructed as useful for all of us, in so far as researchers manage to present it as exciting and accessible. An example of the coupling of transgression with excitement and passion can be found in a text by the Ministry of Research and Innovation. This text both constructs research as a mundane and practical activity and as coupled with excitement and passion:

It is a pleasure to be able to present a selection of *exciting* talks about ongoing research in Denmark. In this catalogue you will find 140 excellent researchers who are *ready to travel across the country* to tell about their research as part of '24 Hours of Research 2007'. Meeting people who are *passionate* about their research is a very special experience. Both because it gives you something to think about and because researchers' engagement is captivating. 'Book a researcher' *gives everybody a chance* to listen to news from the world of research and meet the people who *are engaged in research on a daily basis*.³²⁰

With the image of researchers as ready to share their knowledge through traveling across the country as a kind of performer, the text draws upon and reproduces the discourse of

³¹⁶ Case analyses, Geira p. 178

³¹⁷ Case analyses, Bent p. 131, letter to the editor p. 201

³¹⁸ See Delanty (2001) for an overview of diagnoses of the university in the knowledge society.

³¹⁹ Case analyses, Tenna p. 111

³²⁰ From the introduction of the brochure 'Book a researcher – 24 Hours of Research 07 – 24 Hours with research at eye-level', published by the Danish Ministry of Research and Innovation (my emphases)

accessibility, which is closely linked to the discourse of usefulness through transgression, and to which I will turn now.

2. A discourse of accessibility

As indicated in the above, usefulness and accessibility are coupled discursively, in the sense that usefulness through transgression also has a more practical or technical dimension; research might be useful without being transgressive or accessible, but this is not what the discourse of usefulness through transgression implies. Another example of this coupling of usefulness and accessibility can be seen in an editorial of a communication magazine: “If research is to make sense, it needs to be disseminated outside of a narrow circle. Undreamt-of potentials remain potentials because we cannot make them understandable to each other”³²¹. The same coupling is made by the head of communication at Aarhus University: “We need to make researchers visible to the surrounding society. You need to be able to find them and use them. But we also need to offer assistance to researchers with regards to the dissemination of their research”³²². And a status report on science communication of another university similarly articulates an obligation to contribute to society through accessibility. It states that “As one of the largest knowledge institutions in the Nordic countries, the University of Copenhagen has an obligation to share its knowledge with the surrounding society”³²³. Further down, it is noted that one of the university’s five future areas of priority is “Increased clearness and accessibility” and that it is ‘essential’ for researchers to give priority to dissemination to a wider public as an integrated element of normal work practice³²⁴.

Whereas the previous section treated different articulations of usefulness, this section will deal with different articulations of accessibility. While ‘accessibility’ and the obligation to share knowledge can be seen as nodal points in the discourse, around which other elements are ordered, they are drawn upon in relation to two different chains of equivalence. In the first chain of equivalence, the elements have technical connotations. Knowledge has to be made available for consumption, and this has to be done with the skills of the audience in mind. The elements of this chain of equivalence include:

*Information – dissemination – visibility – receiver-orientation – user friendliness*³²⁵

³²¹ Editorial in the magazine ‘Kommunikatøren’ (The Communicator), December 2005. Theme issue on dissemination of research, p.5

³²² Interview in the magazine ‘Kommunikatøren’ (The Communicator), December 2005. Theme issue on dissemination of research, p.7

³²³ Status report 2006: ‘Dissemination of research’, the communication department at Copenhagen University, p.4

³²⁴ Ibid, p.7

³²⁵ Case analyses, Tenna p. 111, Cecilie p. 164, Norbert p. 189

In the second chain of equivalence, the elements have connotations of dialogue, mutuality and understanding. They include:

*Communication – understandable research – dialogue – relationship with the public – clarity – simplicity*³²⁶

As such, the concepts of each chain of equivalence contribute to articulating accessibility both in terms of a transmission understanding of communication and as part of a dialogical communication ambition. But as I will show below, the two chains of equivalence are often intermingled, so that accessibility acquires status as an empty signifier, which has different meanings for different actors. The hegemonic logic of the discourse of accessibility can thus be seen as the strive to define or fill out the empty signifier of accessibility in ways that comply with different actors' practice or interests. If usefulness through transgression and an imperative of accessibility have become hegemonic discourses, it becomes vital to be able to label different kinds of practices as complying with the logics of usefulness and accessibility. Interestingly, it seems that there are no claims to universality within this discourse – particular interpretations of accessibility are not excluded in the attempts to fill out the empty signifier. Recall that the hegemonic (hence the political) struggle is constituted by attempts by particular elements to establish themselves as universal. Instead, within this discourse, different particular ways of giving meaning to accessibility are allowed to co-exist, and, as I noted, sometimes articulated together. Whereas the discourse of usefulness through transgression contained more antagonistic elements – and thus has a more political dimension – the discourse of accessibility is more pragmatic; the empty signifier of accessibility can and must be filled out in numerous particular ways in order for a range of practices to make sense and count as legitimate, as we will see in the analysis below.

Accessibility as a question of making available

The coupling of accessibility as a political imperative and as a more technical aspect of communication is not just indirect – through the linkages of discursive elements – but also made explicit in actors' accounts. One communication officer mentions that a major concern in relation to the 'Research and tell' report was 'the unavailability' of researchers. A way to enhance the communication of research thus became to make sure that

³²⁶ Case analyses, Carl p. 109, Marie-Louise p. 212

researchers were available to the press, and this became very visible in talk about how to communicate research-based knowledge:

If you attend a course [in the communication of research], then one of their consultants will pose the question 'What is the most important thing about communication?' And then he goes 'availability, availability, availability...'. Then he talks about journalism and all the rest. And then you need to ask: Is the most important thing for research that it is rendered available to journalists who phone in with their [agendas]? I'll say no, it is not. It is maybe not the most important thing – that type of availability. But maybe it is important for the university that you communicate to a broader range of people. And therefore it is important for the university that researchers give some consideration to these issues; not that they are accessible, but that they are allowing some access. It is another form...it is to turn the whole thing upside down³²⁷.

Not being accessible, but allowing some access – the insistence on this distinction points to an attempt to negotiate the meaning of accessibility, because accessibility as such cannot be rejected. This is because accessibility ensures that researchers are useful to society, but at the same time, the logic of usefulness should not become dominating so as to challenge the integrity of research. This points back at the differential and sometimes antagonistic positions within the discourse of usefulness through transgression, and the work required to position particular practices as legitimate in the discursive field of the knowledge society.

At some universities, the imperative of 'accessibility' is less challenged. It can even be seen as central to the conception of communication of research. For instance, it is defined – by a librarian responsible for the communication of research³²⁸ – in the following way:

Hm...What our role is...we are responsible for the registration of people's research here at the university. And – as part of that – we are also responsible for the part of the university's homepage, which contains research; the user-interface of the research registration system, where researchers upload their information themselves, within different categories. And then this information is presented on the homepage...We try to make as many documents as possible available in our electronic archive – and then our research registration system and our digital archive are connected, so that as much research as possible is searchable via google³²⁹.

³²⁷ Interview with a communication officer, Christian, 19.03.07, line 182-192

³²⁸ It is not surprising that a librarian is concerned with informational systems and the functioning of databases, but maybe more surprising that librarians are constructed as responsible for the *communication* of research at a particular university, and give meaning to this task in the way described above. Here, ideals of dialogue and alternative formats for communication are not prevailing.

³²⁹ Interview with a librarian, Carsten, 22.03.07 (not transcribed in entirety)

According to the librarian, other ways of making research available are currently being discussed at the university. These include an expert-database and participation in a common Danish research website, which borrows content from the different universities' homepages.

In the communication policies of another university, the technical sense of availability is also important. Maintenance of the technical 'supportive systems' is seen as quite demanding: "In itself, it is a big, technical task for us, to establish it in all departments and faculties and get people to register their research. All researchers have to enter their data about research and dissemination in the system"³³⁰

Accessibility as a question of understanding and dialogue

Alongside articulations of the technical aspects, accessibility is articulated as a question of rendering research-based knowledge understandable and relevant. Accessibility is thought to be achieved through communicative efforts (as the ambitions to strive for clarity and simplicity indicate³³¹) and through engaging in dialogue. Researchers have to be ready to engage directly with other actors – as expressed in a policy document from a younger university:

The Danish University of Education needs researchers to become progressively more competent at meeting, assessing and judging when and how it is possible to enter a constructive and critical relationship with public and private organizations³³².

In many documents, different kinds of accessibility are conflated into one ambition which is about being available to the public. For instance, the recommendations of the Think Tank on the Understanding of Research are both about making research technically available and about entering dialogues. It suggests that:

- 7) An internet gateway to information regarding research is to be established
- 8) The user friendliness of the homepages of universities needs to be improved
- 16) Dialogue meetings between journalists and researchers are to be established³³³

³³⁰ Interview with a communication officer, Jens, 03.08.07, line 179-181

³³¹ Case analyses, Carl p. 109, Simon p. 163, 167

³³² Project description: 'Communicative research – Development of tools and competencies to strengthen researchers' credibility in their communication with the surrounding society', The Danish University of Education, p.2

³³³ 'Research and tell', report from the Think Tank on the Understanding of Research, p. 15

The same happens when the head of the communication department at the University of Copenhagen names all the obligations in the university's development contract. He talks about:

Alternative electronic dissemination formats, pilot projects with pod and web-casting, establishment of a web function with blogging possibilities for researchers and students – and we are doing that, by the way. Make research visible, 5% increase in the Infomedia database hits. A 5% increase in the database LexisNexis, which contains the 40 largest international media, you know, Newsweek and Times and so on. Increase dialogue with high schools and elementary schools, a 10% increase in visits to high schools and elementary schools [...] So we have different goals which supplement each other³³⁴

Tension between the technical and the dialogical

Articulations of the technical sense of accessibility need not be related to transmission perspectives on communication, even if the latter focus on technical aspects of communication. Technical availability is also constructed simply as a basic element in the communication of research. However, in some instances, the concepts connoting a transmission view on communication (information, dissemination, etc) are contested – also when communication activities revolve around technical aspects of accessibility. For instance, at one university, the former 'information office' has been renamed, and is now called 'the communication unit'. This is presented not as a better description of the activities taking place, but as a sort of kick off to another way of dealing with the communication of research, more in line with the political ideals of usefulness and dialogue. Since the unit lacks resources, it can only take care of informational tasks – and at present, the only possible changes in practice are those which can be carried out by rationalizing or changing daily routines:

...what was once named the information office, just an enquiry office and a site for the production of informational material regarding our educations, has now been renamed the Communication Unit, because we think the word communication is better than the word information, and it covers the areas we would like to work on in the future, but which we far from cover well enough at the moment³³⁵

At another university, a communication officer addresses the tension between the two chains of equivalence (articulations of technical elements and articulation of dialogic

³³⁴ Interview with a communication officer, Jens, 03.08.07, line 36-44

³³⁵ Interview with a communication officer, Heidi, 22.03.07, line 91-95

elements) by problematizing the dialogic ideals with a critical interpretation³³⁶ of a particular approach to science communication as overly inclusive and democratic:

In the report *Forsk og fortæl* (Research and tell), they don't like the word 'dissemination'. They prefer communication. And that is because dissemination is too sender-oriented. So you need to take the receiver into consideration. You constantly have to think 'what would the receiver like to hear about?'... Both within and outside the university, in all types of dissemination, there is a contempt for authority, which lies underneath the contempt for dissemination... At the university we can no longer deal with lectures; sometimes we can have a short presentation. 'Can't you make a short presentation?', you know. And why is that so? Because we have to create space for the other, right? Or everything breaks down. That also means that when you organize a conference – that type of dissemination – ... you get ten minutes, because the most important thing is not...the most important thing is to enter a dialogue.³³⁷

Whereas the empty signifier of accessibility is given meaning in many ways, and rarely questioned as such, the demand to spend resources on dialogical communication may make it more contested. We saw how, in the first interview excerpt of this section, a dialogic reading of the imperative of accessibility is constructed as impossible (due to a lack of resources), and, in the second quote, as a problematic ideal. In these instances, communication practices revolve around 'accessibility' as an empty signifier, which allows for very different kinds of practices to be constructed as ways of rendering research-based knowledge accessible. The frequent reproduction of the discourse of accessibility in many variations furthermore means that accessibility becomes performative, in that it becomes part of the horizon of expectations of policy-makers, communication officers, and journalists towards researchers, and of researchers towards themselves.

3. Subject positions in science communication

In the articulations of the discourses of usefulness through transgression and accessibility, different subject positions are made available. A lot of work is done to position people and practices as legitimate or illegitimate in relation to the empty signifiers of usefulness and accessibility. When the analytical attention is directed towards negotiations between journalists and researchers, usefulness and accessibility still stand out as central, but in new figurations in relation to constructions of 'the media' and journalists. Usefulness and

³³⁶ As I noted in the section on interviews, the empirical material of this thesis has plenty of such passages where interviewees come up with analyses of science communication which operate on an abstract rather than a descriptive level. This is both the result of them being positioned as experts in the interview situation, and an indication of an ongoing debate which most actors involved in the communication of research are capable of reproducing with ease.

³³⁷ Interview with a communication officer, Christian, 19.03.07, line 211-225

accessibility become an object of negotiation between journalists and researchers, and often a question of the researcher stepping out of the position of 'the academic'. This section will show how, in this connection, we see a reproduction of the subject positions of 'the academic' and 'the other'. At the same time, it will be illustrated that positions are also blurred, and an image of unstable attachments to positions emerges.

Positioning work: the academic and the other

In the cases analyzed in the previous chapters, it is possible to discern the traces of a lot of work done to uphold clear-cut positions. Boundaries are policed around what it implies to be an academic, and rather clear-cut divisions between the positions of academics and others are produced or reproduced. In two cases we see how colorful communication and the straying outside of a research field leads to attacks from other researchers in the form of accusations of plagiarism or scientific fraudulence³³⁸. A positioning along the lines of the nodal points of usefulness/understanding can be contested and sought redefined along the lines of the nodal points of overexposure/populism. In another case, we see the hard work going into producing clear-cut positions which are easy to relate to, where researchers are constructed as aligned with remoteness/complexity. The labels of (aloof) academics and (stupid) journalists are also used about people who try to resist them and soften them. When a person experiments with working as a journalist, without being trained as one or identifying with the profession, she *becomes* a journalist in the eyes of others, and is expected to be sensationalist and superficial³³⁹.

Also when researchers themselves cross over and work with the communication of science in a way that they describe as complying with the rationales of journalists, they may contribute to the maintenance of a sharp distinction between academics (in general) and journalists³⁴⁰. Although particular academics identify with what they see as the values of the media, academics as such are positioned as oppositional to media – or, positioned as journalists by other academics³⁴¹. Such boundary work supports the maintenance of shared, commonsensical ideas about professional borders. These ideas circulate widely. A journalist captures them by calling some researchers 'difficult' because they want to add nuances and are afraid of being restrained by a clear conclusion³⁴². The image of academics being closely connected to other academics is emphasized by the idea that they are scared

³³⁸ Case analyses, Carl p. 111, Norbert p. 200

³³⁹ Case analyses, Cecilie p. 165

³⁴⁰ Case analyses, Carl p. 134, Norbert p. 191

³⁴¹ Case analyses, Cecilie p. 165

³⁴² Case analyses, Simon p. 163

of their colleagues, i.e. scared of stepping outside of a perceived, common rationality. The separation of academics and the outside is also constructed as part of academics' self-representations: "The university population has a sense that it is too self-contained [...]"³⁴³ The idea of separation is reinforced by the idea of the shared dialect of researchers. For instance, a journalist reports on a researcher's problems with dealing with the media. The researcher goes: 'in your journalist language', but, according to the journalist, still speaks 'researcher-Danish'³⁴⁴. The opposition between academics and the media is also described in terms of a metaphor of oil and water:

Researchers have a hard time in a media context. In a sense, it is like oil and water when researchers with their sense of detail and documentation meet the media with their focus on wholes and broad strokes³⁴⁵

To produce the separation between academics and an outside, this outside is positioned as oppositional in relation to the nodal points of remoteness/complexity. Journalists are readily used as representatives of the outside of academia:

There is an opposition between the ways in which you communicate within journalism, and the ways in which you want to communicate certain kinds of research...because – as I have encountered journalists – they need some clear statements, they work a lot with oppositions, black/white, new/old knowledge, dramas, heroes/villains, etc. And if they can draw out these oppositions and create a story...they always talk about stories...they want to create stories out of everything. That makes them happy. And maybe your research results cannot be written into a dramatic story constructed around dualist structures. And if you want to work with complexities ... and insist that the world cannot be understood as a singular phenomenon and in terms of dualistic oppositions. Then you are in opposition to journalists, who have a criterion for success, which is to communicate in a simple language ...then it clashes. It becomes a struggle...you have different criteria for success³⁴⁶.

Two researchers describe being interviewed by journalists and having their 'constructionist take' turned into 'a realist take' in the process of creating a media product³⁴⁷. In such accounts of what 'journalism' is about and what 'research' is about, two opposite positions are constructed. The pure categories are maintained through continuous boundary work (Gieryn, 1998: 88) not only among researchers, but also among

³⁴³ Status report 2006: 'Dissemination of research', the communication department at Copenhagen University, p.5

³⁴⁴ Case analyses, Geira p. 182

³⁴⁵ Interview with the communication director of a research-based company in the magazine 'Kommunikatøren' (The Communicator), December 2005. Theme issue on dissemination of research, p.9

³⁴⁶ Interview with a researcher who wants to remain completely anonymous

³⁴⁷ Interview with Marie 13.09.07, line 31-32 (and the researcher quoted above)

journalists and other professionals involved in the communication of research. We have seen traces of such activities throughout this analysis, with the constructions of the subject positions of 'university people' and 'people outside'. In many accounts of mass mediation of research (e.g. Fenton et al., 1998), these are similarly reproduced; we have a war of positions fought by researchers and journalists. Much of the drama arises from the discourses of usefulness through transgression and accessibility which offer a complex field of more or less legitimate positions for researchers to navigate in; they have to render themselves useful without becoming populist, they have to stand as representatives for complexity without becoming irrelevant, etc. And in the processes of co-constructing knowledge and positions through their interactions with journalists, they constantly have to negotiate the right balance with the journalist.

However, during the interview with the researcher quoted above, it becomes clear that the researcher does not reproduce stable chains of equivalence between, on the one hand, 'us – complexity – construction – analysis' and, on the other hand, 'others, outside – realist language – reduction – statements'. The chains are broken when it is stated that communication is possible, and (some) journalists are able to deal with the complexities of this type of research:

Of course there is a layer, which can be understood and communicated rather easily... but when you come to the most important contribution of the field, that is where the trouble starts...But actually it is not impossible to communicate complex theoretical statements, you just need to have time and space, and that is not always possible in the mass media. But some journalists are good at it. I trust some of them, and with them it is actually possible...But that also depends on whether they are willing to listen³⁴⁸

As the analyses have indicated, in so far as academics interact with the outside – or, concretely, the media – they may be positioned as communicative in a legitimate way or communicative in an illegitimate way, straying outside the position of the academic. The legitimate subject position is described with notions like 'professional – the expert commentator – experienced – communication skilled – provider of projections – provider of perspective – pre-eminent'. The illegitimate subject position with notions like 'political – opinionated – mixing research and politics – interested – not academic enough'. As I argued above, these are, of course, linked to the chains of equivalence described in the section on the discourse of usefulness – the subject positions and their characterizations

³⁴⁸ Interview with a researcher who wants to stay completely anonymous

are closely intertwined with the resources drawn upon to negotiate the appropriate way to engage in science communication and the status of science in society.

Blurred positions

In relation to the positions and chains of equivalence lined up above, it is possible to identify a lot of movement back and forth between loyalties vis-à-vis on the one hand the fast/clear/brutal, audience-driven clarity and simplicity, and on the other hand the slow/muddy/sensitive, complex knowledge, abstract thoughts and specialist terms³⁴⁹. This identity work is linked to all four dimensions of the discourse of usefulness through transgression, and the constant balancing of the elements follows from the impossibility of achieving closure in relation to defining how knowledge is rendered useful and how researchers achieve a legitimate position within the field of discursivity of the knowledge society. We see how a researcher becomes positioned as inaccessible in one site but performs the role of accessible researcher in other sites³⁵⁰, or how a researcher's inclusion in some situations entails exclusion from other situations³⁵¹. The shifting identifications with positions that are constructed in opposition to one another seem to point to a poor language of cross-over and hybrids in between academics and the other.

But positions do become questioned and blurred. Several actors are occupied with defining a 'me' which is outside of categories, sometimes in opposition to 'others' who fit categories better. One way of breaking down distinctions between a position inside of academia and a position outside of it is for researchers to express an identity which resembles that of the public intellectual more than that of the academic, for instance by recognizing the importance of style in relation to the communication of research. In the cases analyzed above, researchers talk about expressing themselves in a light, clear, and entertaining manner³⁵², about engaging in debate – speaking in seven word sentences – without presenting 'rocket science'³⁵³, or simply by constructing themselves as contributors of useful and valid knowledge in cooperation with actors outside of academia, and in a sense intertwined with these actors. Other actors also offer a variety of positions for academics to take up, other than that of the pure academic – such as the professional source, the untrained source, or the politicized expert³⁵⁴.

³⁴⁹ Case analyses, Carl p. 111, Cecilie p. 164

³⁵⁰ Case analyses, p. 167

³⁵¹ Case analyses, p. 194

³⁵² Case analyses, Carl p. 111-112

³⁵³ Case analyses, Norbert p. 205

³⁵⁴ Case analyses, p. 204

In several cases, actors transcend professional categories by giving up defending their borders, or identifying with members of other professions. For instance, both media actors and researchers identify with the needs of 'the other'³⁵⁵. Also, different actors articulate a kind of researcher/journalist fraternity. One researcher tells about how a journalist likes him because he delivers, and the journalist confirms this with an almost identical wording³⁵⁶. Another talks about journalists as 'friends'³⁵⁷, and in a third case, a researcher tells how a journalist has realized that he is a good source, because she understands what he is doing. This journalist talks about their common commitment³⁵⁸. One of my cases demonstrates how interests may become constructed as overlapping – journalists articulate appreciation of pure research and engage critically with academic books, and they enter the domain of research-based knowledge with their interest in theories and analytical apparatuses³⁵⁹. Researchers are constructed discursively as connected to variety of actors outside of the university. In short, in the analysis of that case, we see the positioning of a researcher with a feel for the media, and of a journalist with a feel for research-based knowledge. With all this criss-crossing and such unstable attachments to somewhat stable positions, my interviewees seem to produce a hybrid kind of academic media performer who transcends professional categories and is able to operate with ease within the discursive field of the knowledge society, well in accordance with increasingly prevalent ideals of a Mode 2 production of knowledge. A recent Danish MA thesis has similarly described how researchers and journalists cross the borders of their professional positions. On the basis of Bourdieu's field theory, the thesis argues that academia and journalism make up different fields, but on the basis of qualitative interviews with 25 researchers and journalists, the authors end up concluding that journalists can be divided into a majority of 'craftsmen' and a minority of 'academic journalists' and researchers can be divided into a majority of uncommunicative researchers and a minority of quasi-professional communicators. As such, they conclude that journalists and researchers share ideals of communication and knowledge, but with the first dominating among journalists and the second among researchers (Hartley and Hansen, 2008). This conception of blurring or sharing is also present in the account of a journalist responsible for the communication of research at a university:

³⁵⁵ Case analyses, p. 110, p. 219

³⁵⁶ Case analyses, p. 111

³⁵⁷ Case analyses, Norbert p. 183

³⁵⁸ Case analyses, Nicholas p 211, Marie-Louise p. 226

³⁵⁹ Case analyses, p. 227

To be optimistic, I don't think there is a big difference, apart from the length [of the texts they produce]. You know, research and journalism typically deals with a problem, and it may be a bit annoying that journalism is always about pointing out how things are malfunctioning, but there are some similarities between research and journalism there, and that is also why research is in fact a good story. There is another similarity, namely the fact that research has a central element, a central question. At least when it is quality research, and that is the same with journalism. So it is about finding points of similarities. Of course, we also experience huge differences with regards to the possibility of developing your argument and include reservations³⁶⁰

So although a lot of work goes into establishing pure professional categories, these are sometimes used as a basis for tearing down distinctions:

That fundamental anxiety [...] 'them and us', and 'it's a totally different world, I don't understand the media logic at all', and that kind of stuff, I would say that has been broken down over the last 3-4 years³⁶¹

In the above, the main concern has been to show which positions are made available discursively, and how individuals negotiate those positions and their identification with them. In the next section, I will show how individuals' attachment to a position is open to collective negotiation by focusing on the positioning of and by a communication officer.

Unstable attachments

The communication officer as university person

In an interview, a communication officer at a university positions himself as aligned with university people as he voices a critique against science stories that are launched by journalists. These are stories where 'the usual suspects' are invited to comment – and accept the function of expert commentators. Such stories are contrasted with the stories which originate from the university and are research-based in a more direct sense. The communication officer introduces the idea of an unfortunate feedback mechanism, whereby the imperative of availability has consequences for the choice of research problems. That which receives extensive media coverage is also that which attracts financial resources – and this is constructed as a problem for basic research. The same kind of positioning of the communication officer as a university person is also present in his extensive critique of the 'Research and tell' report, which was crafted by "people from

³⁶⁰ Interview with a communication officer, Jonas, 10.08.07, line 242-250

³⁶¹ Interview with a communication officer, Jonas, 10.08.07, line 501-503

outside” who (therefore) came out with a “bad report, which basically said that we need some more journalism in this area”³⁶². University people were underrepresented in crafting it, and policy makers did not consider the special nature of the subject matter(s) in question, according to the communication officer.

In these lines of critique, two main subject positions are lined up; the university person and the other. The position of the university person can be personified by researchers, or – as it happens above – the communication officer. The other position is offered to policy makers, journalists, consultants, and others, like we saw it with the positions of the academic and the other above.

The communication officer as a media person

In the accounts of researchers, however, the very same communication officer is constructed as aligned with policy makers and journalists, in opposition to the subject positions of academics:

Interviewer: If you as a researcher and the communication officer you work with agree on the fact that the communication of research has to treat research-based knowledge with due respect to its complexity, where do the problems arise?

Researcher: But we do not agree.

Interviewer: In principle?

Researcher: In principle, yes. Fine words. But he does not understand what complexity is...and you can ask my colleagues about that as well. They have had great problems... I believe that when journalists say ‘this is too complex, we cannot write this, we have to...’, it is because they don’t understand what a constructivist perspective is. They think that what constitutes a constructivist perspective is just foolish, superfluous lingo...and that what you should do is to report what people say in an ordinary language, a realist language. And then you have a nice and well-communicated version of what once was a constructivist analysis...So when you analyze constructions of how things are constructed, then – in the journalist’s hand – this is turned in to a statement of how a phenomenon works, in reality...You cannot make a drastic reduction of a topic, and then think it is the same – just expressed in a better way... I prefer if people would just give up the communication rather than doing this [...] He does not understand a constructivist perspective. He wants some statements. ‘How is it?’ ‘Yearh, but...’ [laughs]...³⁶³

³⁶² Interview with a communication officer, Christian, 19.03.07, line 168-173

³⁶³ Interview with a researcher 30.03.07 (not transcribed in entirety)

This positioning of the communication officer as belonging outside the category of academics or university people cannot simply be seen as an effect of an antagonistic relationship. The communication officer himself also steps into the position of the professional communicator, and out of his attachment to the academic:

Well this person is very particular. But that is also because of the kind of research we are dealing with here, where the whole point is that when you talk about something in a particular way, this creates reality in a particular way...performativity...and you think by yourself 'Hey, I can't write this'. I have been sitting with this researcher...I think that the first time I wrote an article dealing with this research topic, we sat together for about two hours having to go through these things. Having to fight, sentence by sentence, to make it work. So it's damned difficult.... This vanity of the researchers, that's something! On the one hand it's a great strength, on the other hand it's a drag. So I am constantly... 'aaargh, we have to say this in another way...', right? And then – in my conceitedness – I will insist that I know what kind of language the world understands. And that they don't understand this, they can't follow this.³⁶⁴

So the communication officer manages to argue for the integrity of research-based knowledge at the same time as he uses the toolbox and tricks of journalism to communicate this type of knowledge, and thus distances himself from the rationality of researchers. In researchers' accounts, transgression easily becomes distortion, but the communication officer may switch from the position of the university person into the position of the 'professional transgressor'. His mediating role becomes clear as he is interchangeably aligned with researchers and with journalists, like shown above.

To sum up, we both see consolidations of clear cut professional positions, a blurring of these positions and individuals' unstable attachments to the positions. From a poststructuralist point of view (see Laclau and Mouffe, 1985: 111), this comes as no surprise – rather, the construction of binary categories and the constant positioning work needed when identities cannot be taken for granted can be seen as fundamental elements of professional identities. What this positioning work tells us, then, is more significant in relation to the discourses discussed in the previous sections. The instability of positions and the unstable attachment to positions should be seen in relation to the political aspects of the discourses of accessibility and of usefulness through transgression. The positioning work is linked to the chains of equivalence which are sometimes antagonistic, sometimes not – but whose articulations are always linked to the struggle for legitimacy within a

³⁶⁴ Interview with a communication officer, Christian, 19.03.07, line 715-729

political horizon of expectations. Hence, I argue that professional positioning in processes of mass mediating research are not individual projects, but collective, politically productive actions. In the analyses above, I have tentatively suggested a movement towards the construction of a hybrid subject position of academic media performers who contribute to the reproduction of Mode 2 ideals and establish legitimate positions to take up within the discursive field of the knowledge society.

4. The position of social science

In the sections above, I have lined out discourses and positions which emerged as central to my empirical materials' articulations of what communication of research is or ought to be. Now, I will turn to another recurrent theme of my case analyses, namely the position of social science, which is also constructed within the terms of the discourses of usefulness and accessibility. The position of social science is linked to the discourses of usefulness and accessibility because in the process of making social science useful, it may be coupled with political issues, and in the process of making it accessible, it may be coupled with everyday observations and ideas that may be interpreted as common sense. And, as we shall see, the coupling of social science with the political and common sense has consequences for the position of social science. As mentioned several times throughout the thesis, this has been demonstrated in other studies as well, on the basis of other kinds of empirical material (e.g. Evans, 1995, Lynch and Cole, 2005, Fenton et al., 1998).

In one case we saw how social science was rendered useful and accessible through the rhetorical use of common sense conceptions and references to shared knowledge and prejudices. We also saw how its use in relation to current events involved the exposure of a researcher's unfinished interpretation work³⁶⁵. In another case, social science was constructed as mundane or simply as present 'everywhere'³⁶⁶. It was bracketed as a branch of 'science'. Whereas natural science can be assigned a special section, social science is intertwined with all kinds of everyday issues, and its status as science becomes unsolid (Cassidy, 2008).

In another case we saw fights against the hegemony of natural science. This also had to do with usefulness and accessibility, because social science was constructed as representative of politics, culture and complexity, whereas the numerical or factual constructions of

³⁶⁵ Case analyses, p. 127

³⁶⁶ Case analyses, p. 229

natural science were seen as easier to translate into a single premise³⁶⁷. In that sense, natural science was constructed as more accessible. Natural scientific discourse also came to dominate social scientific discourse³⁶⁸, because its black boxes concerning the structure and function of the brain were naturalized. Other actors (the media and social scientists) were allowed to discuss some consequences of natural scientific knowledge, not to unpack its black boxes. By contrast, social scientific knowledge claims were deconstructed. They were positioned as (legitimate) emotional or political 'responses', but not as knowledge in their own right³⁶⁹. We saw a discursive linkage between 'gender research – ideology – blurred gender categories' and between 'brain research – knowledge – differences in girls' and boys' abilities and needs.' In another case, evidence-based research stood out as opposed to interpretative or critical research³⁷⁰, and while not constructed as dominating, it had the advantage of providing 'facts', e.g. statistics. This type of knowledge is also, in a sense, quite accessible. At least, journalists readily use this type of knowledge. The material did show contestations of the interpretation of statistics, but no disturbances of the idea of statistics as a way of saying something about the social.

In relation to the discourses of usefulness through transgression and accessibility, natural science can easily be constructed precisely as useful in this way when it is cast in simple terms of causality or numbers. By contrast, the usefulness of social scientific knowledge relies more on its connection to everyday problems and politics. This creates problems in relation to widely circulating ideals of objectivity, which are described by a journalist in the following way:

Journalist/PR-officer: The communication department of [a particular university] should not act as a sender of political messages. You know, what comes out has to be research-based. It wasn't that much of a problem, in fact. But I believe that if you ask the researchers sitting out there, they have convictions that are more or less political, and of course their research is influenced by that

Interviewer: Yes, but is it at all possible to have research which is not...

Journalist/PR-officer: No, probably not. But you can...you know, it is a classic problem within journalism, right? You can strive for a degree of objectivity, and when you say that, researchers just laugh, but you have to try, right? Because when I write my articles, I cannot just set my own agenda. I have to try...I am drawing on my background, but I also have to play according to the rules of the game, and that also goes for

³⁶⁷ Case analyses, p. 155-7

³⁶⁸ Case analyses, p. 157

³⁶⁹ Case analyses, p. 157

³⁷⁰ Case analyses, p. 176, 192

researchers. You cannot simply push conservative politics with your research, you have to find evidence for what you say, right”³⁷¹

The general idea that to be professional (whether as a journalist or a researcher) you have to bracket subjectivity and strive for objectivity of course creates special conditions for the communication of social scientific research, which often has to establish its positions as legitimate (no matter its epistemological orientation). This justification work is fundamental to be able to fill out the empty signifier of usefulness.

5. The hegemony of ‘the media logic’

Throughout the thesis, I have already touched upon the concept of the media logic (for discussions of the concept, see e.g. Albæk, 2007, Dahlgren, 1996) – both with regards to its theoretical uses and the way in which actors draw upon it. Here, I will argue that the recurrent articulations of ‘the media demands’ and the need to respect ‘a media logic’ tie in with the discourses of usefulness through transgression and of accessibility. If research is to be rendered useful and accessible, this is furthered by compliance to what is constructed as the logic of the media. In a piece on the medialization of science, Peters et al. note that a general adoption of a media logic can be read off from “the high value accorded, both within organizations and among individual scientists, to science-related media communication” (Peters et al., 2008: 88), and linked to the attempts to establish science as legitimate through the assertion of its socio-political relevance.

In one of my cases, it is stated that in relation to the communication of research, the media’s emphasis on conflict is good. Debaters should not agree, because arguments result in great radio sound. Also, the importance of predefined premises, clarity and clear-cut positions is articulated. The debate format comes to dominate peoples’ interaction and the content of science communication, and this is not only presented as legitimate, but as an advantage to science communication, because it makes arguments more accessible³⁷². The same is said of an editor’s suggestions, omissions and other techniques to make texts ‘more clear’³⁷³.

I will argue that when researchers articulate the need for complying with ‘the media logic’, this is part of a strategy to comply with the discourse of usefulness. When researchers experience incorrect treatment of their statements in the media, they do not necessarily

³⁷¹ Interview with a communication officer, Jonas, 10.08.07, line 386-404

³⁷² Case analyses, p. 144-145

³⁷³ Case analyses, p. 112

attribute blame to journalists or 'the logic of the media'. Instead, journalists are seen as simply doing their job in specific ways, because they need to sell papers. In this connection, some researchers readily acknowledge that there is no room for modifications, uncertainties and doubt, and they construct this as legitimate and even necessary³⁷⁴. Journalists experience this respect for the media's demands, for instance when researchers go 'what is your angle on this'?³⁷⁵ Researchers also articulate recognition of the ways in which the professionalism of big newspapers leads to a routine application of a trisection of experts/interest groups/conflict. The need for different kinds of sources to comment upon facts is constructed as a routine operation³⁷⁶. The routine operation is also constructed as implying a necessary sharpening of focus:

But why are some researchers still reluctant about getting media coverage? [...] Time is an important parameter. But so is the evolution of the media. Stories are more narrowly focused and journalists need an expert who can legitimize their angle. Many researchers have the experience of being used in a political game³⁷⁷

The media's 'own logic' imply that researchers must be ready to provide one-liners and act as experience-based sources. Researchers acknowledge that journalists have no time for all the lines of argumentation researchers often need to go through to arrive at 'some poor conclusion', and that researchers need to be clear, get to the point, and refrain from coming up with reservations³⁷⁸.

Articulations of 'the logic of the media' can both feed into the discourse of usefulness through transgression and the discourse of accessibility. To contribute with useful knowledge in the media may be framed as a question of producing useful statements rather than offering research-based knowledge claims:

I am often asked to contribute as an expert, but they do not want my analysis, they want my opinion. Whether there exists a kind of expert knowledge which supports my argument or not, that is not interesting. An opinion needs to be supplemented by a face and a position, not by an extended argument³⁷⁹

³⁷⁴ Case analyses, Norbert p. 186

³⁷⁵ Case analyses, Geria p. 183

³⁷⁶ Case analyses, Nicholas p. 220

³⁷⁷ Interview with a communication officer in the magazine 'Kommunikatøren' (The Communicator), December 2005. Theme issue on dissemination of research, p.6

³⁷⁸ Case analyses, Norbert p. 192, Nicholas p. 221

³⁷⁹ Interview with an often quoted philosopher in the magazine 'Kommunikatøren' (The Communicator), December 2005. Theme issue on dissemination of research, p.16

Attention to the media logic can also be coupled with accessibility. Once actors understand the media logic, they can render themselves accessible to the public:

I always say that the stories that are brought up in the newspapers, they come from somewhere, and this is what you have to understand. If you want to appear in the newspaper, you have to understand those processes [...] Also the criteria, the three criteria of journalism, timeliness, prominence and identification³⁸⁰

In the analyses of the cases, we also saw contestations of the hegemonic status of 'the media logic'. But still, all actors contribute to articulating it as an actually existing force, and as a consequence, it becomes performative.

Conclusion

This chapter has looked into elements of what was termed the discursive field of the knowledge society, as constituted around science communication in Denmark, and has shown how practices and positions are assigned meaning. It has been argued that because positions and discourses have a relational and never fully fixed character, they acquire differential positions in relation to one another and make up a contested terrain. Here, attempts to construct particular communication practices and professional positions as legitimate are part of a hegemonic struggle to negotiate the role of the university in society. Importantly, particular ways of performing usefulness and balancing the respect for pure research and the acknowledgement of society's needs are sought established as universal. In the analysis, the different attempts to fill out the empty signifiers of usefulness and accessibility include 1) being ready (or not) to enter into a dialogue with the surrounding society, as demanded in the policy statements and reproduced by both communication officers and researchers, 2) being easy (or difficult) for journalists to find and get to talk 3) being able (or not) to communicate in a way that an imagined 'other' understands, an aspect mentioned by communication officers, researchers and journalists alike, 4) doing (or refusing) a resented (or valued) part of your job as a researcher, 5) a technical achievement, exemplified by the research database and the 'googleability' of researchers, which is central to the work practices of both university people and journalists. Different articulations coexist, and they revolve around different chains of equivalence which are sometimes antagonistic and sometimes reconcilable. The different articulations of usefulness and accessibility contribute to the unstable reality, which forms the backdrop for communication activities. This is demonstrated by the last part of the analysis, which shows that understandings of the communication of social science are

³⁸⁰ Interview with a communication officer, Jonas, 10.08.07, line 433-441

conditioned by those discourses. They make it seem more obvious that researchers and the communication of research should comply with actors' co-constructed idea of the media logic. Finally, the conditions of social science to live up to the imperatives of usefulness and accessibility are different from the conditions of natural science, as we saw in the last section. Throughout the analyses, some articulations of the discourses of usefulness through transgression and accessibility were highlighted as having acquired a momentary hegemonic position, which bestows some stability on the discursive field.

Throughout the analysis, we have seen construction work going on to create two chains of equivalence which contribute to the establishment of the subject positions of 'university people' and 'other people', with its synonyms 'the surrounding society', 'the world', 'the public', and 'people outside'. Other entities used as an outside in relation to academics include journalists, interest groups, research subjects, politicians, the outside, and 'the externals'³⁸¹. The analysis also showed that the borders between positions sometimes become blurred, and that actors' attachment to specific positions are unstable. The subject positions were related to the nodal points of the discourse of usefulness through transgression, and much identity work was about balancing the inside/outside – i.e. producing research and statements that both live up to ideals of integrity and sharing.

My case analyses indicated a lack of associations between on the one hand researchers and journalists and on the other hand communication people at the universities. But the latter are there, in the landscape, and a focus on discourses and positions have made it clear how they are part of the establishment and reproduction of the discursive field of science communication in Denmark. They make up a professional group, which tends to be overlooked in research on science communication (and they play a minor role in the study of sources in media studies). Together with studies which have demonstrated the complex and controversial position of the communication officer (e.g. Rogers, 1986, Treise and Weigold, 2002), this analysis offers a problematization of the image of the communication officer as one who "ease[s] the passage of information between academy and the media" (Fenton et al., 1997: 11). At the same time, it differs from studies (e.g. Walters and Walters, 1996) which have argued for the inherently problematic relationship between scientists, journalists and public relations practitioners, by showing how actors cross borders and perform more complex versions of 'the researcher' or 'the communication officer'.

³⁸¹ Strategy for a research group at Copenhagen Business School, p. 21

An extension of the empirical material in this chapter has allowed me to draw lines from my cases to texts and voices that were otherwise excluded from the analyses because of the ambition to adhere relatively strictly to the principle of following the actors closely. In contrast, a central goal with this analysis was to look at the discourses of the empirical material as relatively decoupled from actual people and situations, in order to capture the discursive conditions of possibility for communicating social science in the mass media in Denmark.

CHAPTER 9

Conclusions

The overarching aim of my research has been to explore how media texts dealing with research-based social scientific knowledge are assembled. The analyses showed how different types of assemblages may consist of entities such as arguments, facts, experts, ICTs, ideals, anecdotes, experience, and actants such as ‘the media logic’ or ‘practice’. These – and other types of entities – are enrolled in diverse ways in more or less solid collectives, through more or less extensive negotiations. The main conclusions I have drawn from the analyses regarding the mass mediation of social scientific knowledge particularly revolve around the relational dimension and the co-construction aspects of these mass mediation processes. This will be the topic of the first two sections of this chapter.

I had a methodological interest in exploring how an analytical framework informed by Actor-Network-Theory could contribute to our understanding of science communication in the mass media. After pointing to the ways in which texts and identities are the products of relations and negotiations in specific instances of the mass mediation of research, I have devoted three sections to summarize what my material allows me to say about assemblages, actants and translations. Each section also contains reflections regarding the value of these concepts for the present thesis. I conclude that, taken together, the concepts created an analytical sensitivity in relation to capturing the *processes* whereby media texts come into being, and the *emergence* of professional positions and professional relationships.

Upon pointing to some of the outcomes of working with an ANT-based analytical framework, I discuss some of the additional insights offered by the discourse theoretical perspective applied in chapter 8. I show how this type of constructivist approach introduces a more political dimension to the thesis, with the analysis of hegemonic struggles within the discursive field of the knowledge society. In particular, I emphasize how hegemonic articulations of the discourse of usefulness through transgression establish (parts of) the conditions for identity work, work practices, and relationships among actors involved in the mass mediation of social science.

Towards the end of the chapter, the discussions of the three above-mentioned concepts lead to a more extended discussion of the methodological and theoretical framework of the thesis. Here, I highlight what I see as some of the strengths and shortcomings of my approach – particularly some of the empirical and analytical absences which have resulted from it. In addressing these absences, the chapter ends on a series of points regarding democracy, power, and the public sphere, as well as empirical issues such as time and organization – all issues that would be relevant to dive into and connect more thoroughly or explicitly to the discussions brought up in this thesis.

The relational aspect of the mass mediation of social science

The relational focus of the thesis has led to a set of analyses that not only examined how entities were related, i.e. how they became part of collectives (a theme which I will return to in the section on assemblages below), but also dealt with the relational aspect of meaning-making in mass mediation processes. I used the concept of dialogue to point to the fact that communication is never unidirectional, but always marked either by actual communication partners or by implicit considerations of ‘the other’ – images of the audience. This Bahktinian insight has been a premise underlying the thesis and studies of mass mediation have, in a similar vein, argued for the significance of ‘imagined audiences’ (see chapter 2). My case analyses have illustrated how such considerations of the other influence the production of mass media texts. They have demonstrated how researchers adjust to their audiences in specific instances of communicating knowledge (especially in chapter 5) and how journalists constantly rephrase statements with an imagined audience in mind (in chapter 5 and 6).

At the same time, the analyses have shed light on other kinds of dialogue in mass mediation, namely instances where actors experience feedback which has consequences for their practices. We have seen, in chapter 5, how the content of research is not left untouched by communication to the public, and, in chapter 4, how communication to the public can be part and parcel of developing social scientific arguments. This has implications for the robustness of social scientific knowledge in various ways. On one level, it can be said to devalue social science by generating an audience-driven, populist research agenda. But on another level, such instances of feedback ensure that research is marked by the interest of different publics, and thus it can be said to be developed with an inbuilt relevance. The same is the case for the production of media texts. Not only researchers, but also journalists experience the relational or dialogic aspects of communication of research in the mass media. They are met with discursive contestations of their framings, and their media products are evaluated informally, discussed publicly,

and have consequences for journalists' credibility. All in all, we may conclude that the mass mediation of social science does not leave the parties involved untouched.

The focus on dialogue and feedback is linked to the concern of this thesis to change scale in the approach to mass mediation, away from conceiving of it as macro-level phenomena to looking at concrete assemblages – or the interactions in concrete relationships. When actors describe how they go about finding sources, putting together radio programs, interacting with colleagues, or making themselves available to journalists, the analysis of such mundane practices and concrete interactions and negotiations makes the idea of a top-down flow untenable. Instead, an image of mass mediation as more relational and dialogic emerges.

The co-construction of knowledge claims and expert positions

The case analyses have unraveled some of the processes through which concrete knowledge claims are co-constructed through negotiations between researchers and journalists. Actors ask for, offer and discuss knowledge claims as part of their construction of different kinds of realities. For instance, the analyses presented the work done to produce factual and political realities, respectively. The thesis has not focused on the fate of ready-made, pre-packaged research-based knowledge claims, but on instances where research-based knowledge is negotiated and coupled with other elements to achieve assumed relevance for the public. It is a commonplace understanding of constructivist media studies that all actors involved in mass mediation processes are actively shaping meaning. Throughout my analyses, I have offered examples of the minute details of how researchers, editors and journalists act as active mediators of knowledge; constantly engaged in configuring others' interests so that they fit into coherent (albeit not necessarily stable) collectives. We have seen how researchers function as active mediators between journalists and different kinds of actors or knowledges (notably in chapter 7). Similarly, we have seen how journalists can not be seen as 'translation machines' processing complex knowledge claims, but rather as actors whose interests are configured through negotiations with their sources and other elements of the networks they become part of. This was evident in chapter 7, but also marked the other analyses. Like the analyses of the dialogic aspects of mass mediation, the focus on co-constructions contributes to disturbing transmission images of the mass mediation of science because it leads the attention to moments of negotiation and feedback.

Just like knowledge claims can be seen as co-constructed, so can the expert positions that are established in media texts. They can be the result of journalists' and researchers' routinized co-operation, or they can be the outcome of concrete assemblages of, for instance, numbers, interpretations, people, and entitlements. Also, actors' expectations about how to do mass mediation of social science shape practice and positions. Conversely, expectations are also shaped by continuous articulations by people involved in this practice. The analyses showed that actors are quite articulate with regards to what they do and how they do it, and for instance researchers' ideas about how to perform research-based expertise have consequences for the construction of expert positions. The analyses also made the point that such positions are unstable. Researchers' positions in relation to colleagues, policy makers and media actors are marked by the communication of their research in the media in various ways. Communication activities can lead to controversies and exclusions, such as institutional reproaches and heated debates in academic circles. They can also play a part in establishing researchers as legitimate players within the discursive field of the knowledge society. This happens when communication to the public becomes part of a strategy to render research useful to society, ensuring that academic books are read, and that debates circulate beyond research settings.

Assemblages in the mass mediation of social scientific research

With their focus on the establishment of assemblages (rather than on established social networks or relationships) in the mass mediation of social science, the analyses have shown the large amount of work required to establish and uphold associations. Alignments of facts, persons, sound bites, quotes, and other elements happened through extensive research, plenty of negotiations, prolonged email correspondences, etc. I will propose that the insight into these processes is the main contribution of an ANT-inspired analytical framework, distinguishing it from other approaches. In the analyses, we have seen how collectives of researchers, politicians and experience-based sources are coupled with 'news' (in the form of figures or events) in a routine fashion that resembles a mechanical procedure. The same is the case for the production of expert statements, which are negotiated between 'professional sources' and journalists on a regular basis, in a swift and often non-controversial manner. This was particularly visible in chapter 6. But apart from routine assemblages of texts, we have also seen that surprising couplings take place. From all the analyses, it appeared that academics are not always coupled with academic writing, media speak is not always coupled with ideals of simplicity, and so on. Hence, it can be argued that academics, academic language, journalists and media language have a non-essential character, and that they come in many varieties, depending on the collectives

they become part of. PR-professionals are interchangeably aligned with academics and media actors (chapter 8), journalists perform intellectuals and news journalists in different professional situations (chapter 7), a researcher's attachment to policy-makers has consequences for his position and for his relation to colleagues and media actors (chapter 6), etc. Since the analytical interest of the thesis has not revolved around the distinct rationalities of social scientific researchers and journalists, but rather on their varied ways of associating with different actors, a picture of their shifting positions in the mass media has been drawn. The analytical approach has allowed us to see how they align themselves with media actors, policy-makers, and colleagues. And also journalists occupy shifting positions. They function as facilitators, as when they gently edit researchers' texts (chapter 4), as interpreters, when they actively transform statements (in all the analyses), or as democracy's watchdog, when they pose explicitly critical questions to researchers (chapter 6).

So for researchers, journalists and other entities included in the mass mediation of research-based knowledge, it seems to be the case that the different types of assemblages they are part of are affected by their attachment to other types of assemblages. Neither the assemblages nor the elements they are comprised of have fixed borders or essential traits – instead they acquire identity in dynamic processes of interaction with other assemblages or elements.

Also, the analyses have indicated that media performances cannot simply be seen as an end result of a research process (after research and communication in scholarly journals have been completed). Rather, the enrolment in media assemblages can be seen as creating new opportunities and relationships, i.e. becoming elements in new assemblages.

Especially one of the cases, the one treated in chapter 5, demonstrated how alignment or agreement in a collective can be difficult to achieve. Attempts to translate other actors' interests so that a collective can hold together to form a coherent media product sometimes demand extensive negotiations. It has also appeared throughout the case analyses that it demands a lot of nurturing to couple particular researchers with authoritative expert positions. But although alignments demand some effort, and although different actors may bring different agendas into negotiations, the picture I have drawn of the relationships between journalists and researchers is not marked by antagonism. Even if actors are involved in different kinds of work practices, I have not found it suitable to talk about different work cultures. This is partly because my analyses are not concerned with behavior, norms or culture. Rather, I see actors as trying to come to grips with

articulations and alignments in particular collectives, and the picture emerging from the analyses is that of hybrid positions and crossovers.

As to the question of why it is sometimes easier than others to establish solid collectives, it can be argued that successful assemblages depend, among others, on the sharing of knowledge interests and ideals. Also, against the backdrop of the discursive field discussed in the previous chapter, it should come as no surprise that actors who participate in the reproduction of hegemonic discourses of usefulness through transgression and manage to balance the valuation of research-based knowledge with acceptance of 'the media logic' are able to engage in a productive relationship.

I believe that the analytical concept of assemblages has allowed the analyses to follow shifting attachments between researchers, knowledge claims, and other types of actants. It has stressed emergence and process more than fixed roles and structures.

Actants in the mass mediation of social scientific research

The thesis has operated on the basis of the assumption that agency is not restricted to humans. It set out to explore which agencies made a difference in the assemblages constructed in and around mass media texts with a social scientific content. Recall, from the theoretical chapter, the ambition of including in the analyses any kind of agent that makes a difference in the course of another agent's action. The analyses ended up drawing attention to, for instance, ideals, co-constructed empty signifiers such as 'the media logic', symbolic elements, and communication technologies.

The analyses demonstrated how ideals are constructed as consequential for the making of texts. For instance, entities were linked in chains to other entities by ideals of newsworthiness, communication ideals, ideals of providing useful research to policy makers, or the value of speaking for a particular kind of practice. Because ideals or values may have this function in the mass mediation of social scientific research, I believe it makes sense to conceive of them as actants. Similarly, co-constructed empty signifiers such as 'practice' or 'the public' linked different kinds of entities together. Researchers and journalists sometimes coupled those concepts with actual groups of people (focus groups, interest groups, personal acquaintances) but throughout the analyses, we saw how 'the public', 'the audience' or 'practice' worked as discursively constructed horizons which had influence on mass mediation practices. It can be argued that as a consequence of this, publics or audiences are constituted at the same time as they are said to influence the

construction of media text. This finding is in line with Latour's (1991: 117) argument, that innovations and their markets are mutually co-produced.

Another important empty signifier working as an actant was the idea of 'the media logic' or the conventions about different media formats. They were articulated and negotiated as something actors have to relate to in particular ways. The empty signifier of 'the media logic' was constantly filled out. It was remarkable, in the analyses, how all researchers articulated – and seemed to operate according to – a conception of media demands. Some researchers position themselves in opposition to the media logic, but in the process of doing this, they also reproduce the concept. It was also used as a marker of prestige if a researcher was capable of understanding – and accepting – what the media logic demands. Conversely, researchers depreciatingly accused colleagues of not understanding or not behaving in accordance with the demands of the media logic. To sum up, a lot of talk about how 'we normally do' in mass mediation processes can be seen as performative, i.e. as an actant ensuring that this really is how things will be done – in the future as well. For practitioners, it might be worthwhile to consider and question how such talk works as actants in their daily practice of assembling media texts.

The analyses also highlighted different kinds of textual elements as significant in shaping the text, enforcing lines of argumentation, offering points of identification or points of entry. Such elements could be anecdotes, peculiar expressions, numbers, 'facts', clear-cut dichotomies, and the like. Symbolic entities were thus analyzed as actants in broader assemblages formed around the communication of social scientific research.

Also communication technologies such as the phone and the email have been analyzed as actants in the mass mediation of social science. This does not lead me to any abstracted conclusions regarding the role or influence of ICTs in science communication or mass mediation processes. I have described how they afford particular activities, and hence the establishment of special kinds of relationships, but this only leads to the assertion that they sometimes become significant entities in mass mediation assemblages. Concretely, the analysis in chapter 6 showed how the phone is integral to the establishment of a professional source relationship, and the analysis in chapter 4 illustrated how the email affords the mending of troubled professional relationships and the extension of an existing collective.

To sum up, the concept of actant has served as a flexible framework for understanding significant entities in particular instances of mass mediation of social science. The concept

can operate on several levels in the same analysis. Different kinds of actants can be elements in particular assemblages, but assemblages can also perform different functions in new situations, hence become actants. For instance, the analyses have established that ideals function as actants that link journalists and researchers, and that researchers themselves become actants in texts when they occupy the position of expert commentator or become part of a controversy. Or we have seen how ideas of 'the public' are actants that influence the ways in which researchers and journalists craft their statements, and how statements themselves become actants in public debates by provoking responses, initiating controversies, etc. For studies of the mass media, this implies that the same analytical concept can take us from media production issues to the question of how textual elements are linked to interrogating the afterlife of a media text.

Translations in the mass mediation of social scientific research

Translation can both be used as an analytical concept to point to alterations of texts or statements (e.g. Walters and Walters, 1996, Fahnestock, 1998, Latour and Woolgar, 1986) and to the process of aligning the interests of others according to one's own goals. This thesis has operated with the concept in both senses.

The first meaning of the concept of translation is widely drawn upon in studies seeking to uncover what happens to statements that originate in a research setting, when they are transformed to become part of a media text (see the section on translations in chapter 2 for discussions of such studies). My analyses have shown that the wording and meaning of sentences, sections and arguments are *negotiated* by researchers and journalists – e.g. on the phone, in email correspondences, in interviews, and through the editing of texts. I conclude that translation in this sense need not be seen only as an activity of media actors. In line with this, the empirical material gave very little evidence of research-based statements being violated by media actors – rather, statements were co-constructed as new kinds of knowledge objects. The concept of translation can also be understood as a way to capture how researchers enact their research-based knowledge differently, according to their (perceived or actual) audiences. In such situations, knowledge objects change as their elements are coupled with new elements; for instance political arguments, media actors, or academic journals. The analyses have shown various instances of knowledge claims which acquire different forms as a result of entering different collectives. Images of the audience and the coupling with other entities in different assemblages are formative elements in the (re-)construction of knowledge claims.

The second meaning of the concept of translation captures how actors align allies according to their interests. In the analyses, we have seen how researchers create acceptable entry points for journalists, configure their interests, and manage to make a specialized language widely used. We have also seen how journalists negotiate the premises of their media products and struggle to align elements in coherent collectives. Finally, we have seen how actors turn methodological questions into political questions, and use them in connection with political arguments – and how those political questions are turned back into methodological questions again in connection with a discussion of academic credibility. Whereas the use of the concept of translation in the first sense often pointed at routine assemblages of facts, people and other entities, the second use allowed me to place emphasis on disagreements over content and framing. In such instances, negotiation became less an issue of wording and more about aligning interests and sometimes mending breakdowns or ruptures. Such fights have been relatively few in the above analyses, because of the tendency to focus analytically on strong actors via the focus on the sites where activity takes place and negotiations are productive. I will get back to the issue of strong actors further below.

Discourses and positions

As I noted in chapter 2, Latour is critical towards any reference to global causes which generate a mass of effects, because they tend to become anonymous, standard explanations. Besides being suspicious of entities such as ‘classes’ or ‘social networks’, Latour also holds that a concept such as ‘discursive fields’ define in advance which groups and issues are meaningful to look at (Latour, 2005: 28). I have followed this argument most of the way through the thesis, but in chapter 8 I let the discursive field appear as a horizon against which to understand discourses and positions in my material. Although I did not intend to use it as an explanatory force, but to understand how concrete articulations are coupled, it can be argued that it does introduce precisely the speculative coupling of entities in the empirical material to abstract phenomena which is so uninteresting when it serves as a foundation for research³⁸². However, by adding this perspective towards the end of the thesis, I let the thesis explore some of the conditions of communicating social science in the mass media in a way that made it possible to address matters of concern which reach beyond the case studies.

³⁸² The analyses of articulations of discourses are well-grounded in concrete empirical instances of language use. But particularly the claim that these discourses should be understood against the backdrop of the discursive field of the knowledge society represents one of the jumps to abstract explanations that I, following Latour, have tried to avoid throughout the thesis. The introduction of this level in the analysis in chapter 8 can be seen as an attempt to make visible how the discourses are connected to widely circulating theoretical constructs.

The remainder of this section will recapture some of the insights of the last analytical chapter, which was devoted to an analysis of dominant discourses and positions of the cases, as well as policy documents and other texts revolving around the communication of research-based knowledge in Denmark. It was argued that within the field of discursivity of the knowledge society, hegemonic struggles for legitimacy and resources occur within a discourse of usefulness through transgression and a discourse of accessibility. It is shown how their nodal points and chains of equivalence are resources for the positioning work of actors, contain valuations and devaluations of particular practices with regards to the communication of research, and thus offer legitimate and illegitimate positions. It is constructed as a legitimate practice for researchers to produce useful knowledge and to render this knowledge accessible. This can be done – and is done – in a myriad of ways, so much explanation and justification is done to make sure that those different ways are articulated as legitimate. Also, a lot of work is put into reconciling dilemmas and tensions between the dimensions of the discourse of usefulness. The analysis highlighted four different chains of equivalence centered around, respectively, the nodal points of usefulness and understanding, remoteness and complexity, irrelevance and self-referentiality, and overexposure and populism. This discourse obviously contains quite antagonistic elements. It has a more political dimension than the more pragmatic discourse of accessibility. Within the latter, two chains of equivalence interchangeably fill out the empty signifier of accessibility. One set of articulations revolve around technical aspects of accessibility and contain terms with a connotation of transmission understandings of communication. Another set of articulations revolve around dialogue and interaction with the public. Often, they are intermingling, for instance when documents and interviewees stress that technical accessibility and transmission are not enough, but nevertheless a condition for communication to the public. On the basis of the analysis, it seems that the empty signifier of accessibility can and must be filled out in numerous particular ways in order for a range of practices to make sense.

The chapter also contained an analysis of the positions available discursively and of the negotiations of these positions. Chains of equivalence are fundamental to the constitution of identities, so we could expect that subject positions were closely intertwined with the discursive resources identified in relation to actors' accounts of the appropriate way to engage in science communication and the status of science in society. The analysis showed that identity work principally revolves around the constitution of 'the university person and the other' (or the outside). The analyses drew a picture of the ways in which clear cut professional positions are both consolidated and blurred, and gave an example of

individuals' unstable attachments to the positions. As I argued in the previous chapter, the instability of positions and the unstable attachment to positions should be seen in relation to the political aspects of the discourses of accessibility and of usefulness through transgression. Within the discursive field of the knowledge society, positioning work is linked to the hegemonic struggles over appropriate positions and practices. It draws on and reproduces the chains of equivalences of usefulness/understanding, remoteness/complexity, irrelevance/self-referentiality, over-exposure/populism, technical accessibility, accessibility through dialogue, the academic and the outside. These chains of equivalence are sometimes antagonistic, sometimes not – but their articulations are always linked to the struggle for legitimacy within a common horizon of expectations. Hence, I argue that professional positioning in processes of mass mediating research are not individual projects, but collective, politically productive actions.

The dynamics of the discourse of usefulness fed into these identity construction processes by offering legitimate ways of being engaged in research and its communication. The discourse of usefulness is marked by hegemonic struggles to establish particular definitions of usefulness as universal. Primarily, people are concerned with balancing the respect for the (perceived) logic of research with the (perceived) logic of the media. This implies holding on to the idea that academia has a special *raison-d'être*, but arguing for the necessity of sharing knowledge with the public in a way that meets the public's demands and takes their abilities into consideration. However, the contestations of these articulations made it evident that the discourses of usefulness and accessibility are not unified or closed.

It ran through the case analyses that researchers acknowledge the legitimacy of media demands and the significance of media coverage for their own legitimacy. When they articulate this acknowledgement, this is part of living up to the hegemonic articulations of the discourses of usefulness and accessibility. These discourses make it seem more obvious that researchers must comply with 'the media logic'. The analyses also pointed to contestations of the hegemonic status of 'the media logic'. Still, all actors contribute to articulating it as an actually existing force, and as a consequence, it becomes performative. Articulations and considerations of the logic of the media lead to the reproduction of media formats such as the broadcast debate, to adjustments in language, and to the enrolment of actors in news collectives.

A methodological endeavor

The thesis was based on the assumption that the complexities of the mass communication of science could be addressed through an analytical approach inspired by the ontological skepticism and the painstakingly empirical orientation of ANT. The idea was to stress the relational element of the communication of research, without reifying connections. Also, the question of how rationalities interact could be approached in an inductive manner, and pre-established categories in mass mediation could be surpassed. So the thesis represents an attempt to approach the issue of mass mediation of science with a *particular sensibility towards construction processes and heterogeneity*. This section is devoted to discussing the outcome of this ambition.

Emergence and process

Specifically, the concepts of assemblages and translation came to emphasize the processes of establishing relations. Also, the ambition of not reifying connections was met by the analytical focus on temporary assemblages. The centrality of the analytical concept of assemblages has meant that the analyses have captured relationships established within and outside texts, between people, technologies, knowledge claims and other entities. As such, the concept allows for a coupling of heterogeneous entities which are in the process of becoming (temporary or more stable) collectives. As Markus and Saka have remarked, the concept of assemblage seems to have to do with structures, but at the same time undermines images of structure with a focus on process and relationships. In their view, it offers an “odd, irregular, time-limited object for contemplation” (Marcus and Saka, 2006: 102). The idea of translation has similarly enabled the thesis to address the issue of emergence. Translation was conceived of as processes whereby texts and relationships come into being, and helped point to all the negotiation that goes into establishing collectives in the mass mediation of social science.

This use of the concepts of assemblages and translation is particularly well suited to account for the *instability of positions and relations* within the field of the mass mediation of social science: journalism can be performed in many ways, actors glide in and out of different positions, texts are rarely purely academic or cast in the simplest possible language by media actors. Even established relationships acquire new forms in new situations, as when a journalist and a researcher are capable of bracketing their common interest in a particular sociological take on practice and co-produce simpler, conventional media texts with standard expert comments.

However, this implies that my use of the above mentioned concepts does not allow me to say a lot about lasting closures or stabilities. They might well have been applied to say something about solid collectives or successful translations, but, as I argued earlier, my knowledge interest lay in exploring processes of emergence. This also means that I have given priority to writing about complexity and construction processes in such a way that the specificity and processual aspects of different situations are not smoothed-over in a systematizing or generalizing text. From this last remark, it is self-evident that the weakness of this kind of framework might be the resulting unevenness of how empirical tales unfold, of how analytical emphases are placed, and of which insights we may gain from particular aspects of the stories. The analytical chapters stand as exemplars which are allowed to retain unequal dimensions with regards to, for instance, their extension in time and the nature of the elements they are comprised of.

The disadvantage of an approach that is flexible (Hassard et al., 2008) and attentive to heterogeneity is the risk of merely stating that everything is connected at various levels, that everything is complex, and that the framework may address any kind of entity or phenomenon. As Hassard et al. have expressed it, it sometimes “appears as if ANT offers little more than analytical flexibility, since everything else, including methodological terms, seems expendable” (Hassard et al., 2008: 130). Therefore, as I argued in the methodology chapter, it is crucial for the validity of a study such as the present to hold on to the idea of fleshing out concrete situations. In that way, it is possible to learn from the complexities of detailed exemplars rather than reproduce general statements about complexity. The tedious attention to particularities in specific instances of the mass mediation of research also entails that we realize how, in processes of mass mediating research, some relations are more significant than others, and different elements push more in one direction than another. Hence, although they are contingent, the exemplars presented in the analyses of this thesis do give us insights into what goes on in the mass mediation of social research, as the first parts of this chapter showed.

Heterogeneity and complexity

The above already pointed to the ambition of capturing the heterogeneity and complexity of the mass mediation of social science. But another element of the methodological framework was central to capturing complexity in the analysis. This was the concept of actants, which allowed me to unpack my empirical material in such a way as to expose its heterogeneity. It was central to developing an analytical framework which did not limit itself in advance to looking at textual or institutional aspects of the mass mediation of

research. In the phase of producing empirical material, the concept of actants called for an exploration of all the various kinds of (human and non-human) actors that make a difference in the production of media texts. As an analytical tool, it pushed me towards treating the traces in the empirical material in a symmetrical fashion, privileging neither symbolic actants (as a media text analysis would), nor interpersonal relations (as a social network analysis would). In the same way, the analysis avoided giving primacy to the role of communication technologies in present-day science communication. The concept of actants was thus central to ensuring the openness of the analytical framework. It has meant that the entities included in the analysis emerged in a bottom-up fashion, and that different kinds of elements were allowed to be seen as agencies. It also implied that I approached the issue of mass mediation of social science without choosing in advance between (e.g.) an institutional, a discursive, an interpersonal, or a technology focus.

Having accepted that different – and unexpected – entities may be significant in the mass mediation of social science and that they enter unstable relationships with one another has implications for the kinds of connections and causal explanations established in the text. It has implied that no abstract ‘mechanisms’ have been called upon to explain the mass mediation of science – and that the thesis does not offer any general conclusions about the universal significance of different elements. However, despite (or because of) the absence of explanation and generalization on the level of general theory, I believe that the concepts borrowed from ANT offers an exciting new take on ‘holistic’ studies of mass mediation practices, because they call for a focus on heterogeneous actors and the ways in which assemblages emerge. For instance, from looking at controversies in one media text, the analysis may open up to look at relations and positioning work that surround the production of the text. Digging more into relations and positions, it appears that the positioning of a researcher as inaccessible in one media text is very different from the positioning of the same researcher in other sites. Or that the non-political use of a researcher in one site is not a rule, but one among other types of uses. Also, we have seen how, for instance, a researcher relates his statements in a media text to his relationship to colleagues. Thus, the network of the text becomes inscribed in wider interpersonal networks, without interpersonal relations taking center stage in the analysis. Beyond interpersonal relations, so many other types of relations can be explored as significant for the making of a mass media product.

The use of my analytical framework has indicated how a holistic study need not be neatly ordered into, e.g., production and consumption phases and need not rely on linear models of mass communication. Building heterogeneity into the analytical approach to mass

mediation practices and relations, we can arrive at differently shaped analyses which can serve as exemplars of a rich variety of practices.

The contributions of the thesis

...to media studies

In relation to the broad field of media studies, this thesis has primarily offered analytical insights. As it was argued in the section above, the analytical concepts of assemblages, actants and translations have the potential to produce a different kind of holistic media analysis, where the borders between professional, institutional and textual domains are blurred, and where emphasis is placed on heterogeneity and process. In such an analysis, a linear understanding³⁸³ of communication is substituted by a view of communication as circulating³⁸⁴. The thesis has also illustrated how we may refrain from talking about causal relations between positions and practices, for instance by showing that working as a journalist does not necessarily imply being a trained journalist or that filling out the expert position in a news story collective does not require for a researcher to have a special status or orientation. Instead of emphasizing regularities and commonalities, the analyses have pointed to different ways of performing journalism or feeding into media texts as a researcher.

I will argue that practices, relations and associations do not explain each other in any regular way. For this reason, I have tried to capture the simultaneous agencies in play in the mass communication of science. The complexity I tried to capture through a particular way of ordering my analyses does not mean that there is no regularity, no best practice or no communication strategies possible. Rather, it shows that there are no necessities with regards to relations, practices or orientations in mass mediation processes. In relation to the empirical field, i.e. actors involved in the mass mediation of social science, the benefit of the knowledge produced by such an approach to the media is that it offers accounts which do not reproduce professional categories and which disturb thinking that relies on co-constructed actants such as the media logic or the public. But the thesis has not merely offered a framework that allowed me to conclude that 'mass mediation practices are complex'. As highlighted above, the thesis also told empirical stories of the establishment

³⁸³ I am not arguing that, e.g., approaches inspired by Hall's encoding-decoding model are conceptualizing mass mediation as a one-way process. On the contrary, most proponents for a holistic approach to mass mediation argue for a view of mass mediation processes as complex and interactive. My point here is that they tend to hold on to analyzing the stages or elements in mass mediation processes as rather distinct from one another.

³⁸⁴ This view of communication is widely shared among media scholars with a constructivist orientation.

and maintenance of source relationships and of the performative character of empty signifiers such as 'the media logic', 'practice', 'the public', or the like. Finally, it highlighted media actors' contribution to the co-construction of social scientific knowledge.

...to STS

In relation to the broad field of STS, the thesis has primarily contributed with empirical observations, looking at actual interfaces between (social) science and society. It can be seen as a supplement to general discussions of science/society relations, or to studies of public engagement with science, by looking at concrete negotiations to co-produce knowledge claims which resonate with diverse actors' interests. It is different from studies concerned with the deliberate construction of dialogue, but has argued that moments of dialogue between science and society are inherent to mass mediation processes. It has proposed that a radical distinction between academia and its outside are both reproduced and disturbed by actors. Various actors show an understanding for – and an ability to engage with – each others' projects and agendas, but through their articulations of understanding of different rationalities or logics, they reinforce the divide between science and the media.

...to science communication studies

Elements of the thesis also feed into discussions within science communication studies – especially the subfield concerned with the mass mediation of (social) science. I believe that the thesis offers different kinds of insights, which are maybe seen as more radical within the field of science communication than within media studies, where constructivist approaches abound. On the level of theory, it disturbs the tendency to assume constitutive differences between actors such as researchers, PR-professionals, journalists and the public. This feeds into the methodological level, where the thesis has proposed an analytical framework for addressing the heterogeneity of the processes of communicating science in the mass media, and for capturing how knowledge and identities are thoroughly relational. On a more practical level, I will argue that such analyses contribute to an understanding of precisely how the complex interactivity of mass mediation is played out in specific situations of communication of research, and that this is a prerequisite for communication policy and planned communication within the field. The thesis has also added to the sparse literature on the specificities of communicating social science, and it might be an element in the pooling of resources that help us understand how the public communication of social science is different from the public

communication of science and technology. This, as Cassidy (2008: 234) has remarked, might be helpful to practitioners of science communication.

...to discussions about poststructuralist methodologies

If we consider the thesis a methodological attempt to think about relations and processes in the mass mediation of research-based knowledge in a non-essentializing way, it is relevant to ask what kind of contribution the thesis has made to ongoing discussions of poststructuralist methodologies. I believe I have illustrated the potential of a non-essentializing, constructivist framework by spelling out which kind of knowledge it has produced. But several topics remain to be addressed. For instance, it could be relevant to return to the idea of keeping the different analyses apart, rather than integrating the ANT-inspired and the discourse analytical tools into a coherent framework for the whole material. The idea was to make it visible how the different kinds of constructivism and anti-essentialism lead to the production of very different kinds of knowledge. This has to do both with conceptions of levels and the relation to data of the two approaches. In the case analyses, I have refrained from moving between levels, whereas the discourse analytical chapter jumps back and forth between the specific and the broader situation. In the case analyses, I went into the processes of constructing knowledge claims, whereas the discourse analytical chapter relied on an assumption of the constructed nature of knowledge claims. In hindsight, however, I will argue that it might produce richer analyses to operate on the basis of an integrated framework, where materialities, discourses, people and other entities are allowed to show up at the same time (as in Clarke, 2005, Irwin and Michael, 2003). The previous analyses are the outcome of a purist urge to keep different knowledge interests apart (in practices/relations and discourses, respectively) and be strict about applying distinct analytical approaches to gain insight into them. In future research, I believe it will be fruitful to leave the too strict idea of 'following the actors' traces'. The analyses are illustrative of the different approaches to the material, but a more inclusive framework could have allowed for a richer interweaving of empirical observations and analytical points through an ongoing coupling of the practical, relational aspects and the discursive aspects of the study.

Absences and possible topics for future research

While the methodological framework did produce the kind of knowledge I was interested in, it also left a number of issues untouched. I consider some of these issues quite important for the study of the mass mediation of social science, so I will devote a section to discussing some of the absences of the thesis.

The grand themes of democracy, engagement and power relations

It might seem quite remarkable that the thesis has not given attention to the democratic potentials of looking at mass mediation of science in relational (dialogic) terms, and has not addressed the issue of sharing research-based knowledge for the good of society. Dialogue and engagement have not been approached as topics of strategic action or as possible responses to democratizing ambitions with regards to science. Such issues have already been discussed – and are still discussed – intensely in the PUS literature. Instead, in this thesis, dialogue and engagement have been possible empirical phenomena, and have proven meaningful in describing parts of actor's practices and interpretations.

Although my knowledge interest has revolved more around *articulations* of democratic ideals than the issue of democracy as such, I will tentatively put forward a set of statements about the implications for democracy of some of my empirical observations. On the basis of the analyses and discussions of this thesis, I will propose that we think about researchers' access to the media as easy, that the interest for sharing research-based knowledge is great, that democratic ideals of clear communication of important knowledge abound, and that both researchers and journalists believe that securing the communication of research-based knowledge to some degree justifies their job or makes it important. Such an optimistic diagnosis of the mass mediation of social science as basically sound could be seen as an elitist point of view, and indeed, the cases of negotiation and dialogue I have reported on belong to subsections of what we could call the public sphere³⁸⁵. To be optimistic about science-society relations as such, it would be necessary to be able to extend the argument to cover other faculties and other 'sphericules', namely the parts of the public sphere seemingly unconcerned with or untouched by research-based knowledge. However, it seems fair to argue that the types of assemblage work identified in this thesis may be widespread phenomena, and if we see knowledge as circulating, the communication and use of social science does not require that everybody is directly engaged in mass mediation of research-based knowledge. It is sufficient that negotiations and the establishment of associations take place and are partly successful.

Another absence in the thesis is an explicit political or critical stance. This is commonly raised as a critique against ANT-based studies, and common answers include a rejection (and ridicule) of research projects that contain the possible answers to their questions a

³⁸⁵ Also, they have unfolded in particular geographical and economical settings – and it is dubious that my conclusions can be extended to, e.g., Third World Countries. In such settings, social science plays a fundamentally different role, and may be negotiated in very different ways. But such discussions are outside the scope of this thesis.

priori (e.g. Latour, 2005: 249-252) and the assertion that all kinds of knowledge production are inherently political (e.g. Mol, 2002). Normative considerations were part of my motivation to engage with the theme of science communication. But although I could have wished for more experimentation with dialogic formats in mass mediation, for more resources to be spent on training in communication for researchers, for more female researchers being granted expert status, or for communication officers' engagement with research rather than branding of the universities, these ideals have not played a part in the formulation of my research interests. My interests are more analytical – i.e. more concerned with exploring ways of dealing conceptually with processes, entities and emerging issues in the mass mediation of research. In that sense, democracy, politics and power relations have lingered in the background. However, having made these remarks regarding the lack of an explicit concern with power relations throughout the thesis, I will argue that power is treated through the analytical focus on the problematization and institutionalization of the communication of science to the public. The analyses show how constructions such as the imperative of making research useful or the necessity of complying with the logic of the media become hegemonic through numerous reiterations of the discourses of accessibility and usefulness through transgression. Such a focus on discursively reproduced, productive power was introduced with the discourse theoretical approach – whereas it was the assumption that power equals activity and successful alignments in the ANT-based analyses.

Time and organization in mass mediation processes

Besides the above-mentioned absences, I would like to point to the empirical issues that became less prominent in the analyses because their linkages to the other elements of the assemblages were relatively weak. They could have been explored more, and they might be strong elements in other assemblages and appear as highly significant in other analyses. I bring them up here because they could become interesting themes to pursue in future research. For instance, how the trend towards a more 'personal' journalism – with more features, portraits and experience-based voices – influences the mass mediation of science. Or how journalism is much more than reacting to current events: how it is geared to long-term planning as well. Also, the empirical material pointed to a lot of practicalities in mass mediation practices – getting parking tickets for guests in the studio, serving coffee, etc. It could be interesting to explore what the amount of practicalities may do to mass mediation processes – in my material actors talked about a need to leave reflections aside and 'just do it'. Similarly, the issue of time, which could be treated as a factor which makes mass mediation a much less controllable process for all parties involved. Finally, it could be fascinating to explore in more detail the role of coincidences and all the compromises

resulting from not being able to reach people on the phone, so as to understand the – probably great amount of – non-planned mass mediation of research.

Dealing with actors' reflexivity

My interviews testified to the reflexivity of interviewees, who analyzed their own media performances, their compliance with the media logic, their relationships and their situation, and explicitly positioned themselves as particular types of actors. My approach to this was to take it seriously and see it as performative, rather than looking at it as instances of 'false consciousness'. This treatment of interviewees' account of their work practices and relations is in line with cultural studies interpretations of scientists' accounts:

That we can deconstruct the categories that scientists use to describe themselves, possibly even prove these to be erroneous constructions, is not the point here. We need to be able to understand scientists from their own perspective, and to do that we need to examine the values they ascribe to their activities, the source of these values, and the relationship that scientists have to others involved in similar enterprises (Erickson, 2005: 142)

As such, my project is not about deconstructing the legitimacy of researchers' interpretations or descriptions of their practice, but about looking at the linkages they make. As mentioned in the methodology chapter, this approach is vulnerable to accusations of microphone holding, but the step beyond description lies in the analytical approach, not in imposing hypotheses, themes and agendas on interviewees. This is in line with poststructuralist strategies, where different tools are applied to obtain a certain degree of denaturalization (Søndergaard, 2002) in relation to the empirical material. This approach can both capture actors' own interpretations – and move beyond these by inscribing them into an analytical framework. In the case of this thesis, actors' interpretations have been inscribed into an analytical vocabulary of assemblages, actants and translations, which implies that their stories are not merely *described*. In that sense, it can also be argued that Latour, the avid defender of descriptions, is very far from being merely descriptive³⁸⁶.

I believe that throughout the analyses, the interplay of the construction work of interviewees and the construction work of the analyst could have been made clearer – as, by the way, it is the case in the compelling stories of Latour. But, as I have argued elsewhere, if we 'study sideways', i.e. as I – as a media sociologist – engage with media

³⁸⁶ See the methodology chapter for a discussion of descriptions versus explanations. It may be that a description that requires an explanation is a bad description, but so is a description which is not analytical.

actors and fellow social scientists – a lot of blurring takes place, with regards to who does the interpretation. Through working on this thesis, it has become clear to me that allowing for actors' reflexivity to form the basis of the construction of assemblages entails a range of issues regarding the quality of interview material. Both interviewer and interviewees co-construct a common horizon, where mutual understanding and dialogue become established as a rule of the game. A common language and understanding of categories constantly affirm that my sociological background and my interviewees' professional backgrounds are not at odds with each other. Our common understandings and language use turn it into a challenge to get the interviewees to 'object'. What I ask them about probably seems reasonable to them, and what they say seems un-exotic and fair to me. Because of this, a number of issues are left untouched and unchallenged – specifically the topics that are cast in a half-commonsensual, half-specialist language. In the methodology section I showed one of several examples where interviewees do not really succeed in setting agendas based on 'sociological contributions' or 'common sense' uses of sociology. Not because the latter are irrelevant or undeveloped, but because, for the interviewer, they often pass unnoticed as obvious truths or common sense. As such, a major lesson of the analyses above could be to study material produced in this way precisely for the way in which a lay sociological imagination (Mesny, 1998) blurs everything, and prevents certain probes for being made and certain traces to be followed. It might be that more confrontational types of interview could create more surprising accounts and highlight some issues that otherwise tend to disappear from view when we study sideways.

Beyond the strong actors?

A last absence to be mentioned here is that of the weak actors. The focus on examples of tight relations between researchers and editors or journalists tends to leave out actors who do not connect well with the media, or actors who are silent. A common critique of ANT is this tendency to focus on strong actors because they are the ones associating, making other actors act, etc. (Law, 1991: 13), and there is indeed such a tendency in my study. Only one of the case studies deals with troubled relationships and actors who choose to withdraw from the scene. But, as we have also seen, activity and associations are no guarantee that actor-networks stay tightly connected – this demands continuous work, and continuous management of controversies. This is only to say that strong actors are not necessarily part of lasting collectives – but the situation of weak actors, in this case actors who are more or less detached from the knowledge society, or more specifically from the production and communication of science, remains to be explored more.

To sum up, issues of power relations and gender in the mass mediation of research, the practicalities of time and organization in mass mediation of science, and the situation of uninterested or uncooperative actors could be pursued as part of future research agendas. Furthermore, a direct engagement with actors' reflexivity as a source of common reflections could prove to be central to understanding how actors ascribe meaning to, and thus constitute, their practices.

For now, the thesis has produced knowledge about particular aspects of the mass mediation of social scientific research through exploring concrete assemblages. It has sought to disassemble four instances of how texts, relations and positions were constructed and aligned in collectives. The study thus adds to a growing literature concerning the mass mediation of social science within science communication studies and science journalism studies, and a task for future research will be to add to the mounting number of exemplars in order to produce a rich body of knowledge on this topic.

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Summary in English

In 2003, a new Danish University Law added communication with the broad public to the universities' other obligations of conducting research and teaching. In the debate regarding the political demands for more communication of research, the mass media are constructed as important actors, although it is commonly questioned that the mass media offer the best forum for the communication of research. One critical line of argumentation suggests that mass mediation is a one-way communication process without possibilities for feedback and that people outside of the university are cut off from possibilities of influencing research agendas when research is 'just' communicated via the mass media. Part of the motivation behind this thesis was to explore how a focus on relations and negotiations could lead to a view on the mass mediation of research as something other than an efficient transmission process and the mass media as something else than a dubious channel for the one-way dissemination of research. Through its focus on the establishment of relations, the thesis can be seen as part of a post-structuralist move away from theorizing structures and essences towards attempting to grasp processes of linkage and emergence. Engaging insights from Actor-Network-Theory (ANT), the thesis applies the concepts of assemblages, actants and translations to capture processes of construction, i.e. the processes through which media texts, arguments, positions and relationships come into being.

The core of the thesis consists of four detailed case studies of how mass media texts come out of diverse assemblages of journalists, editors, and researchers, together with non-human elements such as symbolic resources, technologies and co-constructed ideals. The analyses are based on interviews with researchers, editors and journalists involved in the production of media texts with a social scientific content. The empirical material also includes conference papers, e-mail correspondences, letters to the editor, a journalist's manuscript, researchers' popular articles, discussion forums on the internet, minutes of meetings and other texts connected to the actors and media texts in different ways. They contribute to shed light on the construction of particular texts or relations. Apart from the case analyses and the methodological inspiration from ANT, the thesis approaches policy documents and other texts that revolve around the communication of research from a discourse theoretical perspective. Through the shifting between analytical gazes, the thesis demonstrates some of the promises and shortcomings of an ANT-inspired approach to the study of mass mediation, as well as its relation to other post-structuralist approaches that are concerned with how discursive and other kinds of practices are constitutive.

The thesis answers its overall research question 'how are media texts dealing with research-based social scientific knowledge assembled' through offering exemplars of how different types of assemblages may consist of entities such as arguments, facts, experts, ICTs, ideals, anecdotes, experience, and actants such as 'the media logic' or 'practice'. The analyses demonstrate how these and other types of entities are enrolled in diverse ways in more or less solid collectives, through more or less extensive negotiations. On a methodological level, the thesis was guided by an interest in the question of how an analytical framework informed by Actor-Network-Theory could contribute to our understanding of science communication in the mass media. It is concluded that the concepts of assemblages, actants and translations create an analytical sensitivity in relation to capturing the *processes* whereby media texts come into being, and the *emergence* of professional positions and relationships.

The thesis also seeks to address the conditions of communicating social science in the mass media. In a discourse analysis it describes the dimensions of a 'discourse of usefulness through transgression' and a 'discourse of accessibility' – which both can be seen as elements in 'a discursive field of the knowledge society'. They are identified across the case analyses as well as in central policy documents and other publicly available material on the communication of science. The discourse theoretical perspective introduces a political dimension to the thesis, with the analysis of hegemonic struggles within the discursive field of the knowledge society. It is emphasized how hegemonic articulations of the discourse of usefulness through transgression create the conditions for identity work, work practices, and relationships among actors involved in the mass mediation of social science.

Summary in Danish

Som del af den nye universitetslov i 2003 blev forskningskommunikation til en af universiteternes forpligtelser – ud over deres forsknings- og undervisning. I debatten omkring de politiske krav til mere forskningskommunikation fremstår massemedierne som vigtige aktører, også selvom der ofte stilles spørgsmål ved om massemedierne er det ideelle sted for forskningskommunikation. Bag det kritiske syn på massemediering af forskning ligger der en forståelse af massemedierne som envejskommunikation der ikke giver mulighed for feedback og som ikke giver folk uden for universitetet mulighed for at få indflydelse på forskningsdagsordenen. En del af motivationen for arbejdet med denne afhandling var at undersøge hvordan et fokus på relationer og forhandlinger kan give et billede af massemediering af forskning som andet end en effektiv transmissionsproces eller en problematisk kanal for envejskommunikation af forskning. Med sit fokus på etableringen af relationer kan afhandlingen ses som del af en poststrukturalistisk bevægelse væk fra at arbejde analytisk med strukturer og essenser, hen imod forsøg på at indfange koblinger og opståen. Med udgangspunkt i Aktør-Netværks-Teori (ANT) trækker afhandlingen på begreberne konfigurationer (assemblages), aktanter og oversættelser. Med disse begreber forsøger analyserne at indkredse hvordan konstruktionsprocesser i forskningskommunikation foregår – det vil sige hvordan medietekster, argumenter, positioner og professionelle relationer bliver skabt.

Afhandlingens centrale del udgøres af fire detaljerede case studier. De beskriver hvordan massemedietekster opstår som produkt af konfigurationer af journalister, redaktører og forskere, hvori der indgår symbolske elementer, teknologier og idealer som er konstrueret af aktører i fællesskab. Analyserne er baseret på interviews med forskere, redaktører og journalister, der har været involveret i at skabe en række konkrete medietekster med samfundsvidenskabeligt indhold. Det empiriske materiale omfatter også konferencebidrag, e-mail udvekslinger, læserbreve, en journalists manuskript, forskeres egne populariserende artikler, mødereferater og andre tekster, der er forbundet til ovennævnte aktører og tekster. Disse tekster er således med til at kaste lys over, hvordan bestemte tekster eller forhold bliver konstrueret. Ud over de ANT-baserede case-analyser indeholder afhandlingen en diskursanalyse af en række politiske dokumenter og andre tekster, som vedrører forskningskommunikation. Ved at anlægge forskellige analytiske optikker på det empiriske materiale demonstrerer afhandlingen nogle af ANTs styrker og svagheder, og positionerer sig i forhold til andre poststrukturalistiske tilgange som er

tilsvarende optagede af den konstruerede og konstituerende dimension af diskurser og andre praksisser.

Afhandlingen besvarer sit overordnede forskningsspørgsmål, 'hvordan bliver medietekster med socialvidenskabeligt indhold konfigureret', igennem de eksemplificerende cases. De beskriver forskellige typer af konfigurationer, som for eksempel kan bestå af størrelser såsom argumenter, fakta, eksperter, informations- og kommunikationsteknologier, idealer, anekdoter, erfaringer, og andre aktanter såsom 'medielogikken' eller 'praksis'. Analyserne demonstrerer hvordan sådanne (og andre typer af) elementer på forskellige måder bliver indrullet i mere eller mindre solide kollektiver gennem mere eller mindre omfattende forhandlinger. På det metodologiske plan er afhandlingen drevet af en interesse i, hvordan en analytisk ramme baseret på ANT kan bidrage til vores forståelse af forskningskommunikation i massemedierne. Det konkluderes, at begreberne konfigurationer, aktanter og oversættelser skaber en analytisk sensitivitet i forhold til at begribe det processuelle ved massemediering af forskning, altså alle de små praktiske forhold og valg, der fører til at medietekster er udformet på en bestemt måde eller at professionelle positioner eller forhold opstår.

Afhandlingen søger også at indkredse nogle af de diskursive betingelser, der har konsekvenser for kommunikationen af samfundsvidenskabelig forskning i medierne. I diskursanalysen opridses forskellige dimensioner af de diskurser der benævnes 'en diskurs om brugbarhed gennem overskridelse' og 'en diskurs om tilgængelighed'. De er begge del af et diskursivt felt, som kan benævnes 'det diskursive felt omkring videnssamfundet'. Diskurserne kan både identificeres på tværs af case-analyserne og i centrale politikdokumenter og andre offentligt tilgængelige tekster om forskningskommunikation. Igennem analyserne af hegemoniske kampe inden for det diskursive felt omkring videnssamfundet introducerer det diskursteoretiske perspektiv en mere tydeligt politisk dimension til afhandlingen. Det understreges hvordan hegemoniske artikulationer af diskursen om brugbarhed gennem overskridelse skaber betingelser for identitetsdannelse, arbejdspraksisser og forhold mellem de aktører, der er involveret i massemediering af samfundsvidenskabelig viden.

Appendix 1

List of interviews

Interview with a male PhD student with an extensive job experience outside of the university (27.07.07) – Carl

Interview with a female editor at a weekly paper (19.04.07) – Tenna

Interview with a female freelance radio producer with an academic background (14.08.07) – Cecilie

Interview with a male radio host with many years of experience (23.08.07) – Simon

Interview with a female PhD student engaged in political issues (13.04.07) – Marie

Interview with a female journalist on a daily newspaper (07.08.07) – Geira

Interview with a male professor often used as an expert source (15.08.07) – Norbert

Interview with a female writing editor on a daily newspaper (10.04.07) – Marie-Louise

Interview with a male professor who often appears in the mass media (13.08.07) – Nicholas

Interview with a male librarian responsible for the communication of research at a university (22.03.07) – Carsten

Interview with a male communication officer at a university (03.08.07) – Jens

Interview with a female communication officer at a university (22.03.07) – Heidi

Interview with a male communication officer at a university (19.03.07) – Christian

Interview with a journalist working as communication officer at a university (10.08.07) – Jonas

Interview with a researcher (30.03.07), not transcribed in entirety.

This list only includes interviews quoted in the analyses – four other interviews were too disconnected from the elements of the assemblages to be included in the analyses.

Appendix 2

Text corpus

(Chapter 4)

Email from the editor, Tenna, to the PhD-student, Carl (16.05.07)

Email from the PhD-student, Carl, to the editor, Tenna (16.05.07)

Conference paper written by the PhD-student, Carl (2006)

Newspaper essay written by the Phd-student, Carl (20.04.07)

Letter to the editor written by a newspaper correspondent to his own newspaper (16.05.07)

(Chapter 5)

Podcast of a radio broadcast, accessed on 04.12.07

Notes from a journalist's telephone conversations with debaters, obtained from the journalist, Simon

Manuscript for a radio debate, obtained from the journalist, Simon

Minutes of a feminist meeting, accessed on 04.12.07

Minutes of a political meeting, accessed on 04.13.07

Contribution to a feminist anthology written by the PhD-student, Marie

Article in a teacher's magazine written by the PhD-student, Marie

Contributions to a discussion forum downloaded from www.folkeskolen.dk/debate on 04.12.07

(Chapter 6)

Newspaper article written by the journalist Geira (the professor, Norbert, appears as expert source) (20.04.07)

Newspaper report written by the journalist Geira (the professor, Norbert, appears as expert source) (20.04.07)

News article, critical of Norbert (18.10.06)

News article, critical of Norbert (23.10.06)

Letter to the editor in a daily newspaper – regarding Norbert’s use of numbers (05.07.07)

Letter to the editor in a daily newspaper – regarding Norbert’s lack of evidence (14.09.06)

Letter to the editor in a daily newspaper – regarding one of Norbert’s statements (03.05.07)

Letter to the editor in a daily newspaper – regarding Norbert’s interpretations (25.04.07)

(Chapter 7)

Article where the professor, Nicholas, appears with a lengthy quote (10.03.07)

Article written by the journalist Marie-Louise (the professor, Nicholas appears as expert source) (29.01.03)

Article written by the journalist Marie-Louise (the professor, Nicholas is interviewed regarding his view on science communication) (17.06.04)

(Chapter 8)

The Danish University Law of 2003

'Research and tell', report from the Think Tank on the Understanding of Research. Published by the Ministry on the 26.05.2004.

Status report 2006: 'Dissemination of research', the communication department at Copenhagen University

Copenhagen University's strategy for the dissemination of research and knowledge, 2005

Article in the magazine 'Kommunikatøren' (The Communicator), December 2005. Thematic issue on the dissemination of research

Strategy for a research group at Copenhagen Business School

Project description: 'Communicative research – Development of tools and competencies to strengthen researchers' credibility in their communication with the surrounding society', The Danish University of Education

The brochure 'Book a researcher – 24 Hours of Research 07 – 24 Hours with research at eye-level', published by the Danish Ministry of Research and Innovation

Editorial in the magazine 'Kommunikatøren' (The Communicator), December 2005. Thematic issue on dissemination of research

Interview with the communication director of a research-based company in the magazine 'Kommunikatøren' (The Communicator), December 2005. Thematic issue on dissemination of research, p.9

Interview with an often quoted philosopher in the magazine 'Kommunikatøren' (The Communicator), December 2005. Thematic issue on dissemination of research, p.16

The list above only includes texts quoted in the analyses – a number of other texts were too disconnected from the elements of the assemblages to be included in the analyses.

