



Interpreting Television News

Gabi Schaap

Mouton de Gruyter

Interpreting Television News



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Editors

Karsten Renckstorf

*Department of Communication, Radboud University Nijmegen
The Netherlands*

Keith Roe

*School of Mass Communication Research, University of Leuven
Belgium*

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by

Gabi Schaap

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Chapter 1

Interpreting television news: Introduction

Gabi Schaap

When news was introduced on television in the USA and Europe in the 1940s and 50s, its current popularity among program makers and public was not always immediately evident (Bourdon, 2001). In those early days, journalists regarded the new medium of television as primarily destined for entertainment, and were of the opinion that serious information had no place in such an environment. In many cases, news editors had to fight tough battles to bring news to the new medium. Besides unwillingness, technology was another factor complicating an easy rise to popularity (cf. Bardoel, 1996). Hindered by not yet adequate recording and transmitting equipment and distribution chains, news was often obsolete by the time it was broadcast. The presence of visual footage determined, then just as now, whether a subject was fit for the news program. Only back then, visual images, let alone moving pictures, were very hard to come by. One legendary story from the early days of television news in The Netherlands (where television news did not start until 1956) tells that in 1957, when filmed footage from abroad was still flown in by plane, one December evening the TV-screen showed just the text; ‘Due to fog, tonight no foreign news’ (Van Liempt, 2005). In these circumstances, it is not surprising that news broadcasts were restricted to only a few bulletins a week.

Soon however, as the number of television sets increased, it became clear that the popularity of televised news with the audience could hardly be underestimated. The public loved television news, and when program directors reacted by increasing the number of bulletins and settling on fixed formats, in the 1960s and 70s watching the evening news became one of the most important evening occupations, in some countries to the point of becoming a national ritual (Bourdon, 2001; Van der Molen, 1989). Later, the introduction of new technologies such as video and satellite transmissions permitted faster and more sophisticated news formats, and the emergence of 24 hour worldwide news channels, and today no self-respecting television network can do without at least one regular news program.

Although some voices may claim otherwise, in the current age of the next generation ‘new media’, television news is still considered a major player in the democratic process. For one, television news was, and still is the public’s self-

acclaimed ‘main source’ (cf. Robinson & Levy, 1986). In 2001, that is, around the time of our main data collection, in 15 European countries, Eurobarometer research shows a striking central role of television news (Groothues, 2004). At this time, more people get their news from television than from newspapers. Whereas on average 40 % of the European citizens obtain news from newspapers, 69 % watch television news every day, and of 89 % of the viewers watch news on television several times a week or every day (Figure 1). Although regional differences are significant, for at least 55 % of the European population television is a source of news, rising up to over 90 % of the population watching the news everyday or several times a week in some countries. Moreover, trend studies reveal that the importance of television as the chief source of information has been increasing since 1994. It seems that television is still a force to be reckoned with when it comes to public information.

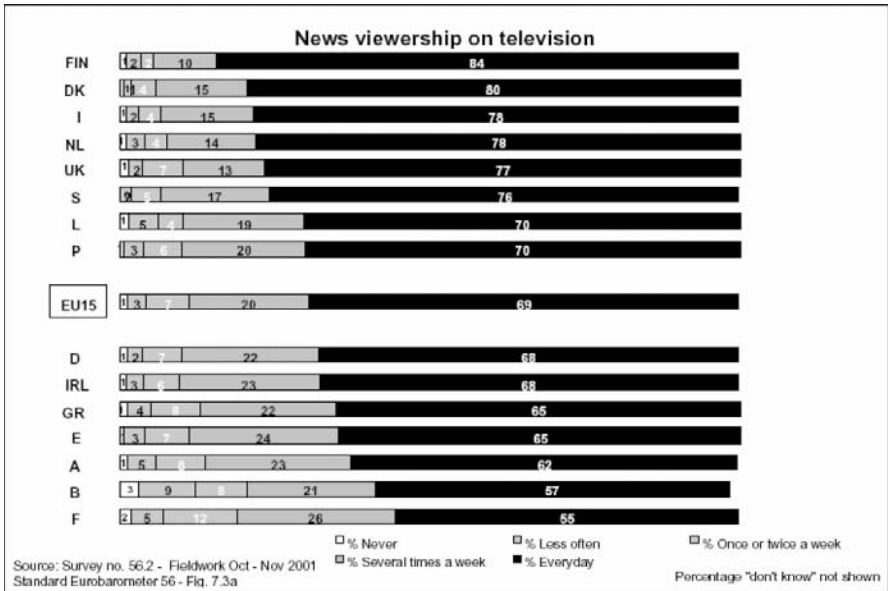


Figure 1. News viewership on television (source: Groothues, 2004, p. 6).

As for the majority of citizens the news on television is their most frequent and most trusted source of information on current affairs, those in power regard it as a powerful, although sometimes frustrating tool to inform and influence potential voters on the issues and viewpoints they find important. The inevitable public relations officers in the service of public advocates battle to give their employers press coverage and the opportunity to define issues (Cottle, 2003). Above all, their aim is to have their employer on the evening news, for which reason they write short, simple but catchy sound-bites. Television news

is thought to have the potential to influence what people think about, to affect public involvement (be it positively or negatively), to alter – not necessarily improve – people’s knowledge and understanding, and ultimately to affect attitudes and opinions. Very generally speaking, there are two opposing perspectives from which this influence has been evaluated. In the optimistic view television news can enlighten ordinary citizens, increase their involvement, knowledge and understanding of what is important to know, and educate them into being rational voters. The pessimistic perspective sees television news as a dispenser of biased (either left-wing or right-wing) disinformation, the prime instrument for keeping the ‘masses’ quiet to perpetuate the status quo in the hands of those already in power, or conversely, to destabilize society. As a result, viewers hardly pick up any useful knowledge from the news, and television news may even lead to increase of cynicism in regard to politics.

Media effects and audience activity

Whatever the viewpoint, the power of television news often seems to be accepted as a given. However, for media researchers the issue of television news effects is for a large part still unresolved; if, when, and how, television news does indeed exert this supposed power is not clear cut. Consequently, it is not established whether television news actually does have the much feared or hoped for contribution to society.

Central to the problem of media effects in general has been the problem of audience activity. After the experiences with World War 1 and 2 propaganda, and especially with the advent of radio and television, communication research has been occupied to a large extent with solving this problem. The incorporation of for instance psychological theories on information processing, and the development of ‘active audience’ theories of which the Uses and Gratifications paradigm are only some better known examples to illustrate that the question ‘what is the role of recipients in the effect of media messages?’ has perhaps become the most central question in communication research (cf. Renckstorf & McQuail, 1996).

The issue of audience activity has been the underlying motivation for the present volume. But audience activity can take on many different forms; viewers select messages, pay attention to certain parts of these messages, process some of the information to some degree, think and talk about the messages with others, and so on. Levy and Windahl (1983) have posited that audience activity can be divided according to the three moments at which they occur: Before, during, and after exposure to a message. The focus in the current project is how viewers deal with television news when they are watching it, how they actively – or not so actively – shape it and make it into something of their

own. In other words, we address the question of effects by focusing on audience activity in terms of interpretive processes through which viewers make sense of the news.

Current mass communication research holds that this interpretive process equals dealing with and processing of information in all shapes and forms. The product of this process – according to the perspective adopted in this project – is an interpretation, a reconstruction of information in the news into a more or less coherent whole. Viewers build their own story of an event or issue, they elaborate on the parts that resonated with them, leave out parts that did not, infer what was meant by actors, invent reasons for why things happened and mash all this into their picture of a specific event or issue. It is this viewer-made, subjective reconstruction of the news message and not some ‘objective’ news content that will determine the ultimate effect of the news. This is the fundamental assumption in this project, and it is an important one, as it suggests that research on how people interpret the news is essential. A further assumption is that because viewers’ knowledge differs from each other in many ways, according to their biographical background, the meaning different viewers give to the same news will differ in many respects as well (Renckstorf & Wester, 2001; Schaap, Renckstorf & Wester, 2001). Here, these notions are the theoretical starting point for research on how viewers interpret the news as they watch it, most notably on differences in interpretations between different viewers.

Interpreting television news: The project

In this book it is maintained that understanding the process of mass communication requires an understanding of audience interpretations. In television news research, little attention has actually been given to this mediating step in the route between exposure to a message and its consequences. Only occasionally researchers have asked how viewers interpret the news, and what factors determine how they interpret it.

One of the main problems is that interpreting the news is at least partly an internal and therefore covert mental action. Interpretations are inside the minds of people, they remain covert and they are therefore not directly observable as overt external behavior is (Hendriks Vettehen, Renckstorf & Wester, 1996). Furthermore, measuring the subjective meanings people attach to their environment is probably one of the most complex problems one could embark upon in social sciences. Meanings are intangible, consisting of hard-to-communicate things such as emotions, pictures, even sounds and smells. Only through intense conversation it may be possible to get an idea of what someone really means, to approach all the complex and different dimensions

of the meaning or sense one gives to some aspect of life. Even long-time spouses, friends or colleagues still have difficulties achieving this, which can account for some unpleasant misunderstandings. Because of both its elusiveness and its importance for understanding media effects, finding out what recipients do in their minds with messages at the moment they are exposed to them may be likened – with slight exaggeration perhaps – to the Holy Grail of communication research.

Because of the complex and covert nature of interpretation, researchers often resort to the only other alternative; inferring interpretations from directly observable behavior (Hendriks Vettehen, Renckstorf & Wester, 1996). In the case of television news this most often means extrapolating the success or failure of information transfer from what recipients can recall from the news. Although this type of research can be very productive, it willingly or unwillingly leaves out much information. Experimental measures of recall of news facts, telephone surveys on what people remember and understand from the news and even measures of viewer evaluations of the news do not capture the full richness of people's interpretations (Gunter, 2001). In Chapter 3 it is argued that in order to reconstruct these covert interpretations and to approximate their richness to some level of detail, it is necessary to study viewers' interpretations from *their* point of view. This means giving viewers the freedom to communicate to the researcher in their own idiom, as opposed to the researcher's how they interpret a news event. One of the main goals of the current project was to find a conceptualization and companion measurement instrument that have the potential of getting to that richness, and doing it in a theoretically sound and methodologically systematic manner.

In psychology there have been numerous studies on interpretations of mediated messages, almost all on persuasive communications such as advertisements (cf. Petty, Ostrom & Brock, 1981). Often, these studies use methods that allow participants to verbalize their interpretations. Through these strategies, important parts of covert interpretations are in effect made overt. Here, a number of the concepts and methodological solutions from this type of research have been put to use in research on television news interpretation. However, these studies tend to measure attributes of interpretations from a particular researcher's idea of what is relevant, such as the number of positive and negative thoughts towards an advertised product. As the ultimate goal is to produce an image of audience interpretations from *their* own point of view, we devised our research approach to represent this point of view (Chapters 3–6). This meant that while there was a preconceived concept of interpretation in this project (i. e., the interpretation of television news is seen as a model consisting of related components), and a general system for categorizing components was also adopted beforehand, the input acquired from research participant's interpretations was important in the development of the measurement instrument.

Research objective

In short, this project holds that a television news viewer is an active processor who in interpreting the news, manipulates, elaborates, and integrates the information as it is received, using previously acquired knowledge. The manner in which this knowledge is combined and integrated with previous information is a major focus of this study. Thus, this is the main question in this volume: (How) Do different audience members interpret identical television news messages differently?

Practically, this focus resulted in two more or less separate goals. First, it was our intention to capture the immediate interpretation of television news messages at the moment it happens, and from a viewer's point of view. This meant developing a method that enabled the capturing of such data. Second, in order to get to know more about how different audience members interpret the news, we wanted to assess the extent of differences between interpretations of different viewers. This required a concept and subsequent operationalization of 'interpretation' that would enable systematic comparison between different interpretations containing possibly a wild array of different meanings. As explained above, it is impossible to assess objectively the exact 'meanings' contained in interpretations. Therefore, we used a concept of interpretation that concentrates on two *structural* aspects: Differentiation and integration. Differentiation and integration together determine the *complexity* of an interpretation, that is, the degree to which an interpretation distinguishes between several elements of an issue reported in a news item, and the degree to which such elements are interconnected. In other words, what we eventually measured was differences in elaborateness and cohesiveness in interpretations, as crude indicators for differences in meanings in interpretations.

In our theoretical perspective, subjective interpretations of a news message – and not some 'objective' news message itself – are important in determining the effect of a news broadcast. Therefore, the focus of this project is almost entirely on the viewers' side of the equation; the power of the viewer, and not the power of the news is central here. This does not necessarily mean we deny the power of mediated messages to affect receivers; however, much uncharted territory is on the viewers' side.

Thus, the main goal of this project is to investigate whether and how viewers differ in their interpretation of television news. Because of the necessity to develop somewhat deviant concepts and instruments before we would be able to achieve the goal of measuring interpretations, the volume has a more or less dual character. A large part of it is directed to the development and testing of this concept and instrument. At the end of the project an inevitably limited empirical study was conducted (the 'main study'), which because of the method's novelty has more of an exploratory character than a proper theory-testing investigation.

Lay out of the volume

The volume is a hybrid between a collection of published and to be published articles, all related to the same subject in addition to more regular ‘book chapters’. Because of this hybrid format, some arguments reappear at various points throughout the book. Therefore, the reader is advised, when confronted with such a repetition, to simply skip that part and move on to the next ‘new’ part.

The earliest publication dating back to research from 1997, together, the chapters do aim to provide a cumulative insight in the various stages of the project. The book does so in what may be seen as three distinctive parts: Part I covers the theoretical background to the study, and in part II the various efforts to construct an adequate method for empirical research are documented. In part III an empirical study is reported, and finally in part IV the entire project is discussed.

The first, ‘theoretical’ part of the book opens with Chapter 2 (‘Three decades of television news research: An action theoretical inventory of issues and problems’). While this chapter was originally written as a review of research on television news, it also functions as the larger theoretical background to the project. From the review of television news research it is concluded that relatively little research has been done on the interpretation of television news, which is therefore chosen as the main objective of this volume. In Chapter 3 (‘Conceptualizing television news interpretation by its viewers: The concept of interpretive complexity’), a more specific conceptualization of television news interpretation is constructed, partly stemming from this more abstract theory. Here it is proposed that news interpretation can be seen as a reconstruction, or ‘model’ of the news, consisting of various interconnected components. These components can be studied in terms of their frequency of occurrence (called ‘complexity’).

We chose this specific conceptualization of news interpretation in order to be able to define and study interpretation differences. In the second part of this volume, the issue is how to make this conceptualization measurable. As there were no ready-made instruments available, Chapters 4–6 are stepwise efforts towards the development of an instrument to measure the components of thoughts that have been reported by viewers while they watch the news. In Chapter 4 (‘Using protocol analysis in television news research: Proposal and first tests’), a method for verbalizing thoughts is chosen and adapted to accommodate verbalization of thoughts by viewers while they are watching the news. In the subsequent chapters, this data gathering instrument is supplemented by an analysis instrument that enables the analysis of the components and complexity of verbalized thoughts.

The third part may be called the empirical section, in which the results of the main study on the nature and complexity of news interpretation and its relation to viewer characteristics is reported (Chapter 7: ‘The complexity of television

news interpretation: Main study'). In the fourth and final part, the results of this study and its conceptual and methodological merits are discussed in a larger perspective (Chapter 8).

Each chapter consists of the original unabridged article. Chapters 7 and 8 are as of yet unpublished.

Chapter 2, entitled 'Three decades of television news research: An action theoretical inventory of issues and problems', was previously published in K. Renckstorf, D. McQuail, & N. Jankowski (Eds.), *Television news research: Recent European approaches and findings* (pp. 47–90). Berlin: Quintessence Books (2001).

Chapter 3, entitled 'Conceptualizing television news interpretation by its viewers: The concept of interpretive complexity', was published in *Communications: The European Journal of Communication Research*, 30, 269–291, (2005).

Chapter 4, entitled 'Using protocol analysis in television news research: Proposal and first tests', appeared in K. Renckstorf, D. McQuail, J. Rosenbaum, & G. Schaap (Eds.), *Action theories in communication research: Recent developments in Europe* (pp. 115–140). Berlin: Mouton-De Gruyter (2004).

Chapter 5, entitled 'Measuring the complexity of viewers' television News interpretation: Differentiation', was published in *Communications: The European Journal of Communication Research*, 30, 459–465. (2005).

Chapter 6, entitled 'Measuring the complexity of viewers' television News interpretation: Integration' was published in *Communications: The European Journal of Communication Research*, 33, 211–232.

An earlier version of Chapter 7, entitled 'The complexity of television news interpretation: Main study', was presented at the 25th IAMCR Conference in Cairo 23–28 July 2006.

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Chapter 2

Three decades of television news research: An action theoretical inventory of issues and problems¹

Gabi Schaap, Karsten Renckstorf and Fred Wester

Abstract

One of the problems in reviewing television news research is the enormous amount and diversity of studies. In this research inventory, an action theoretical frame of reference for the study of television news is applied in order to provide a systematic, consistent and theoretically coherent overview of some 250 recent television news studies published in the period 1970–1998. Using the reference model, 10 major research domains are discerned. Past research efforts have not been evenly distributed among these domains. Furthermore, this review uncovers a lack of theoretical coherency. We conclude that research efforts up until now have not lead to definitive insights into either the impact (i. e., effects, consequences and results) or the social functions of televised news. Finally, proposals for updating the research agenda are presented and suggestions made for future research in the field.

Introduction

In accordance with the most prominent role ascribed to television news in modern western societies, television news has enjoyed the attention of communication scholars throughout the world for several decades. Both experts and laymen alike have been fascinated by the presumed influence of television news on individuals, groups and society as a whole.

Television news was said to be ‘the all-seeing eye’ (cf. Bogart, 1980; Dahlgren, 1986; Stam, 1983), and today, television news is still thought to be particularly influential, partially because of the immense public popularity of news programs (cf. Frank, 1985). This popularity can hardly be exaggerated. In the Netherlands, for example, Arts, Hollander, Renckstorf and Verschuren (1990) claim that 66 % of the population say they watch the news at least once a day. Another study says 73 % of the Dutch watch television news everyday (Hendriks Vettehen, Hietbrink & Renckstorf, 1996). In Germany, 66 % of the people claim

they watch the news on a daily basis (Schulz, 1982). Hagen (1994a) claims that more than half of the Norwegian adult population watches the national news bulletin every evening. This is why television news has been referred to as the people's main source of information (Robinson & Levy, 1986a). A large part of people's image of reality is said to stem television news information (cf. Allen & Kuo, 1991; Findahl, 1994). Furthermore, televised newscasts are thought to play an important role in the realm of public opinion and citizen democracy. By informing rational citizens and generating political discourse in society, television news is assumed to have a positive influence on democratic processes by creating a 'public sphere' – in cooperation with other news media (cf. Graber, 1994; Hagen, 1994a; Jensen, 1986, 1988; Kleinnijenhuis & Rietberg, 1994; Schulz, 1976; Dahlgren, 1980). Furthermore, individuals frequently express a felt obligation to 'keep informed' (cf. Hagen, 1994a; Höijer, 1990; 1996). In sum, both the seeming dependence of the public on television news and the democratic climate in western societies suggests that television news plays an influential role in modern society. Thus, television, with its mass audience could contribute considerably to public debate of which the reasoned, rational outcome should be the basis for political processes (cf. Davis & Robinson, 1986).

The classical distinction between the so-called 'public' and 'private' spheres has been under discussion for some time (cf. Habermas, 1989). Especially regarding broadcast news, several authors have expressed in rather diverse fashions their concern with an apparent trend in which the two spheres seem to be converging (cf. Tuchman, 1978; Van Zoonen, 1991; Dahlgren, 1980; 1995). The 'rational' view of liberal-critical democracy and the presumed role of television news in it, however, has proved to be not entirely consistent with the overwhelming majority of scientific findings (cf. Blumler, 1979; Dahlgren, 1980; Gunter, 1987; Findahl & Höijer, 1985; Katz, 1977). First, many critics have pointed out that broadcast news, instead of fulfilling democratic ideals, merely covers dramatized, superficial and distorted reports of events (cf. Davis & Robinson, 1986; Patterson & McClure, 1976a).

Furthermore, the concept of a 'well-informed citizen' who makes political and social decisions based upon rational assessments of public interest, turned out to be a rather idealistic one. Empirical results show that citizens are much less rational and all the more emotional in their informational and decisional behavior (cf. Brosius & Mundorf, 1990). According to some, this is most effectively illustrated by results indicating that viewers remember disappointingly little from the news (Berry, 1983; Giegler & Ruhrmann, 1990; Graber, 1990; Gunter, 1987; Katz, Adoni & Parness, 1977). Usually, viewers of television news are able to recall between 20 % and 25 % (Stauffer et al., 1983; Giegler & Ruhrmann, 1990; Peeters, 1991b) or even less (Neuman, 1976; Berry, Gunter & Clifford, 1980) of the news items presented. Only when cued, people are able to remember up to 50 % of what they watched (Brosius, 1989, 1990; Berry, 1983;

Findahl, 1994; Neuman, 1976; Renckstorf, 1980). Understanding the news items seems to be even more problematic; people often misunderstand news items. Sometimes viewers simply misinterpret items other times they even add facts to the news (Findahl & Höijer, 1976, 1985; cf. Robinson & Davis, 1990; Woodall, Davis & Sahin, 1983). In other words, people who watch the news do not seem to learn what they ought to learn from the news (cf. Robinson & Levy, 1986; Robinson & Davis, 1990). Therefore, some scholars suggest abandoning the rational-cognitive approach to television news research (cf. Griffin, 1992).

Inconsistencies

Citizens turned out to be less 'rational' and less 'informed' than it may appear (cf. Wittebrood, 1992). The expressed need to keep informed in order to be able to function as a proper citizen, obviously, is not all there is to news viewing. People use television news for multiple reasons: Information, entertainment, escape, a source for social integration, or otherwise (cf. Stam, 1983; Bogart, 1980; Csikszentmihalyi & Kubey, 1981; Hagen, 1994; Hermans & Van Snippenburg, 1993; Jensen, 1990; Robinson & Davis, 1990). Consequently, the idea of a positive impact of television news on democratic processes nowadays is no longer unchallenged (cf. Davis & Robinson, 1986; Golding, 1994). The influence of television news on public opinion is considerable, according to some (cf. Iyengar, Peters & Kinder, 1982; Adoni, Cohen & Mane, 1984), and highly overrated according to others (cf. Höijer, 1990a).

Moreover, recent studies undermine much of the (positive) influence attributed to television news in earlier research. Consequently, the last decade has seen a considerable rise in television news research questioning the influence and function of television news. Leaving behind the early, rather optimistic 'rational' perspective, alternative approaches were developed, but alternative conclusions are still largely inconsistent and incomplete.

In spite of recent research findings, the general public, as well as some scholars persist in emphasizing the emancipatory potential of the news. But again, in contrast to the amount of studies, there seems to be no agreement on how findings should be interpreted and integrated in existing theories. Thus, television news research is a highly controversial field and outcomes still remain rather inconclusive (cf. Findahl, 1994; Merten, 1977).

Objectives of inventory

To scholars, experienced or not, who want to enter the field and contribute to television news research, the impressive amount and confusing diversity of studies still constitute a rather unstructured bulk of knowledge (cf. Findahl & Höijer, 1981b). Of course, this may be due to the complexity of the subject, but

the absence of a systematic overview of the field may also be relevant. What is needed, we feel, is a systematic inventory of television news research. Such an inventory should outline the research issues that have been investigated and the types of research problems that have been discerned, thus enabling an accumulation of insights. Applying a social action perspective as frame of reference (cf. Renckstorf & Wester, 1992; Renckstorf, McQuail & Jankowski, 1996), we classify and discuss systematically some 250 recent television news studies during the period 1970–1998 in order to point out ‘gaps’ of the past and to define some new issues for a future research agenda in the field of television news research.

An action theoretical perspective

Ever since Katz (1959) stated that communication research should first and foremost study ‘What do people do with the media?’, conceptualizations of the media audience have changed radically, the focus of communication research shifting from media-centered to include audience-centered approaches. Recently, this shift has included the adoption of interpretative concepts by a number of audience-centered researchers (cf. Anderson & Meyer, 1988; Charlton & Neumann, 1985; Renckstorf & Wester, 1992; Renckstorf et al., 1996).

Social action perspectives in mass communication research

Although audience-centered models are rather diverse in nature, they share the view that *social action*, including media use, takes place in a context of both social-cultural and biographical factors (cf. McQuail & Windahl, 1993; Renckstorf et al., 1996). Against the background of society as well as social and individual characteristics, different situations and individual encounters must be defined by actors. These *situation definitions* lead to further action, among which media use. In later stages, these actions will be evaluated by the actor, leading to new definitions, leading to new actions and so forth.

According to the social action perspective applied here mass communication is to be studied from an audience-centered point of view (cf. Bosman, Hollander, Nelissen, Renckstorf, Wester & Van Woerkum, 1989; Renckstorf & Wester, 1992; Renckstorf, 1994; Renckstorf & McQuail, 1996). ‘Audience activity’ is presumed to start from the objectives, intentions and interests of the participating actors, and social action is regarded as symbolic by its very nature. This means that actors have to interpret all components of an action. The encountered situation, objects in that situation, the action of other persons in the situation, and the actor’s own actions must be interpreted, that is, provided with *meaning*. In this way, the actor can design future actions. *Interpretation*

by the social subject is perhaps the most fundamental concept in the social action perspective. However, this does not mean that each separate situation has to be interpreted anew. A large amount of everyday experiences can be *routinely* interpreted and does not ask for further reflection (Schütz & Luckmann, 1979; Zijderveld, 1974). Social institutions, including mass media, are representations of crystallized patterns of shared meanings. In a way, institutions are the ultimate form of routine activities.

Media use is seen as just one type of social action, competing with many alternative ways of social (inter)action open to the subject. Consequently, watching television news is just one of a large array of alternative ways to use the media. Media use is thus conceived of as a “‘Normalfall’ sozialen Handelns” (Renckstorf, 1977: 12). This means that media use is completely embedded in a social nexus; this implies, for example, that a viewer while watching the news has to ascribe meaning – *uno actu* – to the news items, the viewing situation, other people present and his own actions as well.

Summarizing, the social action perspective – applied here for review purposes – is based on three main premises: (1) media use is conceived of as social action, (2) the audience is seen as active and central in the process of mass communication, (3) human (inter)action is symbolic and must be interpreted before it can be used to design further action.

An action theoretical model: Ten domains of television news research

There are a number of consequences of adopting a social action perspective on the use of media, as can be seen in the action theoretical reference model (see Figure 1). The *media*, c. q. *television news*, and the *information* they offer, are conceptualized as mere ‘objects’, part of an infinite universe of ‘objects’. A given situation, an event, occurs to which the *institution* television news may pay attention – or not. Situated in a surrounding context of *social networks*, a person may decide to take notice of the ‘event’ reported by the media. If the person chooses to do so, he/she must *define the situation* according to his/her social and psychological backgrounds. After evaluating this definition the actor can design alternative modes of actions, for instance, looking for more, or better, or different information, or otherwise. In the long run, patterns of television news use are likely to evolve and the viewer may be *socialized* by, or develop on his own and manifest (i. e., *objectivation*) conventions of news watching and understanding.

According to the social action perspective, the processes of *television news making* and – as a complement – *making sense of the news* are seen as processes of reality construction. Television news hereby functions as one of the functional alternatives in a universe of social objects to which a person can decide to direct his attention in order to get the information needed at a given point.

Furthermore, the news viewer has to give meaning to the symbolic content of the news. The audience members, conceived of as *meaning makers*, thus, construct their own separate image of reality – against the background of personal goals, motives, or in other words, personal relevance structures (cf. Dahlgren, 1986; 1988; Woodall, Davis & Sahin, 1983; Jensen, 1988; Höijer, 1990). The role of television news is merely to offer audiences a limited universe of information – objects for interpretation (Dahlgren, 1986; Findahl, Hanssen, Höijer & Höijer, 1969; Höijer, 1990b).

Having sketched the social action perspective, we narrow down this rather broad perspective for mass communication research in general through several theoretical topics that describe *domains* of television news research, specifically. Covering all the different steps of news making and news reception as defined by the action theoretical reference model, these domains serve to achieve a comprehensive overview of *issues* and *problems* in recent television news research. Originally derived from a social action perspective for research on ‘the need for public information’, Renckstorf and Wester discerned 10 domains of relevance for the study of television news use (Renckstorf & Wester, 1993; cf. Bosman et al., 1989).

The first domain of television news research is the domain *Situations*. This term refers to all events of which the media may take notice. People learn about situations via personal experience, interpersonal communication in their social network or further communication processes. Together, all of these experiences represent the social stock of knowledge. The individual viewer is confronted with information about events in a news item that represents a selection and an interpretation by the news (cf. domain 2) out of an endless range of situations in reality.

Institutions are the crystallization of social actions in society. Like schools, marriage, politics and religion, the media are social institutions built up in order to solve specific social problems. Inside institutions, social action as well as interaction situations are well-defined, and often of a highly routine (or professional) nature. Specifically, the institution television news provides a selection and a description of events that is specific to that particular medium and its professionals (i. e., journalists).

The individual audience member does not operate as an isolated entity. Each individual has an own place in social reality, defined by *Social Networks*. Networks are of extreme importance to the information a person gains and as such to the individual’s identity and self-image. Central in the process of creating a meaningful image of reality and self, is the interaction with significant others, either on a personal, face-to-face level or through the media, to acquire information about the surrounding world. Here, social networks are regarded as separate sources of information about the surrounding world, next to institutional sources such as television news.

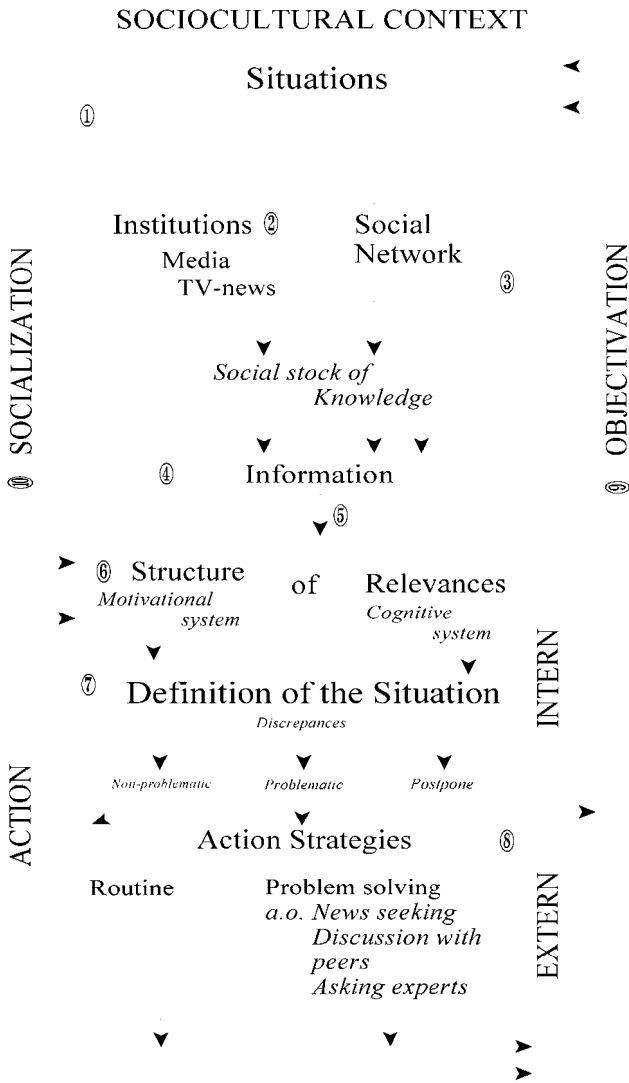


Figure 1. An action theoretical model for the study of television news use, reduced version (cf. Renckstorf & Wester, 1993, forthcoming).

The entire range of definitions of situations a person is confronted with by the media (i.e., television news items) or otherwise, is called *Information*. Information is treated here as an ‘observer construct’ (Dervin, 1983). That is, information is seen as an *objectively describable entity* of knowledge about a given situation/event/thing, thought of as being transferable from “system to user” (Dervin, 1983: 173).

The fifth domain, *Interaction Situation*, refers to all situations in which a person acts as recipient of information. Regarding television news research, interaction situation concerns the situation in which news watching takes place. The social action perspective regards watching television news in terms of everyday action patterns. On the basis of characteristics of this situation (e. g., other people present, other activities going on), as well as his/her subjective relevancies, it is the recipient who constructs his/her own subjective definition of the situation (cf. domain 6).

Relevance Structure, domain 6, refers to the *conditions* for internal action (whereas the *process of thinking* refers to domain 7). These conditions are formed by the structure of the individually held stock of knowledge and meanings. It consists of the cognitive and affective aspects knowledge represents to the viewer, which is organized in a hierarchical manner, or *structure of relevancies*.

By confronting incoming information with this relevance structure, a *Definition of the Situation* is created by the news viewer regarding the news event. Domain 7, *Definition of the Situation*, refers to both *the interpretation process* (i. e., *defining* the situation) as well as to the end product of this process. The television news viewer establishes at this point whether the new information received by watching the news brings forward discrepancies with previous knowledge, that is, 'information' in the sense of 'user construct of information' (Dervin, 1983). In the case of television news, problematic discrepancies seem to be relatively rare. Consequently, in most cases it is not necessary for the viewer to adjust his stock of knowledge or motives. The successive news items of a television news broadcast require successive processes of interpretation, so further action on an item may be postponed until after the news.

Once the problematic or unproblematic status of television news information has been assessed, the individual is able to design further *strategies of action* (Domain 8). As most processing of the news is probably unproblematic, normally, design and execution of actions is a matter of routine; when the news is over, the individual goes on to do other things. It is assumed that television news watching is generally performed at low activity levels.

Objectivation, domain 9, as well as the following process of socialization, refers to a different level of analysis; patterns in recurring episodes of news watching. In taking into account these two domains, we look at the way in which the processes described above, are being put down in behavioral and interpretative patterns. Objectivation is the process during which habitual problem coping is constructed. Actions and situations that recur regularly are put down in cognitive schemas for routine use. In this context, objectivation is the forming of patterns of television news viewing.

Finally, the tenth domain, *Socialization* refers to the process in which the individual becomes a member of society. Institutions try to transfer specific meanings

and behavioral patterns to the individual. By socialization we mean the process of internalizing of these meanings (the 'social stock of knowledge') and behaviors by the actor in its own subjective stock of knowledge. In the case of television news, the social stock of knowledge signifies 'what is taken for granted', what everybody knows or rather what everybody is supposed to know in order to understand television news (cf. the concept of television news 'discourse').

Ten domains in television news research: Issues and problems

We apply the ten domains of an action theoretical perspective on television news research in an attempt to order and classify recent television news studies. As mentioned earlier, our main objective is to realize a systematic inventory of recent television news research that gives us insight into points of focus and the latitudes of this field of communication research.

In total, some 250 studies carried out between 1970 and 1998 were reviewed and classified. Of course, we do not pretend to present a complete list of all television news studies; for example, the field of 'political communication' is not represented (cf. Schulz, 1997; Jarren, Sarcinelli & Saxer, 1998). Nevertheless, we hope to have considered most of the major television news studies in this period of time. Starting from a vast base of television news studies present at the Department of Communication at the University of Nijmegen and drawing upon several bibliographic CD-ROM databases, we employed a so-called 'snowball strategy' in order to find relevant literature.

We placed each single study under one or more domains of the action theoretical reference model (cf. Figure 1), based both on the questions asked and the conclusions drawn in the study. Thus, our focus is *conceptual*, i.e., we try to assess and define research issues and problems, not to provide a complete overview of findings. In the final section, results are discussed and suggestions made for further investigation.

Domain 1: Situations

Television news is a partly routinized representation of selected 'events'. Items that appear in the news are selections and interpretations made by professional journalists; only a fraction of all 'real world' events are selected according to specific (news) values of their profession. The actual process of news making is part of domain 2: *institutions*, whereas here we discuss the events selected as part of all possible events in the 'real world'. Studies in this domain, *situations*, can be categorized according to two research issues: News events as a specific selection of 'real world' events, and the news event as a true account of the 'real world' event.

Issue: news events as a selection of 'real world' events. Although events mentioned in the news are virtually unlimited in nature, much of the 'thematic content' of the news is repetitive (Dahlgren, 1980; 1986). Most news is about events from only a few specific sectors of society. Inherently, parts of reality are included in the news, while others are not, or much less so. A number of studies address this issue. Berkowitz (1990), for example, found particular selection patterns of events for broadcasting. Of 391 potential stories, only 58 percent was aired. Research has focused on the most frequently selected events, such as elections (Hallin, 1992; Keeter, 1987; Kosicki, Becker, & Fredin, 1994; Leroy & Siune, 1994; Meadow, 1973; Shapiro, Young & Patterson, 1991), war (Pan, Ostman, Moy & Reynolds, 1994; Servaes, 1991; Lo, 1995; Steele, 1995; Soderlund, Wagenberg & Pemberton, 1994; Liebes, 1992b; Iyengar & Simon, 1993), major socio-cultural events like legal cases, riots, and policy processes (Slotnick, 1993; Hunt, 1993; Taras, 1989; Hofstetter & Buss, 1978), environmental or crime issues (Behr & Iyengar, 1985; O'Keefe & Reid-Nash, 1987; Graber, 1979; Reeves & Campbell, 1994; Fan et al., 1994). In addition, research effort has focused on media coverage of unexpected events such as disasters (Spencer, Seydlitz, Laska & Miche, 1992; Snepenger, Collins, & Snepenger, 1992; Kepplinger, 1994) or assassinations of media personalities (Schwartz, 1991; Weibull, Lindahl, & Rosengren, 1987). By far the largest portion of television news items are about political subjects (Ballsaetdt, 1977; Heinderyckx, 1993; Glasgow Media Group, 1995).

Issue: News as true account of 'real world' events. That news events are a small selection of what happens in the 'real world' is one thing; the selection of *events* instead of *processes* is another. Critical researchers stress the way in which television news structurally understates social processes (for instance, social conflicts), social change and power relations (Golding, 1981, Cohen, Adoni & Bantz, 1990; Cohen, Adoni & Drori, 1983; Franz, 1993; Fiske, 1987; McLeod, 1995; Molotch, 1978). Others have commented on the fragmentation-al way of reporting. Choices in news programs often construct a representation of events in which various sectors (for instance, the political and economic sector) of society, or the various parties in international conflicts, appear to be functioning in isolation from each other, and are not provided with a context (Jensen, 1987; Kleinnijenhuis, Peeters, Hietbrink & Spaans, 1991; cf. Adoni & Cohen, 1978; Graber, 1990; Dayan & Katz, 1992).

The 'doctrine of objectivity', as Bogart (1980) called it, is regarded an important determinant in the process of creating a credible and acceptable world-view. While the values, norms and techniques used to create 'objectivity' of the news are part of domain 2 (cf. *Institutions*), here studies are reviewed that investigate the news event as *a true account* of world events (cf. Rosengren, 1974; Schulz, 1976). Well-known is the observation that visuals from former news events are used again on later occasions (cf. Wember, 1976). Studies on this issue concentrate on *viewer evaluations* of the news. Most news viewers

do regard the news as fairly objective and demand it to be so. This may be a function of the fact that news on television is said to have an especially unique perspective as it provides a sense of immediacy, accuracy, realism, and concreteness (Bogart, 1980; Dahlgren, 1986; Drew & Reeves, 1980; Gibson & Zillmann, 1994; Van Hoorn, 1989; Stam, 1983; Spencer et al., 1992; Van der Molen, 1989; Jensen, 1990; Page, Shapiro & Dempsey, 1987; Graber, 1984).

The portrayal of minorities and women in television news has been investigated (d'Haenens, 1996; Mickiewicz & Jamison, 1991; Swenson, 1995; Fair, 1993; Van Zoonen, 1991), signifying the understated or victimized role of both social groups.

Commentary. Whenever the domain of *Situations* is touched upon in the 59 reviewed studies, this is usually done only marginally. The main finding is that most news is about political events. Another observation is that the television news audiences regard the news as accurate; one can 'see it happening' (cf. Himmelstein, 1994). News, however, cannot give accurate descriptions of events in an absolute sense. Contrary to the viewers' perception, scholars regard the news as a construction manufactured by a specific group of people, designed to meet certain specific standards (cf. domain 2: *Institutions*). Very few studies have been undertaken which investigate the issue of the truth of news accounts.

Domain 2: Institutions

We have defined *institutions* as sector-bound activities, of a mostly professional or 'official' nature. Inside institutions, behavior is highly structured. Specifically, professional actors (e. g., journalists) who behave in accordance with professional expectations as well as social norms and values construct television news as an institution. As such, these structured and largely routinized actions produce medium-bound selections and representations of events. Therefore, we categorize the vast amount of studies on the production of news into two research issues: The ways television news professionals proceed in constructing news items according to their norms and values, and the qualities of news items, which are the products of these collective professional efforts.

Issue: norms and values of news making. Among the first to investigate the 'social production of news' (cf. Tuchman, 1978), were White (1950), Gieber (1956), Breed (1960), and Donohew (1967), who conducted studies on what has been called the 'gatekeeping' function of journalists. Individual journalists, editorial boards, or the organization as such (Robinson, 1973; Bailey & Lichty, 1972) respectively, have been branded the main selective forces in the production of news. In 1965, Galtung & Ruge pointed out that this selection of what is news and what is not, is highly value laden. But news is not only selected; it has to be constructed. In fact, the central process may be called *news making*

(Gans, 1980; Tuchman, 1978). It has become clear that the news we read and see every day is not an objective registration of 'real-world reality', but rather a construction based subjective or professional norms of journalists as well as the technical and institutional restraints sometimes referred to as 'media logic'.

Studies concentrate on *personal aspects of selection and editing processes* (Adoni, Cohen & Mane, 1984; Bogart, 1980; Dahlgren, 1980, 1986; Drew & Reeves, 1980; Gibson & Zillmann, 1994; Schulz, 1982; Graber, 1990; Van Hoorn, 1989; O'Keefe & Reid-Nash, 1987; Steele, 1995; cf. Staab, 1990; Golding, 1981; Robinson & Levy, 1986; Glasgow Media Group, 1995; Hallin, 1986; Stam, 1983), *objectivity as professional goal or institutional image* (Bogart, 1980; Kleinnijenhuis et al. 1991; Himmelstein, 1994; Heinderyckx, 1993; van Zoonen, 1991) *the socially determined selection and presentation of broadcast news* (cf. Van Ginneken, 1998; Jensen, 1987; Berkowitz, 1990; Bogart, 1980; Altheide, 1984; Schulz, 1976), *news sources, witnesses, or experts* (Blumler, Dayan & Wolton, 1990; Kepplinger & Köcher, 1990; Lang, Lang, Kepplinger & Ehmig, 1993), *editing dilemma's* (Blumler, Dayan & Wolton, 1990; Liebes, 1992b; Van Praag, 1986; Patterson & McClure, 1976a; Graber, 1994; Golding, 1981; Höijer, 1996; Epstein, 1973; Kepplinger & Köcher, 1990; Blumler, Dayan & Wolton, 1990; Steele, 1995) and *organizational constraints* (Wolsink, 1981; Altheide & Rasmussen, 1976; Danielian & Page, 1994; Himmelstein, 1994; Altheide, 1991; Schulz, 1996).

Issue: News content characteristics. As discussed above, news making as an institutional process of selecting and constructing news events concentrates on certain domains of social life (cf. *Situations*). Apart from a *thematic focus* on particularly political events, television news items are analyzed on their *formal characteristics* such as length (Heinderyckx, 1993; d'Haenens, 1996; Fiske, 1987; Hartley, 1982; Van Hoorn, 1989), tone (Graber, 1994; Levy, 1978a), format demands (Dahlgren, 1986; Golding, 1981; Heinderyckx, 1993; Jensen, 1987; Graber, 1994; Steele, 1995; Van den Berg, Glastra & Van der Veer, 1984; Hofstetter & Zukin, 1979; Fiske, 1987; Mancini, 1988; Pietilä, 1996; Van Zoonen, 1991), *image-text proportions* (Griffin, 1992; Graber, 1985, 1994; Ballstaedt, 1977; Wolsink, 1981; Brosius, 1993; Brosius & Donsbach, 1996; Heuvelman, 1990; Heinderyckx, 1993) *image-text comparison* (Graber, 1985; Wolsink, 1981; Brosius & Donsbach, 1996; Wember, 1976) and *quality of the pictures* (Ballstaedt, 1977; Höijer, 1990; Graber, 1994; Hallin, 1992; Griffin, 1992; Altheide, 1987).

Commentary. The presentation of television news events derives from a series of assumptions and conventions employed by journalists (Cohen & Roeh, 1993; Golding, 1981; Jensen, 1987, Graber, 1994; Kepplinger & Köcher, 1990; Kepplinger, Brosius, Staab & Linke, 1990), from routine coverage of events (often referred to as 'agenda journalism'; cf. Golding, 1981; Graber, 1994) and from group decisions (Berkowitz, 1990; Höijer, 1996). Routine beliefs,

or conventions and procedures in turn determine ‘how events become news’ (cf. Boone & Servaes, 1982; Galtung & Ruge, 1965; Westerståhl & Johansson, 1994), and how these events are represented in a particular view of the world (Jensen, 1987; 1988; Golding, 1981; Glasgow Media Group, 1995).

But as some studies show, the journalistic rule that a news report should always include answers to the questions Who?, Where?, What?, Why?, and How? (cf. Findahl & Höijer, 1976, 1985; d’Haenens, 1996; Heuvelman, 1989) is usually followed only with regard to the first three questions. Items are short, using certain kinds of images, to create an informational-entertainment mix. But 75 % of all scenes used in the news, involve routine images that fall in one of ten thematic categories (as defined by the researcher) and that 33 % of all images are of political gatherings and conferences (Heinderyckx, 1993).

Furthermore, the similarity between the presentation of news broadcasts in different countries is remarkable, all using virtually the same conventions with anchor persons leading in stories and conclude with statements from stand-up journalists (Heinderyckx, 1993; Van Zoonen, 1991; Mancini, 1988).

We found a large number (59) of studies on both the ‘social production of news’ and on the results of this production for television news presentation formats. However, the influence of other institutions (other media, mother companies, press agencies, advertisers, political parties) on the institution of television news has been investigated much less. Frequently, the influence of other institutions on the news, is more presupposed than empirically investigated. We hardly found studies on television news journalists’ information sources (cf. Pleijter & Renckstorf, 1998).

Domain 3: Social networks

Traditionally, the social aspects of mass communication have been interpreted in rather diverse ways. Two of the most important views regard social networks either as intervening variable in the diffusion of information process (cf. Lazarsfeld, Berelson & Gaudet, 1948; Rogers, 1983; Greenberg & Parker, 1965; Tichenor, Donohue & Olien, 1970), or as a motive to ‘keep informed’ (Blumler & McQuail, 1969; Blumler & Katz, 1974). Both interpretations are related to the domain of *Social Networks* as formulated in our action theoretical reference model. But the foremost function of the social network is its function as an alternative for the media route of information about situations and events in the socio-cultural context. Besides these different functions, the direct social environment is important for situations of media reception as well, as will be discussed in domain 5, *Interaction Situation*.

In spite of the theoretical relevance of social networks in communication processes, we found only 16 studies in this domain, addressing two issues: social network as information source and social network as socialization agent.

Issue: Social networks as information sources. In contrast to the period of news diffusion studies (e. g., Bostian, 1970; Renckstorf, 1970), in more recent studies on television news social networks as information sources have only partly been considered. In so far as social networks are studied at all, research efforts concentrated on ‘*interpersonal communication*’ about news items (Allen & Kuo, 1991; Atkin & Gantz, 1978; Liebes & Ribak, 1991; Price & Zaller, 1993; Robinson & Davis, 1990; Robinson & Levy, 1986a; 1986b; Hermans & Van Snippenburg, 1993; Merten, 1977; Neuman, 1976; Höijer, 1990b; Levy, 1977).

Issue: Social networks as socialization agents. A second way in which social networks influence communication processes refers to the transfer of social meanings onto the individual (see domain 10: *Socialization*). As socialization through social networks is a highly complex long-term process, few scholars have attempted to investigate its connection with news viewing. Recent studies concentrate on differing *attitudes towards and routines of news viewing* (Hermans & Van Snippenburg, 1993; Atkin & Gantz, 1978), and on *socio-cultural backgrounds* for interpreting news (Merten 1977; Price & Zaller, 1993; Allen & Kuo, 1991; Liebes & Ribak, 1991; Höijer, 1990b; Jensen, 1990).

Commentary. In the case of major news stories, only some 5% of respondents point to interpersonal communication as the primary information source. However, when observed more closely, 60–65% of media users use informal communication channels to acquire information in everyday situations (Robinson & Levy, 1986; cf. Katz & Gurevitch, 1976). They discuss relevant topics in a more substantial manner with the people that are closest to them (cf. Robinson & Levy, 1986). While some authors find no connection between discussion of news events and recall of television news information (Neuman, 1976; Price & Zaller, 1993), others conclude from large surveys, in which respondents were asked about political knowledge and media exposure, that discussing the news enhances learning effects – comprehension as well as recall – more strongly than watching the news itself (Robinson & Levy, 1986a; Robinson & Davis, 1990). It is evident that some news viewers have more knowledge about news events than others. As far as we can see, it has not been (consistently) investigated *if* and *how* knowledge about news events that does not stem directly from the news relates to social networks. Social networks do seem to act as resonance factor for news items. But how the viewer is socialized to watch the news is still a question left unanswered.

Domain 4: Information

We defined the domain *Information* (‘observer construct’) as embracing all the facts and figures about events that a person may encounter. All the various definitions of situations, of which a part stems from institutions such as televi-

sion news, serve as a source from which people can form an image of 'reality'. Of course, of special interest here is that part of this information stems from television news. Again, two research issues can be discerned: Television news as part of the information budget of the viewer, and formal features of television news information.

Issue: Information as a 'budget'. Much communication research has been done in the past on the domain of information. The *Knowledge Gap* hypothesis has been tested by looking at people's information budgets to determine the differential effects on knowledge of the various media – with television as supposed knowledge leveler (cf. Tichenor, Donohue & Olien, 1970; Olien, Donohue & Tichenor, 1983; Bonfadelli, 1987). The *relative importance of television news* in the total information budget has been studied extensively (Pan, et al., 1994; Schulz, 1982; Al-Menayes & Sun, 1993; Chaffee & Schleuder, 1986; Patterson & McClure, 1976a; 1976b; Gunter, 1987; DeFleur, et al., 1992; Page, Shapiro & Dempsey, 1987; McDonald, 1990; McDonald & Reese, 1987; Neuman, Just & Crigler, 1992; Adoni & Cohen, 1978; Culbertson & Stempel, 1986; Spencer et al., 1992; Robinson & Levy, 1986; Kleinnijenhuis, 1990; Kleinnijenhuis et al., 1991; Robinson, 1976, 1986; Robinson & Levy, 1986, Hill, 1985; Price & Zaller, 1993; Price & Czilli, 1996; Brosius & Kepplinger 1990, 1992, 1995; Fan, Brosius & Kepplinger, 1994, Brosius & Weimann, 1996; Iyengar, Peters & Kinder, 1982; Iyengar, 1990; Iyengar & Simon, 1993; Reeves & Campbell, 1994; Schönbach, 1983), occasionally in the form of studies measuring '*Media Agendas*' (cf. Schulz, 1982, 1996; Brosius & Kepplinger, 1992 etc.).

Issue: Format features. The consequences of format variations in television news items have been extensively investigated as well. Among these studies are *Agenda Setting* studies (Cohen, 1963; McCombs & Shaw, 1972; cf. Dearing & Rogers, 1996), as well as a wide range of experimental studies from other fields (Schönbach & Früh, 1984). *Structural variations* in news item formats (Iyengar & Kinder, 1987; Iyengar, Peters & Kinder, 1982; Graber, 1984, 1994; Schulz, 1982, 1996; Mundorf, et al., 1990; Gunter, Berry & Clifford, 1981; Gunter, Clifford & Berry, 1980; Robinson & Levy, 1986; Brosius, 1990, 1989; Brosius & Mundorf, 1990; Renckstorf, 1980a; Renckstorf & Rohland, 1980); *complexity* (Findahl & Höijer, 1973, 1985; Graber, 1984; Cohen, Wigand & Harrison, 1976; Bybee, 1980; Gan et al., 1996; Heinderyckx, 1993) and the *combination of textual and visual information* (Brosius, 1989; Crigler, Just & Neuman, 1994; Heuvelman, 1990; cf. 1989; Wember, 1976; Wolsink, 1981; Basil, 1994; Findahl, 1981; Berry, 1983; Brosius, 1993; Kleinnijenhuis, 1991; Davis & Robinson, 1986; Reese, 1987; Winterhoff-Spurk, 1983; Drew & Grimes, 1987; Katz, Adoni & Parness, 1977, Gunter, 1980; Brosius & Berry, 1990; Graber, 1985, 1996; Gunter & Furnham, 1987; Newhagen, 1994; Cohen, Wigand & Harrison, 1976).

Commentary. Much research has been done on information budgets (82 of the studies reviewed). Although definitive conclusions are hard to draw, there

is some evidence that too much reliance solely on television news as information source is not beneficial for *knowledge* gained with respect to somewhat complex matters. People who employ multiple information sources, especially print media, benefit from higher knowledge levels (Kleinnijenhuis et al., 1991; Patterson & McClure, 1976a; Robinson, 1976; 1986; Robinson & Levy, 1986; Hill, 1985).

A large array of studies focuses on format features, mostly under (quasi-) experimental conditions. The prominence, placement, frequency and length of items are thought to act as cues that influence *attention* and *recall*. Pictures seem to aid recall in many cases, in so far as they are not discrepant with the verbal component of the news (Wember, 1976; Wolsink, 1981; Basil, 1994; Findahl, 1981; Berry, 1983; Brosius, 1993; Heuvelman, 1990; Kleinnijenhuis, 1991; Davis & Robinson, 1986; Reese, 1987; Winterhoff-Spurk, 1983; Drew & Grimes, 1987). The structure of a news item, having a certain level of complexity, seems to be one of the most important influential factors on recall (Findahl & Höijer, 1973, 1985; Graber, 1984; Cohen, Wigand & Harrison, 1976). However, various authors point out that format features interact with audience characteristic variables such as prior knowledge and interests (Brosius & Mundorf, 1990; Price & Czilli, 1996; Renckstorf, 1980a; Renckstorf & Rohland, 1980; Winterhoff-Spurk, 1990; Findahl & Höijer, 1985). Information gain seems to benefit most from clear and unambiguous reporting, with items containing not only details on persons, places and events, but also structural information on causes and consequences (Bybee, 1980; Cohen, Wigand & Harrison, 1976; Findahl & Höijer, 1973). In these studies, information gain is defined in terms of an 'observer construct', that is, the investigator decides what should be regarded as relevant information (cf. domain 6: *Relevance Structure* for the 'user construct').

Most research concentrates on the consequences of format features on recall or retention of a single news item, and not on *reception of a bulletin in general*. Consequences of format features for the overall appreciation of a news bulletin are infrequently investigated. Furthermore, it should be noted that audience as well as situational factors (see domain 5: *Interaction Situation*), which are key elements in the reception process and have remained undiscussed in this section, have rarely been taken into account in experimental studies (cf. Brosius, 1990).

Domain 5: Interaction Situation

The domain *Interaction Situation* refers to the immediate (inter)action contexts of the television news viewer watching the news. More specifically, the focus is on the direct surroundings, for instance other people present during watching or other actions of the viewer in the viewing (interaction) situation. The studies

contributing to this domain can be classified according to their contribution with regard to three research issues: patterns of exposure and the organization of everyday life, the social context of watching the news and parasocial interactions during watching.

Issue: Exposure and everyday life. A substantial part of communication research, perhaps even the largest in this discipline, is dedicated to the study of *exposure*. This also holds true for television news research. Communication scholars interested in exposure to television news often employ exposure as a variable – usually operationalized as the frequency of news viewing or the amount of time spent viewing – that explains short-termed ‘learning’ effects (Atkin & Gantz, 1978; Pan et al., 1994; Robinson & Levy, 1986; McClure & Patterson, 1974) or long-termed cultivation consequences (cf. Perse, 1989; Allen & Kuo, 1991).

Mostly conducted by broadcasters to improve the understanding of their audience, exposure studies have occasionally been heavily criticized by communication scholars for being unreliable, as there seems to be no appropriate measurement procedure to assess the time, or the quality of watching or reading (Chaffee, & Schleuder, 1986; Nelissen, 1992; Zhao & Bleske, 1995; Brown, Bauman & Padgett, 1990; Ball-Rokeach & Grant, 1990). Some consider exposure to television news as *part of everyday life* (Hietbrink, 1993; Price & Zaller, 1993; Van der Molen, 1989; Chaffee & Schleuder, 1986; Shapiro, 1991; Wober, Brosius & Weinmann, 1996; Nelissen, 1992; Hill, 1985). Fewer studies can be found on the place television news watching in the *time schedules of everyday life*, (Verwey, 1986; Huysmans, Lammers & Wester, 1997; Krotz & Hasebrink, 1998) where domestic life provides the context for media use (Hagen, 1994a: 196).

Watching the news has become a daily ritual, one that can be done simultaneously with everyday occupations such as ironing, doing the laundry, having dinner, drinking coffee, or playing with the children (cf. Van der Molen, 1989; Hermans & Van Snippenburg, 1993; Mutsaers, 1993), washing the dishes, or even reading the newspaper or sleeping (Mutsaers, 1993; cf. Csikszentmihalyi & Kubey, 1981; Levy, 1978a). Csikszentmihalyi & Kubey (1981) found that only in 30 % of the time people watch television as the *primary activity*. Several studies confirm that watching the news for some people is a *secondary activity* (Levy, 1978a; Hagen 1994a; Jensen, 1990; Peeters, 1991a). But inasmuch as little research has been dedicated towards investigating the immediate viewing situation of watching television (cf. Barrios, 1988; Charlton & Neumann, 1986; Liebes & Ribak, 1991; Lull, 1980; Mutsaers, 1993), the consequences of this actual context for, say, attentiveness is unclear.

Issue: Watching the news as a social activity. Watching the news most of the time does not take place in isolation (Hermans & Van Snippenburg, 1993; Hietbrink, 1993; Van der Molen, 1989, Mutsaers, 1993; Hagen, 1994a; 1994b;

Höijer, 1996). Most interactions with other persons during this gregarious viewing consist of *short remarks* of amazement or arousal, mostly of a rather superficial nature (Van der Molen, 1989; Jensen, 1990). Only when people are involved personally with items on the news, do they engage in further discussion (cf. Rubin & Perse, 1987a; Allen & Kuo, 1991; Merten, 1977). This points to the social quality of the act of watching the news: people watch the news at least partly, because it adds a daily socially shared experience to their lives (cf. Van der Molen, 1989). Discussion of news items with other people present in the interaction situation can redirect attention and thus function as a selective process (Merten, 1977; Van der Molen, 1989). In addition, ‘balance of power’ within a group of viewers affects what is watched at a certain time and how items should be interpreted (Van der Molen, 1989; Liebes & Ribak, 1991; Mutsaers, 1993; Rubin & Perse, 1987a; Jensen, 1990; Morley, 1986).

Issue: Parasocial interaction. In the interaction context, viewers might feel closely related to what happens on television. Television news personalities, like presenters or anchormen, may act as pseudo-friends for news viewers (Perse, 1990b: 21). Although a number of *Parasocial Interaction* studies exist (cf. Rubin & Perse, 1987a; Rubin & McHugh, 1987; Rosengren & Windahl, 1972), research devoted to parasocial interaction with television news is scarce. Emotionality is a central factor in parasocial interaction (Lombard, 1995; Perse 1990a; Mancini, 1988; 1986; Levy, 1977; 1978a; Isotalus, 1995; Rubin & McHugh, 1987; Rubin & Perse, 1987a). Emotional involvement, although a clear indication of ‘audience activity’ seemingly does not influence knowledge gain, but influences emotional responses and thus, according to Perse, may influence attitude change (cf. domain 6: *Relevance Structure*). Levy (1979) found evidence that the more opportunities an individual has for ‘real’ interactions, the less likely he/she is to engage in parasocial interactions.

Commentary. Some 33 studies contributing to the domain of *Interaction Situation* of television viewing were found. As anticipated, most of these studies concentrate on exposure. Our main conclusion is that in all of these studies, television news viewing is conceptualized as a *social activity*. Although there are a number of studies known involving the interaction situation of television viewing (e. g., Brown & Linné, 1976; Gunter & Svennevig, 1987; Lull, 1990), apparently much more research is needed to study the influence other persons present in the interaction situation have, for example on *media use patterns* (cf. domain 3: *Social Networks*) and *message reception* (cf. domain 7: *Definition of the Situation*).

Domain 6: Relevance Structure

We have referred to *Relevance Structure* as the hierarchical ordering of the stock of knowledge, in other words, the *meaning system* of the television news

viewer. Relevancies, motives, goals, knowledge etc., are the basis on which a viewer copes with the information offered by the news (this coping process is discussed in domain 7, *Definition of the Situation*). Although on a theoretical level cognitive and affective aspects of the personal relevancies are interrelated, the studies in this domain concentrate on two separate but interlinked issues: cognitive structures in the stock of knowledge and affective relations with the news item, or involvement.

Issue: Cognitive Structures. Cognitive structures are usually recognized as highly complex and multidimensional. Schema theory has become a dominant theoretical basis for the study of television news, most specifically for studies concerned with the retention and comprehension of television news information (cf. Woodall, 1986; Woodall, Davis & Sahin, 1983; Findahl, 1994; Graber, 1984). *Schemas* are structures in which knowledge is organized, frameworks of information, interpretation and experiences of situations and individuals, as well as relationships among the various elements (cf. Höijer, 1990; Shapiro, 1991; Al-Menayes & Sun, 1993; Basil, 1994; McCain & Ross, 1979). Some studies suggest the existence of specific ‘*news schemas*’ by use of which viewers try to give meaning to the news (Jensen, 1988; Winterhoff-Spurk, 1983; Findahl & Höijer, 1985; Berry, 1983; Graber, 1985; cf. Berry, Carter & Clifford, 1982; Brosius, 1990; Jensen, 1988; Graber, 1984). Indications are that people from different social backgrounds employ different news schemas.

By far the most extensively investigated subdomain is *knowledge gain* (Gunter, 1980; 1987; Katz, Adoni & Parness, 1977; Neuman, 1976; cf. Brosius, 1990; 1993; Berry, 1983; Peeters & Heuvelman, 1996; Stauffer, Frost & Rybolt, 1983). One of the main influences on learning from the news, seems to be the availability of *previous knowledge* (Heuvelman, 1991; Price & Czilli, 1996; Price & Zaller, 1993; Findahl & Höijer, 1973; 1982; 1985; Findahl et al., 1969; Hendriks Vettehen et al., 1996; Peeters & Heuvelman, 1996; cf. Giegler & Ruhmann, 1990; Kleinnijenhuis et al., 1991; Hill, 1985; Graber, 1984; Wober & Brosius, 1996; Berry, Carter & Clifford, 1982; Brosius, 1990; Brosius & Berry, 1990; Höijer, 1989; Iyengar, 1990); everyday experience is used as a reservoir of cultural knowledge (Shapiro, 1990, 1991; Adoni, Cohen & Mane, 1984; Cohen, Adoni & Bantz, 1990; Cohen, Adoni & Drori, 1983; Schulz, 1982; Hagen, 1994a; 1994b; Jensen, 1988). Knowledge gain studies often find that respondents, even when cued shortly after viewing the news, remember astonishingly little of what they have heard and seen (Gunter, 1980; 1987; Katz, Adoni & Parness, 1977; Neuman, 1976; cf. Brosius, 1993). Interpretation, perception and recall are mutually influencing factors, as memories consist of mental representations, interpretations of events and items, rather than the events or items themselves (Drew & Reeves, 1980; Höijer, 1989; Findahl & Höijer, 1985; Giegler & Ruhmann, 1990). This will be discussed in more detail in the context of domain 7: *Definition of the Situation*.

Issue: Beliefs, attitudes, opinions. Related to the cognitive system, viewers have relevancies with a partly affective component in terms of beliefs about the world, attitudes towards social objects and opinions about social issues. Investigations include beliefs about race, minorities, crime (Allen & Kuo, 1991; d'Haenens, 1996; O'Keefe & Reid-Nash, 1987; Perse, 1989) and attitudes towards economy and other countries (Adoni & Cohen, 1978; cf. Perry, 1990). Most research concentrates on political attitude and opinion change (Page, Shapiro & Dempsey, 1987; Conway, Wychoff, Feldbaum & Ahern, 1981, Wober & Brosius, 1996; Brosius & Kepplinger, 1992; Atkin & Gantz, 1978; McClure & Patterson 1974; Levy, 1978b; Iyengar, 1990; cf. Edelman, 1988; Chaffee & Roser, 1986; Lo, 1994; McLeod, Eveland & Signorelli, 1994; Kazee, 1981; Price & Czilli, 1996).

Issue: Affective Structures. In addition to purely cognitive, knowledge-related processes in news reception, further viewer characteristics also play a part that are of a more affective nature (cf. Mundorf et al., 1990; Perse, 1990b; Höijer, 1989; Bosman et al., 1989; Schütz & Luckmann, 1974). Motivations, relevancies, interests, expectations, and goals determine the amount of attention (i. e., increased mental effort: Chaffee & Schleuder, 1986) the viewer gives to a specific item, as well the intensity and level of elaboration (Brosius & Mundorf, 1990; Price & Zaller, 1993, McDonald, 1990; Rubin & Perse, 1987).

Expectations and goals as *motives in news watching* have been investigated rather extensively by uses and gratifications affiliated scholars. People who report watching the news for mostly cognitive reasons ('to be informed'; this is sometimes called need for information) are said to process the news more actively, whereas people who say they watch the news for primarily affective reasons (e. g., entertainment, diversion, ritual) are thought of as processing news in a routine manner (Levy, 1978b; McDonald, 1990; Peeters, 1991; Van der Molen, 1989; Stam, 1983; Perse, 1990a; Levy, 1977; Bogart, 1980; Peeters, 1991; Hagen, 1994a). Viewers seeking informational gratification or personal utility watch the news with a heightened sense of attention and interest, and score higher at recall tests (Peeters, 1991; Levy, 1978a; 1978b; Neuman, 1976; Perse, 1990b; Garramone, 1984; cf. Brosius, 1989; Gantz, 1978). Motivated intensity increases retention levels (Stauffer, Frost & Rybolt, 1983; Neuman, 1976; Perse, 1990a; Chaffee & Schleuder, 1986; cf. Culbertson & Stempel, 1986) and recall (Celsi & Olson, 1986; Grunig, 1976; Genova & Greenberg, 1979; Adoni & Cohen, 1978; Neuman, Just & Crigler, 1992; Renckstorf, 1980; Renckstorf & Rohland, 1980; Atkin & Gantz, 1978; Van der Molen, 1989; Pettey, 1988; Hendriks Vettehen et al., 1996; Shapiro, 1991; Neuman et al., 1992). In addition, the general expectation people have of specific news programs determines their choice for a news bulletin (Palmgreen, Wenner & Rayburn, 1981; McDonald, 1990).

A widely used concept to signify perceived relevance of and interest in a specific news item, is *involvement*. Involvement may be seen as the subjectively

perceived connection between the news viewer and an item in the news. The closer the observed relation, the more relevant an item is to the viewer (Celsi & Olson, 1986; Grunig, 1976; Findahl & Höjjer, 1985; Hietbrink, 1993; Schulz, 1982; cf. Chaffee & Schleuder, 1986; Robinson & Levy, 1986; Hendriks Vettehen et al., 1996; Shapiro, 1991; cf. Shapiro & Lang, 1991, Chaffee & Schleuder, 1986; Graber, 1984; Rubin & Perse, 1987; Perse, 1990c). Involvement serves as a motive to heighten attention, to react emotionally (by, for instance, parasocial interaction; see domain 5), or to undertake cognitive action (making inferences: Giegler & Ruhrmann, 1990) or, occasionally, to act externally (Perse, 1990a; Rubin & Perse, 1987, Perse, 1989; Lo, 1995; Van der Molen, 1989).

Commentary. Most of the 89 television news studies contributing to this domain recognize that people, in processing television news make use of cognitive as well as motivational structures (cf. Levy, 1978b). The stock of knowledge is thought of as the main influential factor on recall and comprehension as well. Evidence suggests that cognitive processing is highly complex, using multiple sources for interpreting the news, and that affective processes make it even more diffuse (Al-Menayes & Sun, 1993; Shapiro, 1991).

Domain 7: Definition of the Situation

Whereas with respect to domain 4, *Information*, research described information as an ‘observer construct’, here, information from the news is treated as a ‘user-construct’ (cf. Dervin, 1981, 1982). Viewers must to interpret the information offered by the news to meet their own priorities, motives, interests (or ‘relevancies’) to come to a basic ‘understanding’ of the news. The domain *Definition of the situation* refers both to the internal *process* of interpreting, and to the *products* of that interpretation process. During information processing, television news viewers assess the problematic nature of the information, that is, they detect potential discrepancies with prior knowledge. Once such discrepancies are detected, further action will be taken to solve the problem, such as acquisition of new information or adjusting of the stock of knowledge. Thus, definitions produced during the act of watching the news function as indication for further action (cf. domain 8: *Action Strategies*).

As interpretation and thinking are basically psychological processes that ask for specific psychological research models, in media studies the focus is usually on just some features and outcomes of these processes. The terminology used is determined largely by academic tradition, which can be loosely divided into humanistic cultural studies (cf. ‘encoding’ and ‘decoding’; Hall, 1980) and social-psychological and cognitive psychology research (Höjjer, 1990a; 1990b, Dervin, 1983). We distinguish four research issues: The process of interpreting the news, and its products: Comprehension, evaluation, and recall of television news by the audience.

Issue: Interpreting the news. Most authors acknowledge that the process of constructing meaning out of television news information involves *complex procedures* (cf. Basil, 1994; cf. Celsi & Olson, 1988; Findahl & Höijer, 1973, 1985; Höijer, 1989; 1990b; Al-Menayes & Sun, 1993; Shapiro, 1991; Woodall, Davis & Sahin, 1983; Price & Zaller, 1993). Interpreting the news is seen as a *cognitive process* to a large extent (Woodall et al., 1983; Woodall, 1986, McCain and Ross, 1979; Al-Menayes & Sun, 1993; Findahl et al., 1969; Höijer, 1989; 1996; Dahlgren, 1986; Findahl & Höijer, 1973, 1985; Hauser, 1984; Shapiro, 1991; Basil, 1994; McCain & Ross, 1979; Höijer, 1996; Price & Zaller, 1993; Stauffer, Frost & Rybolt, 1983), but *affective processes* (e. g., involvement, distance) are thought to be relevant too (Findahl & Höijer, 1985; Cohen, Adoni & Drori, 1983; O'Keefe & Reid-Nash, 1987; Adoni & Cohen, 1978; Schulz, 1982; Brosius & Berry, 1990; Perse, 1990c; Findahl & Höijer, 1985; Giegler & Ruhrmann, 1990). These basic elements have already been discussed with regard to domain 6, *Relevance Structure*.

But some favor the notion that television news is easy to comprehend (cf. Page, Shapiro & Dempsey, 1987; Salomon, 1984) through *mental representations* of the news event, using schemas, frames, scripts (Al-Menayes & Sun, 1993; Woodall, Davis & Sahin, 1983; Höijer, 1990a; 1990b). The higher the level of involvement, the more the process of interpretation shows *attentiveness, intensity* and/or *elaboration* (Celsi & Olson, 1988; McCain & Ross, 1979; Giegler & Ruhrmann, 1990; Findahl & Höijer, 1985; Shapiro & Lang, 1991; Woodall, Davis & Sahin, 1983; Drew & Reeves, 1980; Perse, 1989; 1990a; 1990b; 1990c; Hagen, 1994b; Levy, 1978b; Newhagen, 1994).

In addition *emotions* are on occasion the focus of research. In a study on violent news pictures, Höijer (1996) finds different *strategies for coping* with visuals that are perceived as too obtrusive. Violent pictures seem to leave people with problematic and ambivalent feelings with which they must cope. She states that action patterns are partly socially determined, for instance women seem more prone to show their feelings while men ward off pictures. This may offer some explanation for the lower recall levels of women for violent news items as found by Gunter (1987), as emotional reactions are usually not associated with cognitive processing and recall.

Humanistic and cultural scholars emphasize in the process of meaning construction the relative independence of the viewer from the news 'text' (Lewis, 1985; Hacker, Coste, Kamm & Bybee, 1991; Liebes & Ribak, 1991; Pietilä, 1996; Iyengar, Peters & Kinder, 1982), using *personal restructuring devices*, such as 'super-themes', that cut across the themes provided by journalists (Dahlgren, 1988; Jensen, 1988; 1990; 1992).

Issue: Comprehension. One of the primary outcomes of the interpretative constructive process described above may be the understanding of the news item. A number of authors clearly *distinguish between comprehension and*

recall as to separate products and processes (Price & Zaller, 1993; Woodall, Davis and Sahin, 1983; Findahl & Höijer, 1985; cf. Robinson & Davis, 1990; Robinson and Levy, 1986). Recall being a reproductive cognitive act, and comprehension involving elaborate inferences with the aid of both cognitive and affective processes (Drew & reeves, 1980; Giegler & Ruhrmann, 1990, Höijer, 1989; 1990; Findahl & Höijer, 1985).

Viewers often seem to misunderstand televised news items: *confusion*, *over-generalization*, and *misinterpretations* are very common among news viewers (cf. Findahl & Höijer, 1985; Dahlgren, 1986; Katz, 1977; Brosius, 1993; Giegler & Ruhrmann, 1990; Woodall, Davis & Sahin, 1983). Comprehension is related to both information features (Findahl & Höijer, 1985; Crigler, Just & Neuman, 1994; Findahl & Höijer, 1973; 1982; 1985; Woodall, Davis & Sahin, 1983), relevance structures (Brosius & Berry, 1990; Findahl & Höijer, 1985; Woodall, Davis & Sahin, 1983), and discussing the news with peers (Robinson & Levy, 1986b). An *accurate reconstruction* (i. e., as aimed at by journalists: Robinson & Levy, 1986; Robinson & Davis, 1990) requires both relevant previous knowledge and personal relevance (Findahl & Höijer, 1985; Woodall, Davis & Sahin, 1983; Giegler & Ruhrmann, 1990). The high level of miscomprehension found seems to be typical of broadcast news, as interpretation based on newspapers shows fewer such cases (Robinson & Davis, 1990).

Issue: Evaluations. A second possible outcome of the interpretation process, the *evaluation* of the news, has been studied by a small number of investigators (Brosius, 1993; Brosius & Donsbach, 1996; Brosius & Berry, 1990; Crigler, Just & Neuman, 1994). Drew & Reeves (1980) demonstrated that a positive evaluation of news stories is associated with learning. Likewise, attitude change may be related to evaluations of news items (Patterson & McClure, 1974; Iyengar, 1990).

Watching the news, and being informed, is normatively defined as a democratic duty which enables the citizen to function as an informed and critical political active citizen (Hagen, 1994a; 1994b; Jensen, 1990). The inherently ritualistic and diversional nature of news viewing, however, accounts for ambivalent feelings towards the news (Hagen, 1994a; Höijer, 1990b).

Issue: Recall. One of the primary problems of television news research has been the recurring finding of 'poor *recall*'. By far the most extensively used variable, knowledge gain studies repeatedly find that respondents, even when cued shortly after viewing the news, remember astonishingly little of what they have heard and seen (Gunter, 1980, 1987; Katz, Adoni & Parness, 1977; Neuman, 1976; cf. Brosius, 1993; Pan et al., 1994; DeFleur et al., 1992, Giegler & Ruhrmann, 1990).

A central question regarding television news recall is the role of pictures in the news (cf. Cohen, Wigand & Harrison, 1976; DeFleur et al., 1992). At first glance, pictures seem easy to process, and would help remembrance (cf. Basil,

1994; cf. Berry, 1988; Bogart, 1980; Brosius, 1989; 1990; Brosius & Berry, 1990; Brosius & Donsbach, 1996; Winterhoff-Spurk, 1990; Price & Czilli, 1996). Even routine, standard pictures are supposed to facilitate reception, according to some (Graber, 1985; 1990). The argument on this matter has however not been settled as yet.

Commentary. Agreement seems to exist that processing the news is largely an interpretive, reconstructive activity. The studies reviewed (74), generally point towards a strong connection to what we have called relevance structure-related processes. Cognitive complexity and relevancies (e. g., involvement) are important factors in determining the nature of news processing. Defining the situation is done on the basis of both cognitive and affective audience characteristics as well as news content characteristics. The often ambiguous structure of the news is indexed as one of the major factors in recall and comprehension variance (cf. domain 4). Interpretation processes that are typical for televised news, involving references to pictures and sound, are still largely uncharted (cf. Basil, 1994). Still, some indications have been obtained, pointing towards the facilitating of comprehension by avoiding both discrepancies between text and picture as well as unclear structuring of stories.

Some gaps were found in this particular area of television news research. Although the use of interpretation frames by viewers is recognized, little is known about interpretation differences (e. g., in frames, schemas, affections) between specific groups of viewers (cf. domain 10: *Socialization*). Second, although affective/emotional processes are thought to play a role typical of television as a news medium, the consequences of emotional responses for definitions of the news event have been investigated only marginally. Thirdly, it is not clear what the actual outcomes of the internal processes conducted by television news viewers ('definitions of the news event') are, and how they might affect recall, evaluations, or further actions (cf. domain 8). Here as well, the question could be raised whether processes or products of processes typical for watching the news exist. One of the most eye-catching gaps in this section of television news research is probably the virtually non-existent research on so-called '*incidental learning*' (cf. Berry, 1983). This is an important flaw, as non-attentive news watching might be a large part of the act of news viewing. We agree with Dahlgren (1986), who states that thinking about television news (recall) has been much too 'rationalistic', and that the symbolic nature of news discourse should be taken into account. Much confusion about the consequences of television news viewing we think is caused by simplistic measurement of recall.

Finally, the influence of the news item itself remains very unclear. Some estimate it to be negligible, while others deem it to be quite strong. The power of the news 'text' has hardly been empirically investigated, and deserves more attention.

Domain 8: Action Strategies

According to Renckstorf & Wester (1993), television news events generally do not provide the viewer with problems as to his situation definitions. Generally, televised news is probably processed in a routine manner and the viewers will continue with their normal activities after watching the news. If a problem arises however, the actor has two basic alternatives (cf. Schütz, 1976; 'problematic problem'). First, he/she may try to neutralize the discrepancy by some internal action, for example adjusting the personal stock of knowledge. Second, the actor may take 'physical' action, for instance, by discussing the news with peers (cf. domain 5: *Interaction Situation*), or seeking further information on the news topic. No studies were found specifically investigating problematic or unproblematic coping with the news.

Issue: Routine. If no problematic situation definition arises, viewers will routinely process news information and subsequently return to their daily routines. Understanding of the news seems to be enhanced by discussing items with friends or peers (Robinson & Davis, 1990; Robinson & Levy, 1986). It may be that people use interpersonal channels (e. g., 'experts', 'opinion leaders') as a means to reduce uncertainty. Again, this kind of elaborated discussion does not occur frequently (Hermans & Van Snippenburg, 1993; Höijer, 1990b; Levy, 1977).

Issue: Active problem solving. Although a lot of attention has been given to the consequences of television news viewing on viewers such as voters, the focus point usually is opinion (change) and not action (cf. Perse, 1989). Knowledge discrepancies are hardly ever the point of focus. The influence of television news exposure on economic action (Adoni & Cohen, 1978) or political affiliation (Klingemann & Voltmer, 1989; Perse 1989; Jensen, 1990; Wober & Brosius, 1996; McClure & Patterson 1974) does not seem extensive. There are, however, accounts of direct influence of the news if personal consequences are at stake (e. g., water supply: Spencer et al. 1992; crime prevention: O'Keefe & Reid-Nash, 1987). Findings on the increase of assassination threats and suicides following reports on these subjects are unclear (Simon, 1979; Horton & Stack, 1984). Finally, there seems to be a relation between news viewing and subsequent additional information seeking (cf. Atkin & Gantz, 1978; Rubin & Perse, 1987; Hietbrink, 1993), but in daily life the relevance of news for information seeking action seems limited (Levy, 1978a; Jensen, 1990).

Commentary. Based on the 18 studies found on this research domain, it seems reasonable to conclude that television newscasts seldom have direct and measurable consequences for problem solving actions (cf. Jensen, 1986; Hagen, 1994a).

Domain 9: Objectivation

While the above domains are directed to an episodic view on the process of news viewing, the remaining two research domains, *Objectivation* and *Social-*

ization, acknowledge long term processes of news viewing. Objectivation refers to the process that multiple situations of news viewing yield to viewing patterns (including motives, interests, routines) that are 'made objective'. That is, they function as an intersubjective (or 'externalized'; see Zijdeveld, 1974) definition of the news viewing situation (cf. domains 3 and 5). Ultimately, these objectivations can take an organized form, thus creating an *Institution* (domain 2).

Television news research on the subject of objectivation is hard to find. Some studies more or less implicitly refer to one of two issues: The development of viewing patterns and the institutionalization of professional perspectives on news.

Issue: Viewing patterns. The externalization of relevancies, which are made objective in patterned interactions, are indeed poorly studied. Motives, preferences, goals, and interests for watching the news when reoccurring on a regular basis, ultimately result in patterns of news watching. By objectivating the relevancies of watching the news, patterns emerge which can be seen as relatively autonomous to these relevancies (Van der Molen, 1989; cf. Mutsaers, 1993); viewers seem to have internalized the obligation of watching the news as a 'taken for granted' part of everyday life (Graber, 1984; Hagen, 1994a, 1994b; Jensen, 1990; Van der Molen, 1989).

Issue: Professional perspectives. Not news viewers develop behavior patterns; the same is true for media professionals. The subjective values of this group of 'meaning producers' are made objective by the application of formal rules of presenting the news to viewers; the professional inclination becomes a professional motive or role. Thus, via the objectivation of personal values, Kepplinger & Köcher (1990) suggest, a relatively limited group of people is able to achieve subjective goals (cf. Schulz, 1976; Jensen, 1987). The audience however does seem to have some influence on news content; agenda setting studies have shown the occasional tendency of the public agenda influencing media action patterns (cf. Brosius & Kepplinger, 1990; Schulz, 1982).

Commentary. Only a handful of studies (10) have been found that touch upon *Objectivation*. They present a view on making and watching televised news as a highly ritualized activity. This does not mean, however, that viewers or professionals cannot take critical positions towards these formalized patterns (cf. Hagen, 1994a; Findahl & Höijer, 1985; Hacker et al., 1991). There are suggestions of other objectivation practices. Politicians are known to watch the news in order to 'be prepared'. Furthermore, journalists (especially of the print media), often admit to use television news to determine their own selection of news events. But the main conclusion is that the objectivation domain hardly has been explored.

Domain 10: Socialization

We defined socialization as the internalization of meanings and behaviors through institutionalized processes. Television news is only one of the institu-

tions in society which willingly or unwillingly passes on meanings to individual actors (cf. domain 3: *Social Networks*), although it is considered by some to be among the more powerful of such institutions. The process is clearly of a long-term nature, creating news related world-views, beliefs, knowledge or evaluations only by multiple exposures to news broadcasts.

Among the most well-known of classical communication studies are investigations of the *knowledge gap* hypothesis (Tichenor, Donohue & Olien, 1970), studies regarding *agenda setting* phenomena (Cohen, 1963; McCombs & Shaw, 1972), and *cultivation studies* (Gerbner, 1973). Although diverse in nature, these investigations all claim certain socialization influences of the media. However, the bulk of studies gathered in this review deals with either print media or non-informational television shows.

Issue: Worldview. Not surprisingly, in some way or another, the majority of socialization studies focus on the consequences of broadcast news on viewers' image of reality. Since television news is assumed to be the main source of information, its role in providing the viewer with a representation of events that occurred seems commonsensical (cf. Findahl, 1994). According to various authors from different scientific fields (Adoni & Cohen, 1978; Bogart, 1980; Dahlgren, 1980; 1988, 1986; Dayan & Katz, 1992; Golding, 1981; cf. McClure & Patterson, 1974; Perry, 1990; Robinson, Chivian & Tudge, 1989), television news is essential in providing the viewer with a subjective *feeling of understanding* about events. Other researchers, some of whom are not primarily concerned with the subject, have shown evidence that viewers have a tendency to form *perceptions and judgments* about reality on the basis of (specific parts of) news items, about for instance violence or crime rates (Höijer, 1996; Gibson & Zillmann, 1994; O'Keefe & Reid-Nash, 1987; Iyengar, Peters & Kinder, 1982; Glasgow Media Group, 1976; Perse, 1989), presidents and voting behavior (Iyengar, Peters & Kinder, 1982, Iyengar, 1990; McClure & Patterson, 1974), and ethnic minorities (Allen & Kuo, 1991; d'Haenens, 1996). Critical communication scholars have argued that the content of the news, being inherently *ideological* (cf. domain 2: *Institutions*), has strong consequences for the way in which viewers perceive the (political) world. What is presupposed by the news, laid down in specific news conventions (cf. domain 2: *Institutions*: Fiske, 1987; Dahlgren, 1986; Bogart, 1980; Pietilä, 1996; d'Haenens, 1996; Golding, 1981; Mancini, 1988; Van der Molen, 1989; Van Zoonen, 1991; cf. Hagen, 1994a; Jensen, 1988; 1990; 1992), is culturally determined (e. g., television news 'information'; Pietilä, 1996), and inadvertently creates noncompromizing attitudes towards these 'ideological' stances (Altheide, 1984; Liebes & Ribak, 1991; Himmelstein, 1994; Golding, 1981; Hacker et al., 1991).

Commentary. Anyone who had the experience of watching the news in a distant country will agree that 'watching the news' implies a hidden curriculum of news conventions and common knowledge. In this way, televised news partly

creates, but also partly tries to meet the viewer's worldview. But the actual processing, the interpretation by the viewer, usually is regarded as the dominant influential factor in creating an image of (social) reality (Perse, 1989; Adoni, Cohen & Mane, 1984; Shapiro, 1991; Findahl, 1994; see domain 5: *Interaction Situation*).

People are thought to have been socialized to regard television primarily as an entertainment medium contrasting with newspapers as information medium, suggesting that people watch the news primarily for entertainment motivations. Agenda setting studies have shown that an agenda setting effect, which is presumed to be a long term consequence on people's relevancies, may exist, but that this effect is influenced by the historical background as well as possible direct relevance of the event under consideration (Brosius & Kepplinger, 1990; 1992; 1995; Fan, Brosius & Kepplinger, 1994; Page, Shapiro & Dempsey, 1987; Findahl & Höijer, 1985, McLeod, 1995; Rubin & Perse, 1987; Schulz, 1982; cf. Erbring, Goldenberg & Miller, 1980). Furthermore, the public agenda may influence the media agenda on several occasions (cf. domain 9: *Objectivation*). One exception should be made with regard to perceptions of political areas (Adoni, Cohen & Mane, 1984; Cohen, Adoni & Drori, 1983; Iyengar, Peters & Kinder, 1982; Schulz, 1982; 1996; Lo, 1995). Television seems to be able to affect perceptions of political life, as it is an area of life that is remote from the viewers' direct experience and knowledge (cf. domain 6: *Relevance Structure*).

What has hardly been investigated concerns the question of the part television news plays in constructing a social stock of knowledge. Another question, implied in the observation above, is on differences in the tacit knowledge assumed in television news in different countries.

Conclusions and discussion

Having reviewed some 250 studies on television news research in the period 1970–1998, we summarize a number of conclusions in order to discuss suggestions for a future research agenda on television news. First, at least four somewhat 'underdeveloped' domains in television news research can be identified (Table 1).

Not much research has been done on the *Interaction Situations* in which television news use is embedded. Evidence so far allows for some sketchy conclusions about everyday viewing practices and activities, but much is still uncharted. As media use is conceived of as a social activity, the influence of 'others' in the viewing surroundings, for instance with regard to parasocial interaction, and the changing role of media landscapes have not been extensively studied.

Table 1. Number of studies contributing per issue/domain.

Domain	Research issue	No. of studies
1. Situation	* News as selection	33
	* News as true account	30
2. Institutions	* Norms/values news making	47
	* Content characteristics	30
3. Social Networks	* Networks as information sources	11
	* Networks as socialization agents	8
4. Information	* Information as 'budget'	33
	* Format features	43
5. Interaction Situation	* Exposure & everyday life	28
	* News watching as social activity	13
	* Parasocial interaction	11
6. Relevance Structure	* Cognitive structures	43
	* Attitudes, beliefs, opinions	18
	* Affective structures	46
7. Definition of the Situation	* Interpreting the news	47
	* Comprehension	10
	* Evaluation	11
	* Recall	25
8. Action Strategies	* Routine	5
	* Active problem solving	16
9. Objectivation	* Viewing patterns	6
	* Professional views	5
10. Socialization	* World view	48

Note. The tentative counting shown in the last column is somewhat arbitrary inasmuch as the number of *studies* – and not the number of *publications* – contributing to a domain and/or research issue have been counted

Additional research issues are the embeddedness of television news watching in of *everyday time schedules* as well as the role of *the others in the viewing situation* on viewing patterns. In addition, the everyday life context of news viewing sometimes makes it a *secondary activity*, but *the consequences for attentiveness* are largely unknown.

Another domain that merits further attention is *Action Strategies*. Although it seems quite evident that most of television news use is a matter of routine, too

little is known about situations in which people do act upon subjectively problematic information from newscasts. In fact, *problematic* and *unproblematic coping* have hardly been discerned and described.

The third somewhat underinvestigated domain is that of *Social Networks*. Here, concepts are highly diverse, and as a consequence, there is little agreement about the role of social networks on the impact of television news use. One of the main problems seems to be that interpersonal channels are not easily investigated given their varying nature. Evidently, social networks play an important part in the diffusion and/or evaluation of information (i. e., *knowledge provider*), but it is much less clear exactly what this role is and how causal relations should be seen. Little is known about the effects of social networks on situation definitions of people and how the viewer is *socialized in news viewing*.

Still less is known about long-term effects on behavioral patterns, or *Objectivation*. In fact, we did not find a single study which specifically investigates action patterns related to television news viewing. It has become clear, however, that television news viewing is regarded as a highly ritualized type of action, and that it is precisely this, combined with the 'citizen duty' to keep informed, that counts for some problematic definitions of the situations, for both researcher and news viewer. Perhaps one of the most interesting and underinvestigated issue concerning objectivation is how television news use patterns may be socially determined as (sub) cultural forms of news viewing. Especially interesting are *viewing patterns of professional groups* (politicians, journalists) that in part generate and/or make the news.

Second, from some of the more heavily investigated domains we understand what *is*, and what *is not* known about the use of broadcast news. Television news concerning *Relevance Structures* and *Definition of the Situation*, is essentially studied in cognitive processing terminology. Results, usually showing poor recall ratings as well as low comprehension levels ('observer perspective'), also point to an integrated processing of information from the news. Viewers tend to restructure and make inferences about news information when processing ('user perspective'). This again, may account for a great deal of 'misunderstandings' found in present recall or comprehension research.

As cognitive processes are now gradually better understood, the consequences of affective processes are much less clear. It is suggested that *emotional reactions* may provide information with evaluations and judgments, and that the processing of television news consists of both cognitive and affective components. How these two components might be intertwined and how they affect each other is a very difficult question to investigate. This suggests research on *interpretation differences* of viewers from different backgrounds. Another interesting research issue is *incidental learning* during viewing, as non-attentive viewing often may be the standard mode of viewing. But most

relevant is further research on the *actual outcomes* of the viewing process, integrating findings on comprehension, emotional reaction, evaluations, and recall. In fact, such a new perspective on the products of news viewing is a necessary condition to assess the relative *power of the 'text'* in the interpretation process.

However much investigated, research on the domains *Situation* and *Socialization* has provided us with few satisfactory conclusions. It is clear that most news topics refer to 'political' issues. The concept of 'politics' used in these studies, is a strictly institutional one (referring to 'political' parties, 'political' institutions, 'political processes'; e. g., Kline, 1972). This leads to an interesting question about the socialization impact of the news, as it may be that this impact is at its greatest when people have no direct experience with news events. 'Politics' and especially 'framing' of politics might be such a topic. What is not clear is how these television news portrayals are connected with both the 'real world', with *non-media institutional definitions* of situations, and with *the life world of the viewers*. There is, however, agreement today about the constructive nature of both news production and reception.

The domains of *Institutions* and *Information* have both enjoyed a great deal of research effort. It is clear that television news is of an ambivalent nature in many ways. It is, more or less consciously, produced to be both informative and entertaining, and possibly as a result of that the textual and visual quality of broadcasts is equally diverse and very frequently confusing or even disturbing to viewers. This poses further questions on the *concept of news* and the *quality of media performance*, i. e., in terms of professional criteria of news makers as well as in terms of suitability to television news users. However, there is much that still has to be investigated, especially regarding the *influence of pictures* (moving pictures as well as stills) *on news understanding*. Another research issue on the institutional domain is the role *information sources* play in the news process, in constructing and presenting the news.

A number of trends can be discovered in television news research across time. While 'in the early days', exposure was usually the starting point of any conceptual model of news reception, this concept is now often regarded as too simplistic and being replaced by other concepts, such as attention, involvement, and sometimes interaction situation and viewing patterns. Secondly, whereas up until the previous decade, recall was regarded as a separate process largely dependent upon general audience characteristics such as education and sex, nowadays it is often thought of as integrated into interpretative structures and processes. Thus, retention of the news has much to do with specific prior knowledge, knowledge structures, and ways of thinking, and with interests, involvement, and motivations. Finally, in accordance with the above, *comprehension*, that is interpreting the news on the basis of personal experiences and knowledge, has come up as perhaps the most important concept in news processing theory.

The action theoretical reference model allows us to give a systematic overview of news studies and enables us to define present and additional issues for the research agenda on television news (Table 2).

Table 2. Suggestions for television news research agenda.

Research Issues	
<i>present</i>	<i>additional</i>
(2) Institutions	* Concept of News
* Norms & Values of News Making	* Non-Media Institutions
* News Contents Characteristics	* News Information Sources
	* Quality of Media Performance
(3) Social Networks	* Networks as Knowledge Provider
* Networks as Sources	* How the Viewer is Socialized
* Networks as Socialization Agents	
(5) Interaction Situation	* Time Schedules
* Exposure & Everyday Life	* Other Activities → Attentiveness
* Watching News as Social Activity	* Others Present → Use patterns
* Parasocial Interaction	
(7) Definition of the Situation	* Interpretation Differences (range)
<i>process:</i>	* Emotional Response → News Definition
* Interpreting News	
<i>product:</i>	* Incidental Learning
* Comprehension	* Power of the Text
* Evaluation	* Actual Outcomes
* Recall	
(8) Action Strategies	* Unproblematic Coping
* Routine	* Problematic Coping
* Active Problem Solving	
(9) Objectivation	* Professional Groups
* Viewing Patterns	
* Professional Views	

One additional research theme of which our understanding is not yet fully developed, cuts across various domains. Dynamics of groups of viewers, in the interaction situation as well as within social networks, and their influences on definitions, action patterns and objectivated/socialized television news uses are of major interest, yet are practically uncharted.

To summarize, much is known about the production of television news, and much is known about how people construct their own sensible information from the news in close interplay with the world surrounding them. As much

as has been investigated, however, a couple of latitudes were identified, in particular long-term and group-related topics. Television news research, it seems according to studies from various scientific schools, is essentially a question of trying to understand constructive and reconstructive processes.

Last, but not least, the media landscape is rapidly changing, especially in Europe (cf. Friedland, 1996; d'Haenens & Saeys, 1998). The emergence of powerful commercial news broadcasters, including online services poses interesting questions on how this will affect institutional processes and the quality of information (media performance) on the one hand, and situation definitions constructed by audiences as well as subsequent action strategies, on the other. Thus, much remains to be done.

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Chapter 3

Conceptualizing television news interpretation by its viewers: The concept of interpretive complexity

Gabi Schaap, Karsten Renckstorf and Fred Wester

Abstract

In recent years many scholars seem to agree that viewers' interpretation plays a prominent role in the influence of television news. However, a clear concept of 'interpretation' is still missing. This article proposes to conceptualize interpretation as the 'representation' of a news item as constructed and reported by a news viewer. More specifically, we look at this representation in terms of its complexity. Two aspects are important: First, the fundamental elements viewers use in their interpretation (differentiation), and second, how the viewer relates these elements to one another on a more abstract level (integration). Together, differentiation and integration represent the complexity of the viewer's interpretation of a television news item. The article provides definitions of these concepts and argues that interpretive complexity may be useful in studying the influence of television news. It concludes by outlining research questions in the field of television news using interpretive complexity.

What impact does television news have on its viewers? Although relatively little is known about the answer to this question, among the things that many communication researchers seem to have agreed upon in recent years is that the influence of television news is something in which meaning construction by the viewers plays a prominent role. Watching news is 'making meaning'. This is a much more complex process than merely absorbing and reproducing news facts. To make sense of a news item, viewers restructure it in their minds, elaborate or simplify it, and integrate parts of it into their stock of knowledge, while other parts are seemingly discarded. Because of this, neither the reception nor the impact of television news can be satisfactorily measured by testing the recall of news facts, which has been the standard way of studying the impact of news (Al-Menayes & Sun, 1993; Berry, 1983; Graber, 1984; Höjjer, 1998; Neuman, 1981; Putnam, 1971; Schaap, 2004; Woodall, Davison & Sahin, 1983). In other words, to answer the question on whether and how the news af-

fects its viewers, one must ask the question what meanings viewers construct from this complex combination of sounds and images, (cf. Findahl, 1998, 2001; Gunter, 2001; Höijer, 1989, 1998; Höijer & Werner, 1998; Jensen, 1998; Robinson & Davis, 1990; Renckstorf & Wester, 2001; Shapiro & Lang, 1991).

Unfortunately, what is exactly meant by ‘meaning’ has often remained somewhat opaque. As a consequence, measuring how people interpret the news has been problematic, and little is still known about the meanings audiences (re-)construct from a news broadcast (Gunter, 2001; Schaap, Renckstorf & Wester, 2001). Here, we use an approach that tries to be more sensitive to the complex reconstructive nature of dealing with television news – what we will call the ‘interpretation’ of the news – by taking a ‘user perspective’. This perspective looks at the interpretation of the news from the standpoint of the viewer, and places what is meaningful to the viewer at the center of its attention as opposed to what is necessarily meaningful or ‘correct’ to the researcher or journalist.

In sum, in order to study how television news affects its viewers, it is relevant to study how viewers interpret the news. And in order to be able to study interpretation, we need to conceptualize it. How to assess viewers’ representations of the news is addressed elsewhere (Schaap, 2004). Here, we propose that the interpretation of a television news item can be seen as a representation of the news made by a viewer. Depending on viewer characteristics, news features, and the viewing context, representations can vary in terms of the amount of elements and relations between the elements that are used.

With these two dimensions of what is known as ‘interpretive complexity’ we will focus on the structure rather than on the content of interpretations. This means one can discriminate between people’s interpretations without having to resort to evaluating what the viewer has precisely ‘meant’ in the interpretation. Assessing what an interpretation means is highly subjective; it is easier to attain some level of ‘objectivity’ in recognizing how interpretations are structured than it is in assessing whether elements are ‘correctly’ used, or what the ‘true’ meaning of an interpretation is (cf. Luskin, 1990; Neuman, 1981; Schaap, 2004; Schroder, Driver, & Streufert, 1967; Tetlock, 1984). Therefore, interpretive complexity is more in line with a ‘user perspective’. Simultaneously, we develop a concept that allows us to measure interpretation in a more systematic way. This article discusses the consequences of using the concept of complexity for the study of television news interpretation and news impact in our concluding paragraph.

Interpreting the news

To interpret television news, viewers use their knowledge about facts, people, motives, norms, values, action strategies, as well as knowledge about for example, what news is, what one can expect from the news, and how to watch it

(cf. Lemish, 2004). They have acquired this knowledge throughout their life through personal experiences and socialization. This idea is not new, similar views have existed for decades in a wide range of disciplines such as cognitive and social psychology, sociology, anthropology, and linguistics, although each discipline employs its own specific terminology (e. g., Berger & Luckmann, 1967; Fisher, 1997; Fiske & Taylor, 1991; Goffman, 1974; Graesser, Singer, Trabasso, 1994; Kintsch, 1998; Parkin, 2000; Putnam, 1971; Spradley, 1972; Vitouch & Tichon, 1996). In this view, watching television news can be seen as a 'meeting' of a viewer with the content of a news program in a certain social context, during which the viewer constructs a meaning from the news (cf. Wahldahl, 1998). The viewer brings to the meeting his or her individual and social characteristics: a personal life history, experiences, interests, goals, attitudes, and membership of various social groups, all stored in knowledge. The news also brings to the meeting its characteristics; not only the topics on which it reports – its 'content' – but also formal features such as sounds and images, the structure of an item, or its length. Both news content and audience characteristics may determine the eventual 'meaning' of a news item. A news item that strongly resonates with what a viewer knows, feels, and is interested in will for instance, be interpreted differently than an item for which this is less the case. Finally, the social context in which the news is presented and watched is of importance. For instance, major social or economic events and circumstances, or perceived public opinion can have a strong impact on how a viewer interprets the news. Thus, a news item on the price of Enron shares may take on different meanings for viewers before and after the financial scandal. In other words, interpreting the news is a dynamic process; meanings change as knowledge changes in a changing environment (Findahl, 1998; cf. Livingstone, 1990). The result of this meeting, and of the process of interpreting the news, is the representation of the news item that is constructed by the viewer.

An example is the study we are conducting in which viewers reported their thoughts on a television news item dealing with agricultural reforms and their consequences for meat consumption. Two of the respondents held opposing views, one who stated s/he found the item interesting, while the other found it not at all interesting. The first viewer reported thinking about, among other things, 'life on a farm, with chickens and pigs', the 'things such as the hormones that farmers add to animal food', and 'genetically modified starch', the consequences of this for public health, such as 'getting a hole in your brain', as well as the fact that 'consumers do not want to pay too much for their groceries'. The second viewer had much less thoughts; they focused on the fact that the viewer's 'brother-in-law has a cow farm as well', and that the 'reporter is a well-known foreign correspondent'.

This example serves to illustrate the premise that the interpretation of a television news item has at least three structural characteristics. First, an interpre-

tation can be seen as a collection of individual components. For the first viewer these are for instance, a farm, farmers, chickens and pigs, genetically modified starch, public health, consumers, and groceries. Some of the components of this viewer's interpretation come from the news item itself, such as the consumers and their not wanting to pay too much. Others, while inspired by it, do not come directly from the news item, for instance the modifying of food and its dangers for public health. A second characteristic is that some of these components are connected; i. e., the first viewer directly connects (the eating of) of food with added of hormones to 'getting a hole in your brain', one is the result of the other. Finally, one can group these components into different 'topics', or categories; some components, such as farm life, pigs and chickens are all related to the same 'area' one can refer to as 'agriculture', whereas others seem to represent categories dealing with 'health' and 'economy'. Thus, in this conceptualization one sees news interpretation as a representation of a news item that is made up of elements and connections between elements and which elements can be seen as being part of different categories (cf. Renckstorf & Wester, 2001; Roskos-Ewoldsen, 2004). Together, these are the characteristics that form a specific individual representation of a news item as constructed by a viewer.

Still more can be learned from this example. There are differences between the interpretations of these two viewers, as the second viewer's reconstruction included different components, from different areas (one could call them 'family', and 'journalism'), and no direct connections of any kind. In other words, the two interpretations are structured quite differently. We suspect that viewers with different relevant characteristics (in this particular case this may be differences in interest) are prone to have differently structured interpretations.

Below, we will elaborate on how interpretation is influenced by knowledge structures, and adopt concepts from disciplines that are concerned with the study of knowledge structures to our concept of interpretation.

The structure of interpretation: Interpretive complexity

The fact that a viewer's interpretation of a news item has a certain structure that may differ from another viewer's interpretation is because the knowledge the viewer uses to interpret a news item is structured in a specific way that is most likely different from person to person. In other words, interpretation is a direct product of the use of knowledge¹. A person's stock of knowledge consists of separate yet interlinked elements which are divided into categories and subcategories in a system that increases in complexity as the number of categories and subcategories increases. How knowledge is structured and how it is used in mental processes, is different from person to person and from situation to situation. As a consequence, the products of these different mental structures and processes too

will vary (Segal & Shaw, 1988). One of the primary products of these processes is a personal representation of the news item. As different viewers have different knowledge structures, the structure of their interpretations will differ as well. Here, we will not focus directly on mental processes, as they are of only indirect concern to communication scholars and are more suited as object of study for psychologists. However, interpretation as a product of these processes is of great importance to the study of the influence of television news.

Ultimately, it is important that one can compare interpretations with different structures. Therefore, it is important to assess in what way the structure of interpretations can vary. In the description of knowledge structures, one can see the similarities with what were described as the characteristics of interpretation; both consist of elements that are linked in some way or another. Therefore, in order to assess how the structure of the interpretation can differ between viewers, we will adapt a concept that has been used in other scientific disciplines to describe these characteristics of knowledge, called cognitive complexity². Complexity refers to the amount of elements and the level of coherence or connectedness between the elements, called 'differentiation' and 'integration', respectively. Accordingly, the interpretation of a news item can also be highly differentiated if viewers incorporate many elements, and highly integrated if viewers make many connections between elements. A highly differentiated and integrated interpretation of a news item suggests an interpretation that contains fine distinctions, flexibility in attitudes and beliefs and extensive information use, whereas a less complex interpretation suggests gross distinctions, rigidity and restricted information use (Hinze, Doster, & Joe, 1997; Schroder et al., 1967; Putnam, 1971; Suedfeld & Tetlock, 1977). In order to distinguish between the concept of cognitive complexity (i.e., the complexity of knowledge systems) and what we do here, we will call the complexity of the interpretation of a news item 'interpretive complexity'. Below, we will discuss the two aspects differentiation and integration in more detail.

The complexity of the interpretation of a news item is largely domain-specific, that is, a person does not necessarily have a complex interpretation of the world in general, but rather of a specific knowledge domain (Suedfeld, Tetlock, & Streufert, 1992; Tajfel, 1981; Tetlock, 1984). This means that the same viewer can have a highly differentiated and integrated interpretation of a news item on the new *Star Wars* film and a much less differentiated and integrated one of a news item on the political situation in the Middle-East. Conversely, the same news item may result in differences in interpretive complexity among different viewers as their personal circumstances are different. As shown, knowledge, personal experiences, interests, and the social situation of a viewer have consequences for the way he or she interprets a news item. So a science fiction fan may have a complex interpretation of the *Star Wars* item, whereas the interpretation of the same item by a professor in Middle-Eastern politics may be mark-

edly 'simpler'. In the concluding paragraph I will discuss in short how these relations can be used to test hypotheses on the influence of the news.

Interpretive differentiation: Amount and range of elements

As seen, the interpretation of a news item consists of certain basic units or building blocks that together make up the viewer's representation of the news. Such elements may include people, for instance 'a farmer', or 'consumers', acts performed by these people, such as 'adding hormones to food', or 'buying', objects like 'animal food', and attributes of these things like 'the price of meat', as well as reasons for, or consequences of acts. Differentiation is the degree to which a viewer uses such elements in the interpretation. As we will see, differentiation refers to both the amount of distinct elements and the range, or the types of elements used in an interpretation. Accordingly, a person's interpretation of a news item can be called more differentiated as the amount and range of elements in the interpretation increases (Linville, 1982; Luskin, 1987; Neuman, 1981; Schroder et al., 1967; Scott, 1963; Suedfeld & Tetlock, 1977; Tetlock, 1984).

But what should be regarded as elements? To answer this question, we have turned to the ethnologist Spradley, who is interested in the elements members of a culture use to give meaning to the social situations they encounter in everyday life (Spradley, 1972, 1979, 1980; Spradley & McCurdy, 1972). All these elements combined make up the basic layout of a social situation as perceived by its participants. Important to this study is that Spradley describes a list of general types of all the possible elements which can be applied to any situation. People do not use these general types, they are merely categories constructed by a researcher in trying to discover systematic features of interpretations. People do use specific elements in their interpretation; each of these specific elements can be classified as one of the general types. To illustrate and clarify this, consider Figure 1, which is taken directly from Spradley. It represents some undefined social situation, in which two people sit at a table with some objects on it, which are manipulated from time to time.

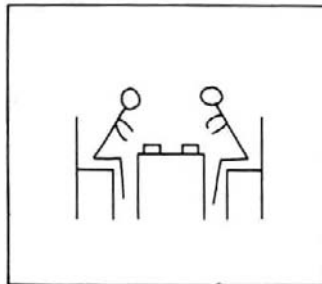


Figure 1. A social situation (Source: Spradley, 1980, p. 87).

Now, depending on the specific social situation, the general elements of this situation – people, objects, handling of objects – represent different specific people, objects and actions. If Figure 1 represented a chess game, the specific actors, objects and actions are different than if the illustration depicts a political debate, lunch hour, or two students in a library. In the same way, viewers of television news interpret the news using specific instances of these general elements. Thus, the general types of elements that are used in interpreting a social situation are the same as the elements that can be used in the interpretation of what may also be called a social situation; watching a television news item.

Spradley’s list of general categories of elements is based on two premises (Spradley, 1972). First, the elements for giving meaning to any social situation correspond to the basic components of any given social situation. A(n) (ideal) social situation consists of actors with certain goals and feelings, who are engaged in an activity that consists of single actions, that is embedded in a set of related activities called an event; all this takes place in a specific space which contains objects, and during a certain period of time (Spradley, 1979, 1980). For instance, two chess masters, both with the goal to win and feeling a bit tense, are engaged in a chess game where they think and move pieces, during a chess tournament. This takes place over a period in three days in the tournament hall, which contains tables and chairs, chess pieces and boards. Thus, a first clue to what elements in the interpretation of a social situation are is that they concern the components actors, goals and feelings, activities, acts and events, and space, time and objects.

Second, when people give meaning to a situation they always link these components in some way or another on a very basic level. Called ‘semantic relationships’, these links relate specific components to small categories. The number of various types of links is limited³. In his research Spradley has successfully used nine types of links: Inclusion (kinds of things), attribution (attributes of things), spatial (parts of things), location-for-action (places for things), sequence (the steps of phases in/of things), cause-effect, functions (the functions of things), means-end (ways to achieve things), and rationale (reasons for things) (Spradley, 1980: 93).

Table 1. Elements in the interpretation of a television news item: Some general elements and examples.

General categories of elements	Examples of specific elements
<i>Inclusion:</i>	
Kinds of...	
Actors	Albert Einstein is a kind of actor
Acts	To think is a kind of act

General categories of elements	Examples of specific elements
Activities	Debating is a kind of activity
Events	A debate is a kind of event
Goals	Solving a problem is a kind of goal
Feelings	Self-confidence is a kind of feeling
Objects	A desk is a kind of object
Space	A TV studio is a kind of space
Time	Today is a kind of time
<i>Attribution:</i>	
Attributes of...	
Actors	Intelligence is an attribute of Albert Einstein
Objects	A brown color is an attribute of a desk
<i>Cause-effect:</i>	
Results of...	
Acts	Solving the puzzle is a result of thinking
Events	Feeling frightened is a result of a loud bang
<i>Rationale:</i>	
Reasons for...	
Feelings	Feeling frightened is a reason for running away
Events	To give information is a reason for a press conference

Combining the two dimensions ‘components of social situations’ and ‘semantic relationships’ creates a matrix, in which one dimension represents the general components of social situations, and the other dimension represents the semantic relationships, defining all possible types of elements that can be part of the interpretation of an interpretation of a situation (cf. Spradley, 1980: 82–83). These types of elements are for instance (using the semantic relationship ‘inclusion’): Kinds of actors, kinds of acts, kinds of activities and events, kinds of objects, kinds of goals and feelings, and kinds of space and time; or (using the semantic relationship ‘attribution’): Attributes of actors, acts, and activities, etc.; (using ‘rationale’): Reasons for activities, feelings, (in ‘function’): Functions of acts, objects, etc. Table 1 lists some of the general categories and provides examples of specific elements in these categories. Thus, the representation of a news item constructed by a viewer consists of various kinds of people with specific characteristics, the things they do, the reasons they have for doing things, or feeling the way they feel, the objects they use, the effects acts and feelings have, etc. The fact that this conceptualization of differentiation includes all elements that can possibly be included in an interpretation makes it highly useful for purposes of this study.

Now that we have established which elements the concept of differentiation refers to, one can distinguish between two types of differentiation. One

viewer's interpretation of a news item may consist of, for instance, several actors, such as Jacques Chirac, Gerhard Schröder, and George W. Bush. A second interpretation by another viewer may consist of one actor, George W. Bush, and in addition an act, e. g., voting, and an object, e. g., an amendment. The amount of elements both viewers used is the same; three. However the range of elements is different. The first viewer uses three elements of the same type, namely all actors (even more specific, they are all politicians). The second viewer uses three elements of three different types: An actor, an act, and an object. Therefore, although the amount of elements used by both viewers is equal, the range of elements is different. Both characteristics of differentiation are important; they represent the degree to which a viewer's interpretation is specific and heterogeneous.

In sum, interpretive differentiation can be understood as the amount and range of distinct basic elements as described above. Thus, the interpretation of a television news item consists of specific discriminate elements in which can be used to distinguish general types 'kinds' of actors, acts, activities, events, objects, feelings, goals, times and places, and their 'attributes', 'causes and consequences', 'reasons', 'phases', 'places to do things', and 'ways to achieve things'.

Interpretive integration: Relationships and domains

The structure of interpretation is characterized not only by the use of separate elements, but also by the way in which viewers link these elements. Whereas elements are almost always connected on a basic level in semantic relationships, as can be seen above, integration refers to a form of association at a higher level of abstraction⁴. A person may use many elements, for instance kinds of actors, but fail to connect them in any meaningful way. So, such a person's interpretation may be highly differentiated yet at the same time it lacks coherence. Such a representation of a news item would be less structured, or less 'complex' than a representation in which elements are connected. In sum, the greater the amount of such connections between elements, the more highly integrated the interpretation is. From the above we can gather that differentiation is a necessary but not sufficient prerequisite for integration, because people using a greater number of actors, acts, and so forth in their interpretation have more opportunities to link elements than people who use a smaller number of elements (cf. Guttieri, Wallace, & Suedfeld, 1995; Neuman, 1981; Schroder et al., 1967; Tetlock, 1984; Suedfeld et al., 1992; Tetlock, 1984; Zajonc, 1968).

There are two ways in which a person can connect elements. First, on a micro level, he or she may connect two or more individual elements. Second, on a macro level, many individual elements are implicitly connected by grouping them in coherent structures, or socio-cultural categories called domains

(cf. Judd & Krosnick; 1989; Wahldahl, 1998). Below, I will specify these two variations of integration.

Micro-integration: Relational elements

One way in which an interpretation shows coherence is through the linking of individual elements. Although every element represents some type of relationship, one could posit that some of these relationships, and consequently some of these elements, are of a higher level of abstraction (Höijer, 1989, Luskin, 1987). These are abstract elements that contain actual explicit relationships between two or more concrete elements. Different kinds of people, places, and events are concrete, observable components of a news item, whereas for instance causes and consequences are more abstract, not directly observable in nature (cf. Al-Menayes & Sun, 1993; Findahl & Höijer, 1985; Schroder et al., 1967). Expanding on this definition, we define elements that contribute to micro-integration as elements referring to explicit relations in terms of direction, logic, or time. Some of the elements we have adopted from Spradley belong to this category; they are the elements concerning cause-effect relations (directional relations), rationale, and function (logical relations) and sequence (temporal relations).

In short, a first aspect of the coherence or integration of interpretation can be defined as the occurrence of an explicit relationship between at least two individual elements in terms of logic, time, or direction. The more such explicit relations an interpretation contains, the higher its 'micro-integration' is. Thus, in addition to differentiation, a second aspect of interpretation of a television news item is called 'micro-integration'.

Macro-integration: Domains of elements

On a still higher level of abstraction, a second type of coherence in news interpretation is the grouping of elements into larger coherent structures, or categories. Although our definition differs somewhat from Spradley's, we will use his term and call these categories 'domains'. In interpreting the news, a viewer may use domains on for instance 'politics', 'healthcare', or 'private life'. When a viewer uses, say, five domains in the interpretation of a news item, this viewer in fact links these categories to each other and to the news item. In other words, such a viewer integrates these domains into his or her representation of the news item, and does this to a larger degree than a viewer who uses only one or two domains in a representation of a news item. In other words, the latter interpretation is less integrated than the former.

A domain is a category in which aspects of reality are grouped that belong to the same social sphere; i. e., it defines what belongs to a social sphere and

what does not. Domains are social products; that is, they are defined by shared meanings. Over time, within and sometimes even across social groups, people have developed shared ideas on what actions, events, etc. mean or should mean, what they represent and how they relate to each other. Elements that share a common ground, on which there is some consensus on a common meaning, belong to the same domain. In other words, people agree on the general content of social areas, and share a general 'definition of the situation'. At the same time, they share definitions of the boundaries of an area, of what is and what is not included (cf. Rosengren, 1986)⁵. In our concept, this means that a domain consists of all elements, such as actors, acts, events, and objects that are related to the same social sphere, such as 'the economy', or 'private life'.

We can get a sense of which domains can be used in the interpretation of the news because the way society has been organized originates from shared meanings. Domains make standard interpretations readily available to the individual, thus facilitating the process through which people make sense of the world. Therefore, the way in which we organize society is reflected in the domains we use when giving meaning to the world, and vice versa. Some of these domains in society are in fact organized in a literal, professional sense; they are 'institutionalized'. They are routine solutions to recurring interpretation problems made 'official', laid down in 'objective', established rules and regulations for action, sometimes literally set in stone (Berger & Luckmann, 1972). So, many political institutions are institutionalized domains. The department of 'education' relates to the social-cultural sphere in which all actors in the area of education (teachers, students, school boards) engage in social activities related to the area (teaching, studying, making a curriculum), in designated places (schools, class rooms), using objects (blackboards, books, other study materials). Likewise, 'economy', or 'defense', or 'justice', are domains with their own specific elements, many of which are unique to the domain. In a similar fashion, news media, as important potential 'defining powers' in western societies, organize world events by placing events into specific news sections in the newspaper, or specialized news programs, such as economy, sports, science, showbiz, foreign news, media, and advertisements. These institutionalized domains are of particular interest for studying the interpretation of the news, as we can expect that many of them are used by news makers in making, and by viewers in interpreting a news item (cf. Graber, 1984; Jensen, 1998; Luskin, 1990).

However, individuals do not share all their situation definitions all the time with everybody, just as individuals do not share their personal history and social background with every other individual. Therefore, in some cases a viewer will define a situation utilizing his or her own idiosyncratic definitions, using domains that are not shared by many other people, and are not used in the news item. In other words, viewers are not only domain users, but also domain

makers. Some domains may only be meaningful to that particular person or a very small group of people. Predicting the idiosyncratic domains that will be used in the representation of a news item is much more difficult, which is why we can only assess them after viewers have produced their interpretation (cf. Graber, 1984; Spradley, 1980).

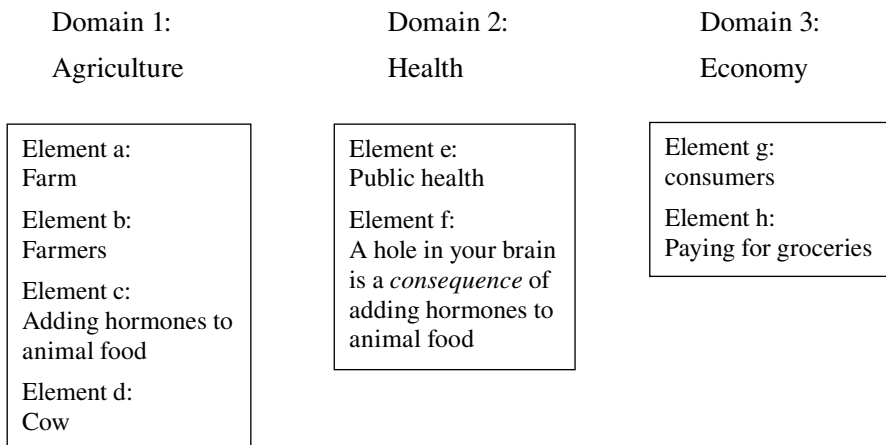
In sum, interpretive domains are categories of elements that are related to areas in social reality. In our concept, all actors, acts, events, objects, attributes, causes, functions, etc. that relate to one social area constitute one domain. The domain of 'agriculture', for instance, contains all agricultural people, agricultural acts, agricultural events, and their consequences, whereas the domain 'journalism' contains journalistic actors, their journalistic acts, and their consequences, etc. Macro-integration, then, is the degree to which a viewer associates domains with a news item and with other domains, how many domains the representation of a news item incorporates. We can see how different news items on different subjects may be interpreted using different domains, and also how different viewers from different individual and social backgrounds may use different domains while interpreting the same news item.

Interpretive complexity: Two approaches to the concept

Above, we have defined interpretive complexity or interpretive differentiation and integration as the degree to which viewers include elements, and elements of varying kinds, the relations between elements, and domains in their interpretation of a news item. Each interpretation may differ from another in the number of elements, types of elements, relationships, and domains that are included. Thus, some viewers have a more, or less, complex interpretation of a news item than others. This is a quantitative approach to the concept, where the number of elements, relationships and domains that the viewer includes in the representation of a news item are counted and compared. Earlier we sketched how an interpretation of a television news item consists of several components. Figure 2 outlines how these components called differentiation, as well as micro- and macro-integration, all contribute to the complexity of an interpretation. As Figure 2 shows, the individual components known as elements are the elements *a-h*, one of which (element *f*) contains a relationship (micro-integration). All these elements can be grouped into three domains (macro-integration): Agriculture, health, and economy.

A second, more qualitative approach is also possible. This approach entails looking at the nature of the elements, relationships, and domains in an interpretation. One viewer could use some particular elements and domains in his interpretation, whereas another viewer uses other elements and domains. For instance, in our first example, one of the viewers used the domain 'agriculture', which among other things, included farmers and cows. A different viewer

might also use the domain agriculture, but may include other elements, such as animal diseases, or crop failure, or he or she may not use the domain agriculture altogether, and connect the item to such things as ‘culture’, or ‘war’. So, viewers may vary not only in the amount of elements, relations and domains included in the interpretation, but also in the kinds of elements, relations, and domains. In order to understand how people make sense of the news, it is important to see what specific elements and domains are used by what kinds of people in the interpretation of a television news item (Wahldahl, 1998).



Differentiation = (element *a*, element *b*, element *c* ... element *h*)

Micro-integration = (element *f*)

Macro-integration = (domain *1*, domain *2*, domain *3*)

Figure 2. Interpretive complexity: Differentiation, micro and macro integration.

Discussion

In this article, we assumed that the influence of television news on its audience is affected by the interpretation a viewer creates of the news. Consequently, to study the influence of television news is to study the interpretation of television news by viewers. In an attempt to develop a useful concept of television news interpretation, we proposed that a viewer’s interpretation of a news item can be seen as a representation of that item. This representation is a more or less complex structure of connected elements, some of which come from the news and others from the viewer’s knowledge. In this view the complexity of the interpretation is characterized by two aspects: Differentiation and integration. They represent the broadness and coherence of the interpretation of a television news item.

One aspect of this concept that gives it an advantage over previously used methods is that it, while giving a broader insight into what people do with the news, focuses on the structure rather than on the content. Thus, it allows us to measure and compare what different people do with the news without the need to classify their reception as 'right' or 'wrong' as recall studies do, or to have the researcher determine exactly what a viewer 'means'. This approach thus tries to be true to a 'viewer's perspective', in which the act of defining what is right or true in the reception of a news item is left as much as possible to the viewer instead of to the researcher. Of course, the role of the researcher, while diminished, is still crucial.

A second advantage may be that, although we are primarily interested in television news, we see no reason why this idea could not be adopted to the study of reception of other news media, or other genres, such as drama, for that matter.

Old and new research questions

Our concept is based on the assumption that how a viewer's knowledge is organized affects the complexity of the interpretation of the news, and this in turn affects if and how the news has consequences for a viewer. How might this concept of interpretation be of use in research on the impact of news? Here, we present a far from comprehensive list of potential research questions, some old, some new (cf. Gunter, 2001; Schaap et al., 2001).

First, we know that viewer characteristics affect how people process the news. Gender, age, and socio-economic status, the viewer's previous knowledge and cognitive skills as well as interests and involvement have all been found to correlate with news recall and understanding (Brosius & Berry, 1990; Drew & Reeves, 1980; Findahl & Höjjer, 1985; Giegler & Ruhrmann, 1990; Gunter, Furnham, & Gietson, 1984; Hendriks Vettehen, Hietbrink, & Renckstorf, 1996; Höjjer, 1996; Lockhart & Craik, 1972; Renckstorf, 1980; Robinson & Levy, 1986). An important question is how these characteristics relate to the interpretation of the news. Which viewers interpret the news in which way? How do individual or social differences influence how and what people think about the news? For instance, people with complex cognitive structures regarding an issue – that is, with much and well-organized previous knowledge – tend to be more resilient to disconfirmation than people with 'simpler' cognitive structures (cf. Fiske & Taylor, 1991; Luskin, 1990; Petty & Cacioppo, 1981). This raises the question whether people with a more complex interpretation are more prone to have a view that is more independent from the journalist's view. A second hypothesis is that highly complex interpretations correspond with a higher level of storage, reproduction, and ultimately understanding of information (Findahl & Höjjer, 1985; Graber, 1984). Thus, particular groups of viewers

may be more likely to have a low level of understanding and at the same time be more subject to manipulation than other groups. In the end this may mean that longer-term attitudes and actions such as voting are influenced by the complexity of the interpretation of issues. One could hypothesize for instance that viewers who have a relatively simple interpretation of certain public affairs news are attracted to political parties that present specific social problems in simple, one-dimensional ways.

One of the most heavily studied issues in television news research is the relationship between content features and audience impact. By far most research has concentrated on the impact of various content features on the recall and comprehension of facts. Our concept of interpretation may help elaborate on the conclusions from these studies, not only by focusing on interpretation instead of recall and comprehension, but also by adopting the concept of complexity to news content. In the past, the complexity has been assessed of transcripts of meetings of high government and military leaders in the wake of crises like the Cuban missile conflict, and of speeches by world leaders (Guttieri, Wallace, & Suedfeld, 1995; Satterfield, 1998; Suedfeld & Tetlock, 1977). Analyzing the complexity of the news content gives us a new way of assessing the 'content' of a news item that makes it possible to compare different news items or news bulletins (cf. Kleinnijenhuis, 1990; Kleinnijenhuis, Peeters, Hietbrink & Spaans, 1991). This way, we can also track the differences in the way news is presented to the public over time and test the often-made claim that the news has become increasingly simplified over the years.

Moreover, comparisons between the types of elements presented in the news and those used in the interpretation by viewers could test hypotheses about 'bottom-up' and 'top-down' processing (Findahl, 1998; Woodall et al., 1983). One interesting question is whether more complex news content has a positive or a negative effect on the complexity of viewers' interpretations. Does the inclusion of a cause-effect element invite viewers to use cause-effect reasoning in their interpretation? And conversely, does the exclusion of such reasoning prevent the viewer from making these connections? In addition, we could investigate whether the reception of television news is more fragmented and of lower level compared to other media and messages, such as news papers, or drama television (cf. Höijer, 1989; Iyengar, 1991; Salomon, 1984; Walma van der Molen & Van der Voort, 1997).

In a similar vein, the consequences of news content features other than complexity on interpretation can be studied. Textual characteristics such as narrative construction, the order in which items are presented, as well as the actual issue, emotional content, framing, and visual presentation features such as graphics, or text-image discrepancy are all known to affect news processing, and may very well affect the representation of a news item made by the viewer (Carragee & Roefs, 2004; Van Dijk, 1983; Graber, 1990; Gunter, 1979; Höi-

jer, 2001; Shah, Kwak, Schmierbach, & Zubric, 2004). Some of these features may facilitate more complex interpretations, while others, such as emotional pictures, perhaps counteract complexity. In short, in this way the power of the news to define interpretations could also be looked into.

Finally, the context in which the interpretation takes place may affect how news works. The social context not only includes the direct environment of the home, others present, and the activities that co-occur with news viewing (Konig, Renckstorf & Wester, 2001; Levy, 1978; Van der Molen, 1989). It also includes the larger social environment, including the perceived dominant public opinion, recent events, social crises (e. g., 'breaking news'), and more intrapersonal factors, such as personal crises, fatigue, stress, and the like (Suedfeld et al., 1992). All these factors may influence interpretive complexity. Some issues become much more prominent and urgent in the media after crisis events (e. g., 'war on terror') and after some time, these reports may change in intensity and perhaps in complexity (Findahl, 1998; Früh, 1990; Suedfeld & Leighton, 2002). Tracking if and how the interpretive complexity related to such issues changes is important to understand the long-term influence of news reporting.

Before we can begin to study these questions however, our first step should be to operationalize the proposed theoretical concept. The usability of our concept rests very much upon the assumption that it is possible to have the viewer report his or her representation of the news item. In our view, it is important to reduce the possible influences of the researcher on the interpretation as much as possible. An interpretation undisturbed by things such as predefined questions or answer categories teaches us more about how viewers interpret the news from their vantage point. One way to do this is by using qualitative interviews, in which viewers can voice their interpretation in their own way. In addition, it is important that we can measure the interpretation at the actual moment of the meeting between news content and viewer, as this is the moment when an image of a news event is created that may affect thinking later on in time (Findahl, 1997). In a pilot study we have used a Thought-Listing Technique to obtain access to news constructions. This method involved having participants provide verbal reports of these constructions during the viewing of a news program. This study and others demonstrate that the technical difficulties of eliciting such reports can be solved (cf. Schaap, 2004).

In addition to technical problems, measuring interpretations via these types of procedures poses some additional questions, most of which are typical of research into cognitive processes or meaning giving, and some of which perhaps will never be completely solved. One important question is how reports by participants relate to thoughts, reflections, and emotions that are actually experienced by a person (cf. Ericsson & Simon, 1984; Van Someren et al., 1994). Although protocols never allow us to completely measure all the thoughts people have, there are many indications that protocols are fairly representative of the

actual thoughts people had (Cacioppo, Von Hippel & Ernst, 1997; Davison, Vogel & Coffman, 1997; Ericsson & Simon, 1984; Van Someren et al., 1994). One additional indication from our own pilot study is the fact that participants report seemingly 'irrelevant' thoughts; almost 8.5 % of viewer's thoughts did not have a direct relation to news content (Schaap, 2004). Furthermore, in contrast to studies in which cognitive processes such as problem solving are traced, the operationalization of our concept does not have to be based on the assumption that the reported thoughts represent actual literal thoughts (Höjjer, 1990). It is sufficient to claim that a large number of thoughts do occur, and that at least the most salient thoughts can indeed be reported. Nonetheless, this question as well as other problems related to various types of validity will have to be addressed in future studies. After the operationalization is complete, we can begin to assess which specific types of elements, relations and domains are used in television news interpretation, and establish if interpretive complexity is related to viewer characteristics, content features, and social contexts.

Finally, decades of research have shown that viewers do not recall and understand much from television news, which indicates that the role of television news as an important dispenser of public affairs information should not be overestimated. Measuring recall and comprehension, while very informative is also limited, and studying interpretive complexity may help us better understand the role television news plays in society.

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Notes

1. Depending on the scholarly tradition, this mental knowledge structure is called schema, network, cognitive map, relevance structure, or frame. We must emphasize that we use the term knowledge structure in a broad sense; it includes both cognitive and affective aspects.
2. Differentiation and integration are concepts from cognitive complexity theory, which has its foundations in cognitive and social psychology and has also been used in political science. In cognitive psychology, cognitive complexity is used to explain such things as (differences in) information processing and task performance (cf. Anderson & Lebiere, 1998; Ericsson & Simon, 1984; Newell & Simon, 1972; Segal & Shaw, 1988). People with a more complex cognitive structure have been found to be better equipped to process information and complete tasks. In social psychology it is used to study social perception, attitudes, and attribution, such as

the in-group-out-group phenomena (cf. Linville, Fischer & Salovey, 1989). People generally have a more differentiated image of their own social group than of other groups. In political science, the concept of 'political sophistication' refers to cognitive complexity in the domain of politics. It signifies the level of thinking about politics (cf. Luskin, 1990; Neuman, 1981; Tetlock, 1984). In addition, various analyses of archival data, such as political speeches, transcripts of policy decisions, and novels, have been conducted (e.g., Suedfeld & Tetlock, 1977). The concept is often called 'cognitive complexity' or 'integrative complexity' (cf. Suedfeld & Tetlock, 1977). In political studies, terms such as 'political sophistication', 'ideology', or 'expertise' are used (cf. Lau & Erber, 1985; Luskin, 1990; Neuman, 1981; Putnam, 1971). Social psychology prefers terms such as 'beliefs', 'social categories' and 'attributes' (cf. Linville, 1982; Linville et al., 1989), whereas cognitive psychologists use 'units' and 'associations'. In fact, these terms are all specific uses of (parts of) the same general concept of 'cognitive complexity' (Luskin, 1987).

3. Spradley maintains that cross-cultural studies show that the number of semantic relationships is limited; probably less than a dozen (Spradley, 1979). Moreover, they seem to be universal. Consequently, they are very fit to act as tools in our search for structural elements of the interpretation of television news.
4. Conceptualizations of integration in other disciplines vary across authors and research questions (cf. Luskin, 1987). In some studies, integration is conceptualized as an abstraction per se, and inferred from peoples' references (e.g., in interviews) to abstract concepts, or comparisons between alternative solutions to problems or perspectives on issues. The main idea behind this is that use of abstract concepts is possible only if the person doing so has made causal links and/or has grouped elements together in some form of cognitive category. In other words, integration is conceptualized using specific symptoms or inferences of integration. This conceptualization is mainly used in political studies on 'political sophistication'. People are seen as more sophisticated in political matters if they can see issues in abstract political terms such as 'liberalism vs. conservatism'. In our concept, we are not looking for a level of political sophistication. Rather, we seek a concept that, if differentiation represents the richness of an interpretation, integration represents the boundaries; i.e., the way in which this richness is organized into all kinds of abstract categories. Moreover, another problem is that ultimately analyzing abstraction requires a great amount of interpretation by the coder, and it is difficult to distinguish between concepts that are very abstract, less abstract or not at all abstract. Consequently, coder bias is a great threat (Baker-Brown et al., 2004; Suedfeld et al., 1992). These aspects make measurement of integration in terms of levels of abstractness somewhat crude and subjective (Luskin, 1987).
5. The fact that a general consensus exists on the content and boundaries of social domains, also implies that occasional disagreements can occur. These struggles over disagreements on definitions of the situation are probably when social change eventually could occur. For us this occasional opacity means that some elements fall into more than one domain if they relate to more than one social situation.

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Chapter 4

Using protocol analysis in television news research: Proposal and first tests

Gabi Schaap

Abstract

It is argued that research measuring viewers' abilities to reproduce news items or news facts, while useful, is of limited nature. To obtain a broader view of what viewers 'do' with the news, an alternative way to study television news processing is proposed: protocol analysis. Acquiring verbalizations of thoughts may provide supplemental knowledge about television news processing. This chapter discusses how this technique which originates in cognitive psychology can be adopted in television news research. A short overview of television news processing studies will be given. After a review of protocol analysis literature, a possible research instrument will be outlined. Furthermore, the results of a small-scale study to test the practicality of the instrument are reported and the problems of validity as well as the implications for television news research are discussed.

Introduction

Research on the processing of television news by its viewers has mainly focused on assessing the reproduction of news facts (Schaap, Renckstorf & Wester, 2001). Results from this type of research indicate that people do not learn much from television news (Gunter, 1987; Robinson & Levy, 1986). Although this is in itself an important finding, some feel that it invokes a somewhat limited view of what people 'do' with information from the news (Al-Menayes & Sun, 1993; Berry, 1983; Hendriks Vettehen & Schaap, 1999; Woodall, Davis & Sahin, 1983). They argue that processing the news is an active, interpretive process through which viewers try to make sense of the information presented to them. This process involves more than remembering and the subsequent reproducing of facts. Thus, measuring reproduction of facts may not do justice to the complete process of news interpretation (Al-Menayes & Sun, 1993; Graber, 1984). Up to now, not many studies have been devoted to the internal interpre-

tive activities of viewers, especially during watching (Höijer, 1989; Schaap et al., 2001).

In this contribution, it is argued that it may be useful to take the viewer's perspective into consideration when studying television news interpretation. As will be shown, the problem with using a more elaborate idea of television news processing is that there are no research instruments that satisfactorily correspond with this theoretical notion, and which can serve as an alternative for recall and comprehension measures. In this contribution, the use of *protocol analysis* (using verbalizations of thoughts as data) as an alternative instrument will be introduced.

First, this chapter will provide a short overview of the types of methods used in, and the results of, studies on the interpretation of television news. Next, it will describe protocol analysis as it has been used in other disciplines, such as cognitive psychology, and the way this knowledge has been used in this study to construct a provisional research instrument. Finally, this chapter will report on a first exploratory study on the practical use of protocol analysis in television news interpretation research, which answers two questions: 1) Does protocol analysis provide us with relevant and analyzable data about the interpretation of television news? and 2) What are the practical advantages and disadvantages of two verbalization techniques in regard to television news research? In order to answer these questions a test was conducted in which the subjects were asked to verbalize their thoughts while watching the news, and interviewed to assess the problems that they had with the procedure.

The interpretation of television news in previous research: Methods, results, and conclusions

This section provides a short overview of the research practices in studies on the processing of television news. The following questions will be answered: What do these studies measure and how do they measure it? For a more extensive listing of literature in this area, see Schaap et al. (2001).

Methods used in previous studies

Research on the processing of television news consists primarily of recall studies. Studies which measure recall and assess the accuracy of this recall (comprehension) are based on what the researcher decides are the important part(s), or the 'gist' of a news item or bulletin that the viewer should be able to recall, and not on what viewers find interesting or meaningful. What is considered important is an, often implicit, estimation of what journalists would consider important (cf. Robinson & Davis, 1990). Subjects are asked to list the factual

information they remember of the news in a given period, for instance the previous week (in field studies), or what they remember of specific bulletins or items (in experimental designs). The questioning format varies, ranging from free and open to cued and closed recall questions. Pieces of information that the subject cannot recollect, or cannot recollect correctly are classified as 'recall failures' (Giegler & Ruhrmann, 1990; Gunter, 1987). In assessing comprehension, it is the researcher who defines whether a person's interpretation of the news is 'right' or 'wrong'. For instance, in a study conducted by Findahl and Höijer (1985), subjects used already available knowledge to piece together parts of news items that they could not remember. When this was the case, subjects were said to have 'misunderstood' the item. Mostly, when researchers study interpretation (cf. Graber, 1984), their analyses are based on measures of recall of information (Woodall, et al., 1983). In addition, research on the 'reception' of television news has used in-depth interview techniques, in which respondents give their general thoughts or views on the program they have seen (e. g., Höijer, 1990a; Jensen, 1998).

Results

A large number of studies have reported on forms of reproduction of televised information, and far less on comprehension. Results show that people do not remember as much from the news as the researcher or the journalist might expect (Gunter, 1987; Robinson & Levy, 1986). Also, people seem to misunderstand the journalists' meaning, or the item's 'message' on a regular basis, as extrapolated from recall scores (Findahl & Höijer, 1985; Giegler & Ruhrmann, 1990). Furthermore, we know that levels of recall and comprehension are heavily related to the possession of relevant previous knowledge (cf. Drew & Reeves, 1980; Graber, 1984; Hendriks Vettehen, Hietbrink & Renckstorf, 1996). Reception studies have shown that viewers often reconstruct the news into general themes which can cut across journalist-defined themes (Höijer, 1990a; Jensen, 1998). In addition, content and format features affect viewers' recall and evaluation (cf. Brosius, 1990; Brosius & Berry, 1990; Crigler, Just & Neuman, 1994).

Conclusions

What is the problem with news processing research? While quantitative recall studies have yielded important information on how news is dispersed and processed, the possibility that some information about how television news is interpreted is systematically being missed cannot be ruled out (Al-Menayes & Sun, 1993; Berry, 1983; Woodall et al., 1983). When we focus on what viewers remember 'correctly', and rebuke 'incorrect' recall, we might be discard-

ing valuable information. This approach leaves researchers with knowledge of what people do *not* do with television news information (that is, remember it or understand it) but lack knowledge of how people *do* use it (cf. Berry, 1983). Another problem, which affects qualitative interview methods as well, is that recall is by definition imperfect, and asking subjects about their interpretation retrospectively may suffer from this. Research using structured questionnaires, or experimental recall questions (quantitative measures), as well as (qualitative) interview techniques, may benefit from the use of alternative methods.

The viewer's point of view

In this study an interpretive view of the use of television news by its viewers will be adopted (Renckstorf & Wester, 2001; Schaap et al., 2001). Watching the news is one of many possible ways for people to make sense of the outside world. This sense making, or interpreting, is a constructive and cognitive activity in which a person relates events or information (for instance in the news) to the things he/she already knows. The result of these (re) constructive activities may be that viewers interpret the news partly or entirely in their own terms. They alter and elaborate news information with their own knowledge, 'file' it under cognitive headings that can be completely different from the journalist's or researcher's and regard events in the context of their own themes (cf. Al-Menayes & Sun, 1993; Jensen, 1988). As a consequence, when asked about information in the researcher's terms as opposed to his/her own terms, a viewer may experience difficulties in retrieving information, thus accounting for the low levels of recall and high levels of miscomprehension found in general television news research. What might be useful is research that takes the viewer's point of view into account. If one is aiming at understanding the way people make sense of television news, one should drop the idea of 'relevant information' as a construct of the researcher. In the words of Al-Menayes and Sun (1993: 58): "the meanings made by perceivers are what counts as data".

To explain the purpose of this study, I would like to refer to a very useful distinction made by Segal and Shaw (1988). They make a distinction between: 1. cognitive structures, and 2. cognitive processes (the structured knowledge of a person and how he/she makes use of it, respectively), and 3. cognitive products, the outcome of the processes in the cognitive structure. The first two variables are not directly measurable, but the third one is. Cognitive products are sometimes more and sometimes less overt behavior, including thoughts.

In addition to being cognitive, meaning construction is situational; the meaning an individual assigns to events changes across time and situations. Therefore it is necessary to study meaning at the moment of production (or close) and in the situation it occurs (Findahl, 1998; Hendriks Vettehen, Renckstorf & Wester,

1996). As we have argued, recall is imperfect; therefore retrospective interviews on how people interpret the news are probably not entirely sufficient.

In sum, we are interested in the immediate *outcome* of cognitive processes. These outcomes are partly external actions, in our case thoughts said out loud. These thoughts in turn, are a good indication of the meaning that viewers assign to television news. The frames of meaning people apply when watching the news are of prime interest to communication scientists, and hopefully ultimately our research instrument can provide us with some insight in these frames of meaning. Therefore, we will focus on ‘measuring’ the thoughts people have when watching the news.

A proposal

The goal of this study, then, is to develop an instrument that gives us an idea of 1) what people ‘do’ with the news in their heads; 2) while they are watching; 3) with as little interference of the researcher as possible. In short, an observation procedure should create “a situation in which viewers can communicate *their* reception” (Höijer 1990b: 33, italics mine). Furthermore, a procedure should provide a systematic way of analyzing data. Protocol analysis may enable us to do this (Van Someren, Barnard & Sandberg, 1994).

Protocol analysis

Protocol analysis is a generic term used for research techniques which have been applied mainly in cognitive psychology. These research techniques are used to gain insight in cognitive processes and their outcomes by means of *verbal protocols* produced by research subjects (Ericsson & Simon, 1984). The name is given both to techniques for *acquiring data* as well as *analyzing* them, although most authors seem to refer only to data gathering (cf. Ericsson & Simon, 1984; Gilhooly & Green, 1996). Since protocol analysis is relatively unknown in communication science, a general introduction seems in place.

Protocol analysis is based upon premises from so-called cognitive processing approaches. It is assumed that people make sense of the surrounding world through information processing. This cognitive process can be seen as a series of internal states in which incoming information is manipulated and transformed (Ericsson & Simon, 1984).

One of the most important concepts is that information is stored and manipulated in a *long-term* and a *short-term memory*. The short-term memory, or working memory, contains information that is the ‘current focus of attention’. It consists of highly accessible information that is ‘kept at hand’ for immediate usage. Its second function is to provide links between this information

and information stored in long-term memory, which can contain vast amounts of relatively permanent information. All cognitive processes are regulated by what is in a somewhat uncanny way named the ‘central processor’ (Ericsson & Simon, 1984; Fiske & Taylor, 1991; Gilhooly & Green, 1996; Van Someren et al., 1994).

Analyzing verbalizations of thoughts is possible, it is argued, because the information stored in one’s short-term memory is not only easily accessible, but can also be verbalized without great effort (Ericsson & Simon, 1984; Gilhooly & Green, 1996). While protocol analysis is not a method in a strict sense as it has no rigid set of rules, there are of course a number of general characteristics. Generally speaking, the method consists of asking people to say, out loud, what they are thinking (mostly whilst doing a task of some sort). Important in protocol analysis is that subjects are not asked to justify or explain their thoughts or way of thinking. Thus, it keeps rationalizations by the subject to a minimum. Of equal importance is the fact that this technique is as non-obtrusive as is possible. The only probe subjects receive is the instruction to talk aloud. This has the advantage that there is little possibility for a researcher to inadvertently guide or direct answers, which is often the case for a personal interviewer or a structured questionnaire (Ericsson & Simon, 1984; Van Someren et al., 1994).

There are two major types of techniques for acquiring verbal protocols. Firstly, verbal reports can be acquired by asking the subjects to verbalize their thoughts at the moment they occur. Reports of this type are called ‘concurrent’ verbal reports. The method most associated with concurrent measuring is the *Thinking-Aloud Method*. Secondly, subjects can verbalize their thoughts shortly or directly after they have occurred: ‘retrospective’ verbalization. An example of this type of verbal reports is the *Thought-Listing Technique*. Below both techniques will be briefly described.

Thinking-Aloud Method

The Thinking-Aloud Method is a type of protocol analysis that makes use of *concurrent* verbal reports. Verbal reports are the product of a subject who is instructed to perform a task and report his thoughts at the same time. That is, the subject is asked to “verbalize overtly all thoughts that would normally be silent” (Gilhooly & Green, 1996: 43). The resulting protocols can be transcribed, coded and analyzed.

Until now, this technique has been used to assess processes of problem solving (e.g. math problems, puzzles or playing chess), to capture understanding of stories or sentences, or to help develop training or educational programs (Green & Gilhooly, 1996; Newell & Simon, 1972; Van Someren et al., 1994). Also, Thinking-Aloud Methods have been used to develop or test computer

software (Benbunan-Fich, 2001; Henderson, Smith, Podd & Varela-Alvarez, 1995). Kushniruk and Patel (1998) cite a number of studies concerned with understanding how medical personnel use software and how doctors assess a diagnosis. Finally, cognitive processes, social anxiety and self-efficacy have been studied using the Thinking-Aloud Method (cf. Chamberlain & Haaga, 1999). In some of these cases, subjects are required to think aloud while they listen to an audio tape, or place themselves in a hypothetical situation. One of the main concerns of this study is to assess whether Thinking-Aloud can be used in a meaningful way to obtain verbal protocols from subjects while they are watching the news, as opposed to performing a task.

Thought-Listing Technique

The second form of protocol analysis is *retrospective*. Subjects are asked to list all their thoughts directly or shortly after performing a task, such as looking at or listening to a stimulus (for instance, a text, a photograph, or an audio tape), or solving a math problem. In practice, longer tasks tend to be interrupted at small intervals in which the subject will verbalize his or her thoughts.

Thought-Listing Techniques have been frequently used in some form or another in clinical psychology and less often in communication science. In clinical psychology, Thought-Listing Techniques have been used to assess psychological disorders, such as social anxiety (Blackwell, 1985; Prins & Hanewald, 1997) and to train patients' behavioral skills (cf. Cacioppo, Von Hippel & Ernst, 1997). For instance, Halford and Sanders (1988) used the Thought-Listing Technique to assess differences in thoughts between distressed and non-distressed couples. Fichten et al., 2001, studied the role of negative thoughts in insomnia. In communication science, there have been studies on the relation between thoughts, recall and the framing of newspaper stories (cf. Price, Tewksbury & Powers, 1997; Valkenburg, Semetko & De Vreese, 1999).

Both techniques, Thinking-Aloud as well as Thought-Listing, are by now reasonably well established in psychology. The theoretical assumptions and the validity of these techniques have been well documented (cf. Cacioppo et al., 1997; Davison, Vogel & Coffman, 1997; Ericsson & Simon, 1984; Halford & Sanders, 1988; Lodge, Tripp & Harte, 2000). We will speak about the problem of validity in the final section of this contribution.

A pilot study

Before we can use one or both techniques to study the interpretation of television news, we must determine the exact procedure. In this section I will provide an overview of difficulties encountered and decisions made in constructing a

technique that, first and foremost, should produce relevant material concerning the interpretation of television news. How can we adopt and reconstruct procedures from other disciplines so that they may be of use in the study of television news interpretation?

Basic requirements

The Thinking-Aloud Method and Thought-Listing Technique have a number of general requirements in common. The setting in which the Thinking-Aloud or the Thought-Listing takes place, for instance, should be such that the subject feels at ease and comfortable to talk aloud. Furthermore, the researcher should interfere as little as possible. Only when the subject stops talking for an extended period should the researcher ask the subject to 'keep talking' (Ericsson & Simon, 1984; Green & Gilhooly, 1996; Van Someren et al., 1997). To avoid any involuntary 'hints' from the researcher, such as nodding or smiling, Green & Gilhooly (1996) even suggest the researcher to remain outside the visual field of the subject.

The instruction can very well be called a key element in the procedure, on which the validity of the obtained data may depend (Höijer, 1989). It is of central importance that it is perfectly clear to the subject what is expected of him/her. In both techniques, instruction is given to the subject beforehand. The core of this instruction should be to 'talk aloud', or to 'say out loud what you think' (Cacioppo et al., 1997; Davison et al., 1997; Ericsson & Simon, 1984; Green & Gilhooly, 1996; Van Someren et al., 1994). In addition, some short phrases can be added to instruct the subject to be as complete as possible ('say *everything* you think') and not to explain or interpret what he or she thinks (Ericsson & Simon, 1984). Of course, a difference between the instructions given by the two techniques is that in one case, subjects are asked to talk aloud while watching the news, whereas in the other case subjects are asked to talk aloud after viewing a short segment of the news.

Green & Gilhooly (1996) and Van Someren et al. (1994) have also suggested that the subject performs at least one warm-up task. After training, most subjects know what is expected of them and have little difficulties in doing what they are asked to do.

Conditions for the Thinking-Aloud Technique

The length of time the researcher will allow the subject to remain silent should be specified beforehand (Green & Gilhooly). However, there does not seem to exist a general consensus on how long this period should be. For example, Lodge et al. (2000), allowed 10 seconds of silence before prompting the subject, while Gilhooly and Gregory (1989, in Green & Gilhooly, 1996) allowed

one minute before prompting. It also may be kept flexible, depending on how the subject seems to be performing.

To the best of my knowledge, studies on concurrent verbalization while watching a videotape or listening to an audio tape have not been conducted. Most research involving Thinking-Aloud Techniques is concentrated on task-performance, whereas my main concern is to find out if the same techniques work in a situation where the subject is watching the news. Therefore, we can only anticipate difficulties based upon common sense.

Conditions for the Thought-Listing technique

In several separate studies, Davison et al. (1997) used an audio tape to which the subjects listened. The short tape was divided into segments ranging from 10 to 15 seconds, after which there was a pause of 30 seconds in which the subjects would say out loud what they had previously been thinking. They called this a 'near-concurrent' approach, as close to the on-line tapping of thoughts as possible. No reason was given as to why this particular length of the segments and the pauses was chosen. In a similar fashion, other studies give subjects time (or space) to list their thoughts, without specifying why they are given as much or as little as they are given (Cacioppo et al., 1997; Lodge et al., 2000). The main line of reasoning seems to be that the segments and the spaces between them must be short to facilitate the recollection of information from short-term memory, but long enough to enable the subjects to verbalize all their thoughts.

In quite a number of Thought-Listing studies the subjects are asked to write down their thoughts (cf. Cacioppo et al., 1997). A disadvantage of this way of working is that one is dependent on the subjects' ability to articulate their thoughts in writing rather than in spoken words, which in itself requires verbalizing skills. Asking people to write down their thoughts might thus put an extra step in the thought process. For this reason I have chosen not to use this particular tactic.

Comparing two alternative techniques: A small scale test

A small scale study was conducted to test the practicality of a procedure we designed based on the requirements described above. The very first question we will answer is whether it is at all possible for people to watch the news while at the same time thinking aloud. Will people who are watching the news produce verbal protocols and will these protocols contain enough and relevant information for communication researchers to analyze? Perhaps the verbalization of thoughts works well in psychological research settings, but is it also effective or practical in audio-visual communication research? This is a valid question,

as according to an overview by Cacioppo et al. (1997), protocol analysis is typically not used under conditions that require a high cognitive load, such as a task requiring a great deal of effort. Watching television news requires a lot of effort, as viewers must cope with various sources of sounds and fast-moving images all at the same time, and must deal with often complex information (cf. Cohen, 2001). Therefore, when we ask people to think aloud while watching the news, it is not impossible that subjects will remain completely silent. If it can be achieved to have people voice their thoughts while at the same time watching the news, still another important question must be answered. How can we make sure that we capture as much relevant verbalizations as possible? In other words, how can we create an ideal situation in which subjects can verbalize their thoughts in an optimal manner? A third important question is: how can we make sure that the verbalizations we acquire actually represent (at least a large portion of) the interpretation?

The goal of this study was to find out which of the two techniques (Thinking-Aloud Method or Thought-Listing Technique) and which setup would be the most effective and efficient way of getting people to talk aloud. In two studies the techniques were compared in terms of the amount of words and thoughts they generated (Blackwell, Galassi, Galassi & Watson, 1985; Lodge et al., 2000). In both instances the Thinking-Aloud Method yielded more material than Thought-Listing. This study is set in a different context. It is exploratory, in the sense that it deals with highly complicated audio-visual 'stimulus material': television news. Therefore, this study's working hypothesis is that we will merely find differences between the two techniques in amounts of words and thoughts. Furthermore, I expect differences between Thinking-Aloud and Thought-Listing Technique in amount of *types* of thoughts. Along the same lines, and finally, I hypothesize that the variance of types of thoughts differs between the two techniques.

In addition to comparing the techniques on amount of generated material, it is important to assess specific problems that subjects might have in performing their task.

Procedure

Following the general requirements described above, I designed the following procedure. The two techniques were tested on a limited number of subjects ($N = 35$). The research group consisted of 17 men and 18 women. They were selected to include a variety of age and educational background.¹ The 'stimulus' material was a recorded broadcast of the main news program in The Netherlands (NOS 8 o'clock news) of Tuesday 21 November 2000. To assure the task would not be too strenuous on the subjects, two news items were removed, resulting in a program with a running time of approximately 21 minutes. Two

copies of the tape were used in two separate settings. The version described above (the entire broadcast minus the two items) was used for the Think-Aloud procedure ($n = 16$). The other copy was edited into segments, adding space between them so the researcher would have time to stop the tape. This version was used for the Thought-Listing Technique ($n = 19$). The segments were edited in such a way, that they both represented a time-span that was neither too long nor too short (generally around 20 seconds), and that they were divided into more or less 'natural units' (for instance, no cuts in mid-sentences, or unnatural shifting of images). The logic behind this was that subjects must be able to retrieve their thoughts from short-term memory, before they were 'lost' to long-term memory. This resulted in a segmented news program of 24:16 minutes (including spaces between the segments), consisting of 67 segments with a mean length of a little under 18 seconds, with the largest segment running 27.4 seconds and the smallest 7.2 seconds. The first, 3.5 minutes item was used as a warm up item, and was not included in the analysis.

The subjects participated in the verbalization task mostly at home, but in a few cases the test was taken in a viewing room. They were provided with specific instructions (see Appendix A) either to think aloud while watching, or to list their thoughts verbally after each segment. The subjects participating in the Thought-Listing procedure were given as much time as they needed to verbalize their thoughts. Immediately after the subjects were finished, the researcher would start the tape again. During the test, the researcher used an observation sheet with a transcription of the text and images of the news program in order to make notes of the subject's behavior, which were used in interviews that were conducted afterwards. The verbalizations were recorded using a tape recorder and, afterwards, transcribed into protocols.

After watching the news, the subjects were interviewed about their performance, watching the tape again if they needed a cue to remember what they thought during certain parts of the news (this was hardly ever the case). The interview consisted of two parts (cf. Van der Veer, Ommundsen, Hak & Larsen, 2003; Jansen & Hak, 2000). The first part was directed at the reconstruction of the thinking process, to clarify uncertainties. This included asking the subject about sounds or expressions that the researcher did not understand, or why he/she did not speak during a given period. In the second part of the interview subjects were asked about their experience with the procedure; how easy or difficult did they find it to express their thoughts, how did they report their thoughts and so on (see Appendix B).

Coding

The criteria used for assessing differences between the two techniques focused on *amount* and *richness* of material. Surely, other criteria could be just as in-

formative, if not more so. However, as a first step in developing an instrument for television news interpretation, the aim is to investigate whether this sort of technique can be used on a very practical level in a context that radically differs from previous studies. Therefore, two techniques were tested and the results compared both in a context with television news and with research in different contexts. For this reason, coding focused on the amount of *words* and *thoughts* as well as the variance in types of thoughts, and not so much in the actual content or meaning of the thoughts.

A first step in the coding process consisted of counting the number of words used, omitting utterances directed at the researcher or statements declaring that the respondent did not think anything. The next, more complicated step, coding the material, consisted of two phases directed at discriminating between several types of 'thoughts'. In this process, the protocols of the subjects' verbalizations were grouped into segments representing 'thoughts' (cf. Blackwell et al., 1985; Höijer, 1989; Lodge et al, 2000). In the first phase, a rough division between different verbalizations was made. The first step in grouping verbalizations into separate segments was defining 'meaningful units'. These are verbalizations representing one line of reasoning, containing one specific argument, or statement. Statements can range from being very short ("I don't agree") to rather long ("I don't agree because ... and ..."). An alternative way in creating segments occurred through taking verbalizations that were clearly separated by time or, when subjects themselves indicated that they distinguished between 'thoughts' ("first I thought..., then I thought..."). The second and final step in this phase was assigning a label to each segment/thought, which provided a short description of the statement.

In the second phase, the goal was to distinguish between types, or classes, of statements. Different content categories were created based on of the descriptive labels assigned in the first phase. Next, the various segments could be assigned to one class or type of statement. As there was no a priori hypothesis about the kinds of statements the subjects would produce (as psychologists often have), open coding was applied, and a coding scheme was developed along the way (cf. Green & Gilhooly, 1996; Höijer, 1989, 1990b; Wester, 1987). Segments would be classified according to the *type* of statement made. This means that the coder was less interested in the *content* of what was being said, as he was in what type of statement was being made. Classification in types of statements occurred in three basic steps. First, the coder distinguished between statements that were related to the news in any way and statements that were not (for instance, statements pertaining to the research situation). The reason being that, ultimately, the goal of this research instrument is to capture interpretations of the news, and not interpretations of the research context. The second step was aimed at creating more specific sub-classes, again looking at the type of statement made. One could, for instance, in the class of news-related statements,

distinguish statements about content aspects from statements signifying some distance from the content, and from references to private matters. In the third and final step, after reading and rereading the protocols, the classes and labels were improved. After several rounds, classes with labels were narrowed down into a coding scheme that classified segments into 12 types of 'thoughts', 10 of which were news-related, and 2 non-news related.

Results

The analysis of the material aimed at answering two different questions. First, is there enough relevant verbal response from the subject to analyze, and are there any differences in the amount of material (words, thoughts and types of thoughts) between the two tested techniques? Secondly, what problems do subjects encounter while verbalizing their thoughts in conjunction with watching the news? Is it possible for them to verbalize their thoughts?

While the techniques succeeded in obtaining enough material to be used in the analysis (see Table 1), some notable differences between the two methods in amount and types of material were found. To assess differences in means between the two subject groups, both the number of *words* and *thoughts* were compared using a T-test for the equality of means.² Earlier, the expectation was to find differences between the two techniques in the amount of words subjects would produce while watching. As Table 1 shows, this hypothesis was confirmed. Subjects in the Thinking-Aloud Method setting used significantly less words ($p = .002$) than subjects in the Thought-Listing Technique setting.

Analysis shows that subjects in the Thinking-Aloud condition reported a mean of 41.94 thoughts during the news, while subjects in the Thought-Listing Technique condition reported an average of 75.42 thoughts. While this shows that people in both techniques are able to report quite a large number of thoughts, it is also another indication of differences between the two techniques ($p = .012$).

Thoughts that were not directed at the news, but at the procedure or the research setting, were then eliminated. This difference remains when only the number of news-related thoughts were analyzed ($p = .01$), pointing in a direction in favor of the Thought-Listing Technique (see Table 1).³

The final expectation, that one of the techniques would be better suited in allowing the subjects to report on the different *types* of news-related thoughts could not be confirmed ($p = .12$). However, when analyzing all types of thoughts separately, one important type of thought (thoughts having a direct relation to the textual content of the news) was found to differ significantly ($p = .000$), with Thought-Listing Technique subjects having more of this type of thoughts ($M = 36.12$; $SD = 14.54$) than Thinking-Aloud Method subjects ($M = 14.69$;

$SD = 7.08$). This is remarkable, as this type of thought was by far the most frequently reported type in both techniques. Apparently, in the thought-Listing Technique subjects are better able to report the most frequent appearing type of thoughts.

Table 1. Thinking-Aloud Method and Thought-Listing Technique: Number of words and thoughts compared.

	Thinking-Aloud Method ($n = 16$)		Thought-Listing Technique ($n = 19$)		Sign. ^a
	Mean	SD	Mean	SD	
Number of words	560.94	489.16	1966.74	1585.03	.002
Number of thoughts (total)	41.94	32.38	75.42	40.60	.012
Number of news-related thoughts	38.31	29.27	68.84	35.33	.01
Number of non-news related thoughts	2.75	2.98	6.37	7.68	.09
Number of types of news-related thoughts	7.06	2.11	8.00	1.37	.12

^a 2-tailed

Levene's test for the equality of variances showed that the final hypothesis (there is a difference in variance in types of thoughts between the two techniques in favor of the Thinking-Aloud Method) was not substantiated ($p = .18$). Both techniques do not differ in variance of types of thoughts.

To answer another question for this test study: what problems do subjects encounter while verbalizing their thoughts in conjunction with watching the news? Is it possible for them to verbalize their thoughts?, we interviewed the subjects on how they had experienced the procedure. Two types of problems are frequently mentioned by the respondents. The first problem has to do with the nature of the occurrence of thoughts. Nine subjects participating in the Thinking-Aloud Method and five of the Thought-Listing Technique reported having multiple simultaneous thoughts and not always being able to report them all. They indicated that thoughts sometimes occurred extremely fast (in 'flashes') or even at the same time, and that they had to choose which thoughts to report and which not, or that the thoughts just passed on and were forgotten. This concurs with other studies that found that subjects did not verbalize every single thought they had (Davison et al., 1997; Halford & Sanders, 1988; Höjjer, 1989).

A second type of verbalization problem was the inability of some subjects to verbalize and keep track of the news at the same time. As could be expected, this was a problem mostly reported in the Thinking-Aloud Method

condition; all subjects, except two, reported so, versus five subjects involved in the Thought-Listing Technique. The problem results in the subject ending up doing one of two things; either he/she would follow the news and not talk aloud, or talk aloud and not follow the news for a few moments (and as a result, sometimes missing points crucial for understanding). This 'synchronization' problem has been indicated by Van Someren et al. (1994) in other research contexts. It is therefore a problem not unique to our study.

In addition to actual problems, the subjects indicated several ways in which the research procedure may have affected their behavior. Although only a limited number of subjects said this was the case, this was a recurring theme in the interviews. One way the procedure sometimes affects performance, is that the verbalization task may either increase or reduce the number of thoughts. This may either be because a subject concentrates on thinking, he/she is listening and/or watching less or more intently than in a normal situation, or because thoughts are catalyzed by the subject's verbalizations.

A second manner in which the task influences the subjects, is that it may encourage subjects to focus their attention and thoughts more on particular aspects of the news than in a normal situation. For instance, they might look more at the visual aspects of the news, or in contrast may pay more attention to the text of the news than they normally would.

Finally, another way in which the procedure could influence on the way people watch, is the level of concentration with which they watch. Twenty subjects (seven in the Thinking-Aloud Method condition; thirteen in the Thought-Listing Technique condition) said their concentration on the news was either higher or lower (because they were concentrating on performing the task). In contrast, 11 subjects claimed that the way they thought about the news was not in any way influenced by neither the task nor the procedure.

Conclusions and discussion

The goal of this study was to assess whether or not protocol analysis could be a useful alternative to other methods in order to study the interpretation of television news during watching. In this small pilot study, we wanted to find out if two techniques could be of use on a practical level. As shown, both techniques are well established in other research areas, and can serve to study various issues. Before I will reach some conclusions, I will look at some of the limitations of this particular study.

First, the data were drawn from a very limited sample ($N = 35$). Conclusions must therefore be seen as preliminary and indicative at the most. Secondly, although the technique ensures that the researcher cannot guide the subjects' answers, he is still present. There is no way in which one can entirely rule

out the possibility that the research context and the fact that a researcher is present has an influence on the way subjects' report their thoughts. One can however assume that the influence is seriously diminished compared to other approaches.

What can be concluded from the results? The findings give some indication that people are indeed able to verbalize thoughts while watching the news, albeit not always without problems. Furthermore, this verbalizing leads to protocols which can be analyzed in at least a basic fashion. They do not, for instance, consist of merely basic cries or one-syllable utterances. An advantage of the material produced, is that it can be analyzed in a qualitative manner (focusing on meanings) as well as a more quantitative manner (e. g., psychologists' analyses of number of negative thoughts).

The amount of reported thoughts did show differences between the two techniques, albeit counter to results from previous research (Blackwell et al., 1985; Lodge et al., 2000). This study obtained some good indications that the Thought-Listing Technique yields more material than the Thinking-Aloud Method. The difference between my results and those of previous research may be explained by the different research context. As indicated by the subjects themselves, television news as a 'stimulus' (as opposed to for instance math problems) produces an ongoing stream of sounds and images. This proved to be especially problematic in the Thinking-Aloud Method setting. As the individual's capacity to perform multiple mental actions at one moment is limited, this requires the subject to concentrate on either the task (reporting on thoughts) or (certain parts of) the news. Either choice results in loss of material. Subjects concentrating specifically on the verbalization task will miss information in the news, to which he or she cannot react. On the other hand, subjects may concentrate on following the news, but as a consequence will be unable to verbalize thoughts. This reasoning might also explain that some subjects in the Thinking-Aloud condition experienced extended periods in which they were virtually unable to verbalize their thoughts.

The problem seems to be serious enough to render the Thinking-Aloud Method, while proven useful in other research settings, of limited practical use in television news research, at least compared to the Thought-listing Technique. Conversely, the Thought-Listing Technique has the advantage of separating the verbalization from the other mental tasks. This makes it easier for the subjects to report on what they thought seconds earlier while watching the news, resulting in a greater amount of reported thoughts. It must be noted, however, that it seems to be wishful thinking to assume that we can make subjects report every single thought they have (Davison et al., 1997; Halford & Sanders, 1988). This calls for analysis of the actual content of the verbalizations.

A somewhat related issue concerns the difference in amount of words and thoughts in relation to the prompts given. While in both versions the initial ex-

PLICIT instruction given to the subjects was kept constant, a point could be made that the Thought-Listing Technique version, with its 67 sections of black space, contains 67 implicit prompts to think aloud. The Thinking-Aloud Method version only contains the one explicit prompts at the beginning and occasional explicit prompts by the researcher in the case of prolonged silence by the subject. What became clear in this study is that the way subjects are instructed to perform the task is of capital importance. It has to be absolutely clear to the subjects what is expected. In the Thinking-Aloud condition it must be emphasized that the subjects should report as often as possible. The practice item proved very helpful in this regard, as it gave the subject the chance to get acquainted with the task, and it gave the researcher an extra possibility to assess whether the subject had understood his task and to correct misunderstandings. For instance, during the practice item, some subjects seemed to be under the impression that what was expected was that they only give their opinion on events and not that they report every thought they had. This could be easily determined and corrected before the actual task was started.

Now that I have demonstrated that the Thought-Listing Technique, at least in this very small study, is superior to the Thinking-Aloud Method in terms of amount of verbalizations generated, this leaves a number of important questions. First of all, how should the results be interpreted? I have only analyzed the amount of words and 'thoughts' that people utter when watching the news. Does this automatically mean that the material is more relevant as well? We, as communication researchers, are mostly interested in the interpretation frames or perspectives that people adopt while watching the news. The question that must be addressed in further research is whether the material generated by one technique is not only superior in amount, but also in quality. Does this technique also generate interpretations that are more relevant (to researchers) than the other technique?

Secondly, and equally important, is the question of *construct validity*. Apparently, it is possible to obtain verbalizations, using the Thought-Listing Technique. In this study these verbal utterances were known as 'thoughts'. However, what we got could be considered merely as spontaneous reactions to the news. Therefore, the question remains, whether these verbalizations have a close relationship with actual thoughts and interpretations. Again, the impossibility of looking inside people's heads prevents any researcher from directly measuring what they think or verifying what they report. However, there have been some studies that provide secondary evidence that there is at least a strong correlation between thoughts and verbal reports.

One indicator for construct validity is *congruent validity*: the ability of a method to discriminate between groups of people with different characteristics, assessed by means of another, preferably undisputed method. Davison & Vogel (1997) report on various studies in which validity for Thinking-Aloud

type procedures has been assessed.⁴ In a number of these studies (amongst others: Bates, Campbell & Burgess, 1990; Coffman & Davison, 1997; Davison & Zigelboim, 1987; Schwartz & Garamoni, 1989) scores obtained through standardized psychological methods for assessing personality traits (for instance, anxiety, or self-efficacy) were found to correlate with thoughts that could be expected on the basis of these personality traits.

Another indicator for construct validity is *concurrent* validity: the ability of a method to distinguish between groups, based on the theoretical expectation that the groups should be different on certain features. One study, using the Thinking-Aloud method (Davison, Robins & Johnson, 1983), showed that through the analysis of thoughts of subjects one was able to discriminate between subjects exposed to a tape containing social criticism and subjects exposed to a control tape. Halford and Sanders (1988) report on a study in which they found the Thought-Listing Technique to discriminate between distressed and non-distressed couples. Distressed couples were found to report more negative thoughts about their partners than 'normal' couples.

Finally, some studies compare Thinking-Aloud procedures with other cognitive assessment methods. The extent to which different measures result in similar results for a construct is called *convergent* validity, which may act as another indicator for construct validity. The assessment of convergent validity of cognitive assessment methods has been problematic, mainly because of faulty comparisons in tests (Chamberlain & Haaga, 1999). Evaluations of construct validity of Thinking-Aloud procedures on the basis of this research therefore remain tentative. For instance, Blackwell et al. (1985) found significant differences between Thinking-Aloud Method and Thought-Listing Technique. However, they had the subjects report their thoughts verbally in one procedure and in writing in the other. This may account for a large proportion (if not all) of the differences. Although Chamberlain and Haaga (1999) state that there is usually low convergent validity between questionnaire methods and Think-Aloud procedures, a number of studies did find a (although not always very high) correlation of either the Thinking-Aloud Method or Thought-Listing Technique with different assessment methods such as questionnaires and interviews (Cacioppo et al., 1997; Fichten et al., 2001; Henderson et al., 1995; Prins & Hanewald, 1997) scale items on psychological traits (cf. Davison et al., 1997;) video-mediated recall (Halford & Sanders, 1988; Lodge et al., 2000) and behavior (Cacioppo et al., 1997; Fichten et al., 2001; Henderson et al., 1995).

Thus, although I have not, at this stage, tested the validity of Thinking-Aloud techniques in a test situation with television news, there are some indications of the validity of these techniques. We must however, address this issue in the future. Research in which answers to questionnaires or interviews on television news issues are correlated with verbalizations of thoughts, may provide

us with clues on the validity of our instrument. Other instruments may also be helpful in this regard, such as video-mediated recall (Halford & Sanders, 1988; Lodge et al., 2000) or the signaled-stopping technique (Hawkins et al., 1991).⁵ Combining several methods for optimal results may be useful (Van Someren et al., 1994).

Notes

1. Age varied from 20 to 64 years (mean 38 years). Education was distributed as follows:
2. 6 subjects had lower education (20%), 13 subjects had middle-range education (37%), and 16 subjects had higher education (43%). We assigned subjects to one of the two techniques in couples (of same sex, education, and age group) as much as possible to ensure a more or less even distribution of these characteristics over the techniques. The author would like to thank Solange Schlösser for her invaluable help in gathering data.
3. To assess differences between means we chose to carry out a T-test for the equality of
4. means. We did this to have some indication about the status of the differences between the two instruments, regardless that we are aware of the fact that the formal conditions for a T-test are not met in our study. This means, of course, that significant differences reported here should be interpreted as just that: indications.
5. On average between 6.56% (Thinking-Aloud Method) and 8.45% (Thought-Listing Technique) of the subjects' thoughts were devoted to non-news related issues.
6. They also find their method valid on face, concurrent and predictive validity.
7. Video-mediated recall is a retrospective technique in which subjects are asked to recall their thoughts while either rewatching a tape of stimulus material in short segments, or watching a tape of their own performances on a task. In the signaled-stopping technique, subjects watch a film, and must press a button whenever a 'thinking change' occurs or when they think something meaningful happens.

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Appendix A: Verbalization Instructions

Instruction I: Thinking-Aloud Method

We are interested in what you think while you are watching the news. For this reason, we ask you to *think aloud* while you are watching. We want you to tell us *everything* you are thinking from the moment the broadcast starts, right until the end. We would like you to think out loud *constantly*, until the end of the broadcast. In sum, you tune in to what you are thinking and say that out loud.

The important thing is to keep talking. It is important that you are as complete as possible: this means that you should report seemingly ‘irrelevant’ thoughts as well. It does not matter whether your thoughts are about the news, about yourself, the situation, or something different. It does not matter whether they are positive, negative or neutral. All thoughts matter.

If you should remain silent for an extended period, I will ask you to keep talking. Do not try to formulate your thoughts in advance, or to explain what you are saying. Just pretend that you are alone in the room and are talking to yourself. It is not a test: you cannot perform poor or well.

Do you have any questions?

We will start with an item to practice.

Instruction II: Thought-Listing Technique

We are interested in what you think while you are watching the news. For this reason, we ask you to *think aloud*. We ask you to list *all* thoughts you have while you are watching the news broadcast.

Every now and then we will stop the broadcast. You then have time to say your thoughts out loud. After you’ve finished, we will continue the broadcast. In sum, you tune in to your thoughts while you are watching and say them out loud later.

It does not matter whether your thoughts are about the news, about yourself, the situation, or something different. It does not matter whether they are positive, negative or neutral. All thoughts matter. It is important that you are as complete as possible: this means that you should report seemingly ‘irrelevant’ thoughts as well. Do not try to formulate your thoughts in advance, or to explain what you are saying. Just pretend that you are alone in the room and are talking to yourself. It is not a test: you cannot perform poor or well.

Do you have any questions?

We will start with an item to practice.

Appendix B: Interviews

I Cognitive Interview

Topic list

Respondent number: _____

Date: _____

Introduction

This part is meant to check whether I have understood everything you said correctly. If needed, we can rewind the tape of the broadcast, to help you to recollect the thoughts you had. Then, I can check whether or not I have missed some things and whether I understood the things you said.

*Interviewer: Consult your notes on the observation sheet to ask questions!
The questions below do not necessarily have to be asked in the presented order.*

1. You said: "...” [consult notes] What did you mean?
2. You said: "...” [consult notes]. Why did you say that? What were you thinking when you said it? How did you come to that thought?
3. Can you tell me, when you review the item, what you were thinking?
4. What else did you think?
5. During some parts, you did not say much or anything. Didn't you think anything at that moment?

II Qualitative interview

Topic list

Introduction

This part is meant to look at the procedure we followed, and your experience with it.

1. Was the instruction clear to you? Did you understand what was expected?
2. Did you find it difficult or easy to think aloud?
3. Did you encounter any problems?
4. Were there specific moments when you had these problems?
5. Did you find it difficult to verbalize your thoughts?
6. Did you find it difficult to keep following the news because of your task to think aloud?
7. You had to think aloud: do you think that it has affected your thoughts?
8. Was the stream of thoughts interrupted by the thinking aloud, or by the news?
9. To what extent does the manner in which you just watched the news differ from the normal situation? Do you normally talk aloud while watching the news?
10. Did you have other types of thought than you normally would? For instance due to my presence.
11. Did you have less or more thoughts than you normally would?
12. Were you less or more concentrated during watching, or was there no difference?
13. Do you think the procedure, or the interview situation affected what you said aloud? For instance, did you not say certain thoughts aloud?
14. Do you watch the news on a regular basis? How many times a week? Which bulletin do you watch?
15. Did you happen to see this particular broadcast before?

Year of birth:	19__
Sex:	M/F
Education:	_____
Were there other persons present?	Y/N
Did the procedure take place without interruptions?	Y/N

Chapter 5

Measuring the complexity of viewers' television news interpretation: Differentiation

Gabi Schaap, Ruben Konig, Karsten Renckstorf and Fred Wester

Abstract

If television news viewers are conceived as active audience members, their interpretations should be a crucial factor in the study of the 'effects' of television news. Here, viewers' interpretations are understood as subjective (re) constructions of a news item. In a previous contribution, we argued that interpretations can vary both within and between viewers in regard to the level of complexity. Complexity is the degree to which interpretations are a) differentiated, and b) integrated. In this contribution, we operationalize the concept of differentiation of television news interpretations by its viewers. Furthermore, we present a procedure for measuring differentiation based on the thoughts viewers reported while they watched a television news program. Results of a small-scale study (N = 19) provided first indications that the procedure is able to discriminate between viewers with varying levels of differentiation in interpreting television news.

Interpreting television news is a complex process in which viewers (re)construct a news item into something that has a meaning and that makes sense to them. If news viewers are to be seen in this fashion, as actively reshaping the content of news, this should have consequences for the way the impact of television news is studied. Despite increasing consensus on this matter, the way in which news interpretation should be conceptualized and measured remains unclear, and as a consequence empirical studies on the subject have been scarce (Gunter, 2001; Livingstone, 1989; Renckstorf & Wester, 2001). In an attempt to contribute to this research area, we recently introduced the concept of interpretive complexity, arguing that studying the structural components of interpretations may be a useful addition to the field (Schaap, Renckstorf, & Wester, 2005). In this article we focus on operationalizing and measuring one aspect of this concept, called differentiation. Differentiation refers to the specificity and heterogeneity of interpretations (cf. Schaap et al., 2005).

Together, the previously introduced concept and the operationalizations and measurement procedure presented here, have the potential of yielding a more direct and highly detailed image of how people interpret the news. This contribution should not so much be read as a report of empirical findings, but as a proposal for a method to study television news interpretation. We use a small-scale study to illustrate the method and test the usefulness of describing interpretation in terms of structural characteristics by assessing variations in the complexity of different television news viewers' interpretations.

The structure of viewers' interpretations: Differentiation and integration

Viewers make sense of television news by constructing a representation, or interpretation, of a news item (cf. Renckstorf & Wester, 2001). This representation is not a direct copy of the program. Instead, we can look at it as made up of subjective interpretations, formed by personal and social knowledge as well as the news. According to our concept of 'interpretive complexity', all interpretations of the news share at least two general structural characteristics (Schaap et al., 2005). That is, viewers make sense of the news by a) using basic elements from the news and/or from their own knowledge, and by b) connecting these elements to create a subjective, meaningful whole.

The degree to which a viewer's interpretation contains large or small amounts and a broad or narrow range of basic elements is called interpretive differentiation, which is the subject of this study. Inspired by the work of James Spradley, we argue that a viewer constructs a representation of a television news item that may incorporate references to specific actors, with goals and feelings, acts, to events and activities, and objects, and to time and space (Spradley, 1972, 1979, 1980; Spradley & McCurdy, 1972). These actors, objects, etc. have specific attributes; they have causes, reasons, functions, etc. The first characteristic of differentiation is then the amount of single specific occurrences of these elements in the interpretation. The larger the amount of specific actors, acts, attributes, causes, etc., incorporated in an interpretation, the more 'specific' it is (Schaap et al., 2005).

In addition to the amount of elements, we should take into account the range, or heterogeneity of elements. One viewer's interpretation of a news item may contain, for instance, several actors, such as Jacques Chirac, Gerhard Schröder, and George W. Bush. An interpretation by another viewer may contain just one actor, for instance George W. Bush, and in addition an act (e. g., voting), and an object (e. g., an amendment). Both of our exemplar viewers use three elements. However, the first viewer uses three elements of the same type; all of them actors. The second viewer uses three elements of three different types: an actor, an act, and an object. Therefore, although the amount of elements used by both viewers is equal (i. e., both interpretations are equally specific), the range of elements is

different (the second interpretation is more heterogeneous than the first). Accordingly, interpretive differentiation has two aspects: the amount of specific elements and the amount of types of elements (or: range). An interpretation containing many elements and many types of elements is called more differentiated than an interpretation containing fewer elements of less different types.

In the interpretation of a television news item, the many (or not so many) single elements are connected to other elements. Representing the coherence of an interpretation, this second structural characteristic of interpretive complexity is called integration. The measurement of integration will be discussed elsewhere, so it will suffice to say that the integration of an interpretation is determined by the explicit causal, logical, and temporal connections that are made between individual elements, as well as by the grouping of elements into larger socio-cultural categories (cf. Schaap et al., 2005).

As different viewers apply different personal and social knowledge to construct meaning, we can assume that the interpretation of a given news item varies between different viewers. Some viewers may have a highly differentiated (and/or integrated) interpretation of a news item, whereas other viewers have a much less differentiated (and/or integrated) interpretation of the same item. Furthermore, a given viewer may have a differently structured interpretation of different news items. That is, the same viewer may interpret one item in a much more complex way than another item. In the following we present a way to measure differentiation as defined above.

Measuring interpretive differentiation

The method for measuring viewers' interpretations of television news consists of four components. First, a data gathering instrument to 'tap' viewer's thoughts the moment they are watching the news, and second, a three-step procedure to assess differentiation in reported thoughts.

Data gathering: Thought-Listing Technique

In order to allow the participants to communicate their interpretations freely and directly, we adapted and tested an instrument called Thought-Listing Technique (Schaap, 2004). This observation instrument enables the participants to report all thoughts at the moment they occur while watching a news program.

We showed an eighteen-minute videotaped news bulletin, containing seven items, to nineteen participants (Table 1). The participants were selected to reflect a wide variety in terms of sex, age, and education¹. Additionally, the broadcast was edited so that the screen turned 'black' after small 'natural' segments of the news, i. e., so as not to disrupt the normal flow of a news item too much. The seg-

ments averaged eighteen seconds in length. Participants were asked to say out loud all thoughts they had while they were watching the news segment at each interval (for a more detailed description of the procedure and its logic, cf. Schaap, 2004). These verbalizations were recorded and subsequently transcribed, resulting in nineteen protocols of verbalized thoughts, with an average length of about 1,965 words ($SD = 1,585.03$; Min. = 622; Max. = 6,827). The thought protocols represented a direct and detailed report of interpretations during the program, and formed the basis to assess interpretive differentiation. For the current test analysis we report on in this article, we used the protocols of all nineteen participants regarding one single news item on political solutions to the 'BSE' or mad cow disease problems in Europe (length: 2:54 min.). Furthermore, we used the two participants' protocols regarding the entire bulletin, which we expected, on face value, to have either relatively complex or simple interpretations.

Table 1. News bulletin for Thought-Listing, NOS 8 O'Clock News, 21-11-2000.

Item	Issue	Description	Length
1	Profession-related diseases	Company doctors fail to report sick employees	3:18
2	BSE	The Netherlands will be testing cattle earlier and more often	2:54
3	Israel	Egypt withdraws its ambassador from Israel after rocket attacks on Palestine territories	2:36
4	Euthanasia	Euthanasia directive used by family members to manipulate physicians into euthanasia when care proves too difficult	2:30
5	Exhibition	Queen Beatrix and president Rau open exhibition on Dutch-German relations	2:42
6	Emmy Awards	TV series 'All Stars' wins American Emmy award in 'best drama series' category	2:24
7	Weather forecast		1:18

Note. Item labels are ours; Item 1 was used as a practice item and was excluded from the analyses, as was the weather forecast

Data analysis: three phases

Measuring interpretive differentiation requires distilling the number of different elements and the range of these elements from the thought protocols. In the following we elaborate on how we operationalized these concepts, and how we constructed a categorization system and coding strategy. The data analysis

phase consisted of three phases: construction of basic sentences, coding of elements, and assessment of differentiation scores.

1. Constructing basic sentences. Since the way in which participants formulate their thoughts can sometimes be quite diffuse, we broke up each protocol into 'basic sentences'. Each basic sentence represented only one statement loosely based on the structure 'object $x \rightarrow relation \rightarrow$ subject y ' (cf. Kleinnijenhuis, Oegema, De Ridder, & Ruigrok, 1998; Osgood, Sporta, & Nunnally, 1956; Van Cuilenburg, Kleinnijenhuis, & De Ridder, 1988). From these basic sentences, the amount and range of elements were distilled². Working with basic sentences proved superior to working directly on the protocols, facilitating coding as it severely reduced the number of elements that remained hidden in diffuse formulations.

2. Coding of elements. In order to establish what parts of the basic sentences could be regarded as elements, we used a list of nine categories of general elements composed by Spradley to aid researchers in recognizing interpretive elements (Spradley, 1979, 1980; cf. Schaap et al., 2005). This list represents all types of elements of which an interpretation of any social phenomenon can consist. We regarded these general types of elements as representing the range of elements. The kinds of elements people can use in their interpretation of television news are kinds of actors, goals, feelings, attributions of actors, goals and feelings, causes of actors, etc. The more of these different kinds people use, the larger the range of their interpretation. The specific instances of general types that we encountered in the protocols (e. g., George W. Bush as a specific instance of a kind of actor) were regarded as specific elements. That is, every single specific element a person uses contributes to the amount aspect of their interpretation. Each specific element people use in interpreting should fit one of these general types:

Category 1. Inclusion elements

Types of elements: *kinds of* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 2. Attribution elements

Types of elements: *attributes of* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 3. Rationale elements

Types of elements: *reasons for* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 4. Function elements

Types of elements: *functions of* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 5. Sequence elements

Types of elements: *steps or phases in* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 6. Cause-effect elements

Types of elements: *causes of* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 7. Location-for-action elements

Types of elements: *places to do/for* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 8. Means-end elements

Types of elements: *ways to do/be* actors, goals and feelings, acts, activities, and events, space, time, and objects.

Category 9. Spatial elements

Types of elements: *parts of* actors, goals and feelings, acts, activities, and events, space, time, and objects.

To develop a complete and workable coding scheme we started by reading our protocols using the above list as a 'prototype coding scheme'. Our goal was to create a coding scheme that was tailored to the elements that were used in the interpretation of this specific news bulletin, which may be different from the elements in the original list. The general types of elements were treated as 'sensitizing concepts'; i. e., each time we classified a term into a category of elements, previously classified similar elements were revisited to analyze their fit or difference. Thus, the coding scheme was under constant scrutiny and subject to change (cf. Glaser & Straus, 1967).

We classified elements by systematically asking questions related to that specific category, for example, is this term in this protocol a kind of actor, feeling, or object? Is it an attribute of an act, event, or place? This way, we coded the discrete elements, simultaneously developing concrete descriptions of elements for use as coding instructions (describing: 'what is an actor?', 'what is an object?', etc.). After several rounds of carefully reading and re-reading the basic sentences in this manner, we found that participants in the interpretation of this news bulletin used elements in only six of the nine categories provided by Spradley³. Furthermore, we combined categories 3 and 4, 'rationale' and 'function', for practical reasons. This resulted in a coding scheme containing five categories: inclusion, attribution, cause-effects, rationale, function, and sequence. In these large categories, the smaller types of elements were located (actors, acts, events, objects, etc.), including basic descriptions of each type. In sum, the number of types of elements included in a thought protocol establishes

the range of elements used in the interpretation, whereas the number of specific elements in these general types represents the amount of elements.

Using the definitive coding scheme, all basic sentences of all participants regarding the BSE news item as well as the basic sentences of two participants related to all news items were re-read and coded. We coded all direct references to, for instance, persons or objects, whenever we were able to assess to whom or what the participant was referring. We did so, even if an actual name was not explicitly mentioned, which was often the case when people simply referred to 'he', 'she', or 'it'⁴. Virtually all statements of our participants could be coded by means of our coding scheme⁵. We established coding reliability using an independent coder trained to use the coding scheme, who practiced coding on 10 protocol segments. This coder coded a random sample of 20% of all protocols. Inter-coder agreement between this coder and the original coder was calculated for exact code agreement. Scott's *pi* for inter-coder agreement was .88 (Scott, 1955).

3. Assessing differentiation scores. Table 2 provides a breakdown of the coding process and outcome of the thought protocol of one segment. It also illustrates how scores for amount and range of elements were assigned. Each time a coder encountered an individual case (e.g., a specific actor), the code for the corresponding category was assigned, thus establishing a term as one 'element' of a certain type. To establish the 'amount' of discrete elements, terms that referred to the same individual case (e.g., the same actor) were counted as only one discrete element⁶. For example, in Table 2 the participant mentions a female politician a number of times ('she'). Thus, a new element was counted whenever a participant mentioned a new, previously not mentioned specific actor, act, object, etc. Range was calculated by adding the number of different types of elements used.

Table 2. A protocol related to one news segment, basic sentences and codes (Item BSE).

<i>Protocol segment (participant no. 1)</i>	
"Well, I thought she had a nice purple shirt. And what she said about the consumer... the consumer has absolutely no idea that the minister's policy is erratic. I think she wants 15 million people to support her, or something, because you won't make it with just a purple shirt."	
<i>Basic sentences</i>	<i>Codes</i>
She ¹ had a nice purple ² shirt ³	1. kinds of actors 2. attributes of objects 3. kinds of objects

Protocol segment (participant no. 1)

“Well, I thought she had a nice purple shirt.

And what she said about the consumer... the consumer has absolutely no idea that the minister’s policy is erratic.

I think she wants 15 million people to support her, or something, because you won’t make it with just a purple shirt.”

<i>Basic sentences</i>	<i>Codes</i>
What she ¹ said ⁴ about the consumer ⁵	4. kinds of acts 5. kinds of actors
The consumer ⁵ has no idea ⁶ that the minister’s ⁷ policy ⁸ is erratic ⁹	6. kinds of feelings 7. kinds of actors 8. kinds of objects 9. attributes of objects
She ¹ wants ¹⁰ 15 mln. people ¹¹ to support her ¹⁰	10. kinds of goals 11. kinds of actors
She wants ¹⁰ 15 mln. people ¹¹ to support her because you won’t make it ¹² with just a purple ² shirt ³	12. reasons for goals
<i>Amount of elements</i>	12
<i>Range of elements</i>	7

In total, the participant in Table 2 used twelve distinct elements, making the amount of differentiation score –for this segment only–twelve. The range of differentiation score for this segment was seven as the specific elements used were of seven different types.

We obtained some preliminary indications of the validity of our instrument, using educational level, since this is conceptually related to cognitive complexity, as an indicator. Previous studies show positive empirical relations between education and cognitive complexity – the differentiation and integration of cognitive structures (Luskin, 1990) – and between education and the level of news processing, represented by recall and comprehension levels and a more complex verbal reproduction (Findahl & Höijer, 1981, 1985; Giegler & Ruhrmann, 1990; Renckstorf & Rohland, 1980; Robinson & Davis, 1990; Robinson & Levy, 1986)⁷. Therefore, educational level can be used as an indirect indicator of the validity of our measurement of differentiation (i.e., construct validity: Cronbach & Meehl, 1955; Zeller & Carmines, 1980). Accordingly, a positive relation between educational level and number of elements and of categories of elements should indicate a valid measurement of differentiation. We compared the amount and range of elements used by participants with both a high and a lower education in the interpretation of one news item. Higher educated participants scored, on average, 52.9 on amount of elements ($SD = 21.1$) and 32.7 on range ($SD = 13.3$), whereas the lower educated scored on average

30.9 on amount ($SD = 16.5$) and 18.9 on range ($SD = 9.1$). A Mann-Whitney test showed that the differences for the number of elements were significant at $\alpha = .05$ (2-tailed), but not for range, although the distribution showed the same trend. This provides us with some provisional validation of our instrument.

Results

As said, we conducted a small pilot study to test the practicality of the study as well as the use of the data it generated. The results are presented here for illustrative purposes. To demonstrate the usefulness of the method and its data, we assess whether interpretation differences can be found between different viewers. Different viewers have different social, situational, and psychological characteristics represented in different knowledge structures. Therefore, we can assume that they interpret identical television news differently. Since our research group consisted of participants with at least some variance in three different characteristics (sex, age, and educational level), we would expect differences between participants in the amount and range of elements they used in interpreting a news item.

Amount

Viewers have, and are willing and able to report, thoughts while watching a news program. As seen from the lengths of the protocols in regard to the amount of words (see above), they reproduce quite a large amount of thoughts during the whole news program. On average participants incorporated 39 unique elements in their interpretations regarding a single three minute news item on the mad cow disease. There are considerable differences between participants in the amount of elements used, with a maximum of 80 and a minimum of 10 elements used (Table 3). In other words, some viewers' interpretations are far more specific than others.

Table 3. Amount and range of elements used while watching per viewer (Item BSE).

Participants	Amount (Elements)	Range (Types)
1	80	14
2	66	13
3	46	14
4	32	12
5	38	13

Participants	Amount (Elements)	Range (Types)
6	42	15
7	34	14
8	23	8
9	10	6
10	78	18
11	42	17
12	39	15
13	25	8
14	14	9
15	63	13
16	23	9
17	49	16
18	14	9
19	23	10
<i>N</i> = 19	<i>N</i> 741 <i>M</i> 39.00 <i>SD</i> 20.82	<i>N</i> 233 <i>M</i> 12.26 <i>SD</i> 3.39

Range

Not only do viewers use a large amount of elements in interpreting the news, the elements are also often fairly heterogeneous. This indicates that many viewers do not merely think about, for instance, the people, places, or events in a news item, but that they include a wide variety of elements in their reconstructions of a news item. Again, there were noticeable differences between participants, although the differences do not seem as extreme as the differences in the amount of elements (*Min.* = 6, *Max.* = 18). These less extreme differences are partly explained by the fact that the number of elements people may use is unlimited, whereas the number of types of elements is restricted by the number of types in our classification scheme.

Differences between viewers

Using somewhat crude criteria, we divided the participants into a typology of interpretive differentiation, establishing three differentiation profiles for this specific news item (Table 4)⁸. Fisher's exact test for this distribution was significant at $\alpha = .001$. The two foremost groups are the groups with either a high amount and range or a low amount and range. So, most participants who used

many elements did so in many different categories (i.e., their interpretations are both specific and heterogeneous), whereas most participants who used a small amount of elements did so in a low variety of categories (unspecific and homogenous). The interpretations of these two groups can be called 'differentiated' and 'undifferentiated' respectively. However, a third, although small, differentiation type was also found; interpretations containing relatively few elements (unspecific) in a relatively wide range of categories (heterogeneous). The opposite, interpretations containing many elements of low variety (specific and homogenous), at least in this group did not occur, although it is certainly not inconceivable that such interpretations do exist.

Table 4. A Typology of interpretive differentiation: Number of participants per subgroup (Item BSE).

		Amount		
Range		Low	High	
	Low	8	–	8
	High	2	9	11
		10	9	<i>N</i> = 19

Differences within viewers

Above, we discussed the indications of differences between participants regarding their interpretation of the same news item. We can hypothesize that these differences can be attributed to personal characteristics such as educational level. However, we can also expect that interpretations of various news items vary within the same viewer. The interpretive differentiation of a participant should presumably be somewhat consistently high or low as it is influenced by structural social and biographical characteristics such as education. Yet, at the same time, interpretive differentiation may be variable. Different news items often concern different knowledge domains, and viewers' knowledge and interests regarding these domains may vary, which in turn may influence their interpretations. To illustrate this, we analyzed interpretive differentiation for two participants. For easy comparison, we selected one participant who seemed, on face value, to have a highly differentiated interpretation of most of the news, and another who seemed to show less overall interpretive differentiation (Table 5). In the following, these two participants, corresponding to participants 1 and 14 in Table 3, are called participant A and B, respectively.

Because we were interested in variations in differentiation between items, we compared five out of seven items with about the same length, all ranging 2:24–2:54 minutes, as these items provide the participants with more or less

equal amounts of time to think, as well as roughly the same amount of content to think about.

Table 5. Amount and range of elements used by two viewers per news item.

<i>News Item and Length</i>	<i>No. of 'breaks'</i>	Participant A		Participant B	
		<i>Amount</i>	<i>Range</i>	<i>Amount</i>	<i>Range</i>
2. 2:54	10	80	14	12	9
3. 2:36	8	77	18	26	12
4. 2:30	8	112	18	21	8
5. 2:42	10	103	19	22	6
6. 2:24	9	64	13	8	5
<i>N</i>		441	82	89	40
<i>M</i>		88.20	16.40	17.80	8.00
<i>SD</i>		19.41	2.70	7.50	2.74

As expected, interpretive differentiation of the same viewer regarding different news items varies (Table 5). Maximum scores may be up to 1.5 or 3 times higher than minimum scores within the same viewer (cf. amount participant A; amount and range participant B). Although this is evidence of some variance within participants in both the amount and range between items, participant A consistently showed a higher interpretive differentiation than participant B. On average the amount of elements in the interpretation of participant A was almost five times higher than in participant B's interpretation. The range of A's interpretation was about two times higher than B's interpretation. The extent of the difference between these two participants is illustrated by the fact that the maximum number of elements used by participant B is less than half the minimum number used by participant A, and the maximum range score of B is still lower than A's minimum range. Additionally, neither the length of the items nor the number of 'thought-listing breaks' seems to be directly related to the level of differentiation. That is, a longer item and more breaks do not necessarily lead to a higher level of differentiation. In sum, differentiation does vary with the news items, yet it also seems relatively consistent within participants, which is consistent with our expectations.

Conclusions and discussion

The aim of this contribution was to outline a method and procedure for the study of television news interpretation and to assess the usefulness of the data

it generates for exploring the interpretation of television news by its viewers. It appears that viewers have a large number of thoughts during the viewing of the news. These thoughts are of varying degrees of specificity and heterogeneity, presumably related to social and personal characteristics among which educational level. Finally, viewers seem to interpret each news item with a different level of differentiation.

These results indicate that the procedure is useful for studying interpretive differentiation. Differentiation scores allow us to distinguish between television news viewers with highly differentiated interpretations and viewers with less differentiated interpretations, as well as between the interpretations of several news items within individual viewers. As interpretive differentiation is presumably strongly related to integration – the second characteristic of interpretive complexity (cf. Schaap et al., 2005) – we expect the instrument to be fit to measure differences in interpretive complexity as a whole. The results corroborate with earlier research that has shown that different viewers of expository programs have different thought profiles, and that different parts of a program relate to different types of thoughts (Findahl & Höijer, 1981, 1985; Höijer, 1989; Renckstorf & Rohland, 1980).

A problematic issue in this study is of course the representativeness of the analysis of thoughts. We have provided a modest test of the validity of our instrument by demonstrating a relation between two theoretical concepts (i. e., educational level and complexity). However, this validation is merely preliminary and should be further explored. In future research the classes of thoughts we have assessed should be tested. Classifications can be supplemented and validated for instance by conducting focused interviews with participants, in which they are asked to judge the researcher's classification, or to provide their own classifications (Spradley, 1979, 1980; Van der Veer, Ommundsen, Hak, & Larsen, 2003). In addition, results of qualitative studies can be used in quantitative research in which classifications can be validated on a larger scale.

How can this method contribute to the study of what people do with the news? When compared to 'classical' studies of television news processing that have used recall and comprehension measures, this is an attempt to do more justice to the complexity that is involved in watching, understanding, and giving meaning to the news. It allows us to study a wider range of the reconstructions viewers make of the news, that is, what viewers 'make' of the news than before, as oftentimes the analysis of recall and understanding of news has been limited to certain specific, expected and deemed as important news 'facts'.

Moreover, studying the structure of viewers' interpretations does not require a pre-fixed definition of what constitutes the processing of news content. Therefore, it can give us not only a more detailed but also a less 'biased' view of what people 'do' with the news (cf. Hendriks Vettehen, Schaap, & Schlösser, 2004; Massey, 1995; Renckstorf & Wester, 2001; Schaap, 2004). To illustrate

how focusing on the structure of interpretation (which is what we did here) differs from focusing on its content, consider the following example. The statement 'a fork is used to eat soup' may, when judged on its content not necessarily be a 'true' statement; in reality a fork is hardly ever used to eat soup. In most classical news studies, this would have meant that the statement was classified as 'false' or 'misunderstood'. However, the structure of this statement indicates that the viewer has incorporated in his or her interpretation the function of forks; 'functions of forks' are part of his or her interpretation of a news item. The interpretation is 'true' to the viewer, regardless of what reality or a researcher may think of it. Moreover, whereas one viewer considers the function of something, and connects this to the news item that is watched, other viewers may include in their reconstruction of the item only the fork, and not its function, or include altogether different kinds elements. Measuring such structural characteristics in other words, can give us insight in interpretational differences between viewers without the necessity of making the 'true/false' judgments that have been used in much previous research on recall and comprehension of news (Robinson & Davis, 1990). This method takes into account the subjective nature of interpreting the news. Moreover, it allows us to do so fairly systematically.

In addition to the study of viewers' interpretation, one could apply the concept and operationalization of 'complexity' to the analysis of news contents, as they themselves are reconstructions too. Comparisons between the complexity of the news and that of viewers' interpretations could for instance test hypotheses about 'bottom-up' and 'top-down' processing of news. Furthermore, relations between viewer characteristics and the complexity of interpretations can be studied. Thus, further studies with similar methods may provide us with supplementary insight into the relationship between interpretation and the influence of television news.

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Notes

1. The research group consisted of ten women and nine men. Age ranged from 20 to 64 years ($M = 38$ years). Twelve participants had completed a low educational level (i. e., any degree up to and including higher vocational education) and seven participants had attained a high education (bachelor's degree or higher).

2. Not all the words people used when verbalizing their thoughts were equally relevant for measuring interpretive differentiation. The aim was not, for instance, to make a linguistic analysis of the protocols. This meant that for instance frequently used words such as 'a', and 'the' were irrelevant, while other words signified elements used in the interpretation.
3. The categories that were not used were 'location-for-action', 'means-end', and 'spatial'. It is conceivable why these categories have been found in ethnographic research and not in protocols of spontaneous thoughts during a television news item. Ethnographers aim to describe every aspect of a culture, including all its cultural acts and objects. Their strategy is to ask members of a culture to describe all the aspects of interest, and keep asking focused questions until they have all the information they need. One can understand that television news viewers do not spontaneously think about different ways to use a location, or the different parts of something at the moment they are watching the news, unless they are pressed for it by an interviewer.
4. A certain level of context sensitivity was required for this procedure. Sometimes we could classify a statement only if statements in its direct vicinity or even in the news content itself were considered. For instance, in the event a reference was made to a person without directly mentioning a name (e. g., 'she' in Table 2) the coder could deduce from subsequent statements and the segment in the news to which this statement related that 'she' was the politician making a speech in the segment. In almost all cases, the coder was able to deduce without much doubt to whom or what participants referred. In cases where this was impossible, we classified the element in a 'missing category'.
5. The only exceptions were statements that are perhaps typical of a news-watching situation, as opposed to interviews. These include short cries and exclamations such as 'well, well', 'how about that', and 'gee-whiz' which may occur without any further context. Without even the smallest context, it becomes impossible to classify them. When the coder encountered such statements, and the context of the rest of the statements did not provide the coder with a clear idea of how to categorize the statement, the coder placed them in a 'not codable' category.
6. This is another instance in which sensitivity to the context of the entire statement and news item is important to determine whether a statement refers to the same actor or not.
7. Both the theoretical and the empirical relation between education and cognitive complexity and news processing is indirect, via IQ and interest (Graber, 1984; Luskin, 1990) as well as cognitive skills, level of processing (Woodall et al., 1983), and the level of specific and general knowledge (Findahl & Höijer, 1985; Giegler & Ruhrmann, 1990). Therefore, correlation with educational level is only a very indirect indicator of construct validity.
8. The mean scores were taken as a criterion for classifying participants into either the high or low groups; for amount we placed participants with the score 39 in the 'high' category.

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Chapter 6

Measuring the complexity of viewers' television news interpretation: Integration

Gabi Schaap, Ruben Konig, Karsten Renckstorf and Fred Wester

Abstract

Although interpretation is often considered a vital factor in the effects of news, its conceptualization and operationalization have been problematic. In this study, interpretation is defined in terms of the structural attribute of complexity. In a previous contribution, one aspect of interpretive complexity, differentiation, was operationalized and measured to test the usefulness of the concept in news research. This follow-up study introduces a method for measuring and analyzing a second aspect of interpretive complexity: Integration. Whereas differentiation represents the broadness of interpretations, integration refers to the cohesiveness of interpretations. This contribution describes two dimensions of integration, called micro-integration and macro-integration, and attempts to test their utility by operationalizing and measuring them in a small-scale study (N = 19). Results illustrate that the method yields data that are helpful in systematically exploring and comparing how viewers interpret television news, through assessing differences in cohesiveness. The merits of the concept and method as well as their use for the study of news effects are evaluated.

Interpreting television news is a complex process; viewers are active receivers that use their personal and social knowledge, and personal motivations to shape the content of a news message until it fits the viewer's purposes. The different ways in which they use their knowledge to construct an interpretation eventually affects the knowledge they gain, their understanding, and the attitudes they form on topics in the news. As differences in how people interpret the news at the moment they are watching may explain differences in these longer-term phenomena, the interpretation of television news should be an important subject of mass media research (Schaap, Renckstorf & Wester, 2005; Schaap, Konig, Renckstorf & Wester, 2005; Shapiro & Lang, 1991).

Because interpreting the news is a complex cognitive and affective process, it is not sufficient to measure only audience reproductions of predefined news facts (cf. Findahl, 1997, 1998; Giegler & Ruhrmann, 1990; Graber, 1984; Gunter, 2001; Höijer, 1989, 1998; Renckstorf & Wester, 2001; Robinson & Davis, 1990; Shapiro & Lang, 1991; Woodall, Davis & Sahin, 1983). Although said research has been, and still is, very fruitful, to do justice to the interpretive process, alternative measurements are needed, preferably measurements that are conducted from an audience point of view, so that more comprehensive information is collected on the complete interpretation process. In earlier contributions, we proposed one such alternative with the concept of *interpretive complexity*. This concept focuses on structural properties of interpretations (Schaap, Renckstorf & Wester, 2005). It has been claimed that the degree to which interpretations are differentiated (elaborate) and integrated (cohesive) affects how and to what degree recipients remember and understand the news, as well as the nature of their opinions in the longer run.

In an earlier study, we attempted to operationalize and test the utility of a concept of differentiation for use in television news research (Schaap, Konig, Renckstorf & Wester, 2005). Here, we focus on doing the same for the second aspect of interpretive complexity: Integration. For a more elaborate discussion of the concepts and their origins we refer to Schaap, Renckstorf and Wester (2005). Below, we present data from a small-scale study; these data are not intended to make claims about interpretive complexity in the empirical reality, but rather they serve as material to illustrate and test the usefulness of the method.

Interpretive complexity: Differentiation and integration

In this project, the interpretation of a television news item is seen as a product of interpretive actions by the viewer; the outcome of a complex process in which a viewer tries to give meaning to the news. This interpretation can be seen as a cognitive *structure* which has a certain level of complexity. This structure consists, first, of the separate elements that are the most basic building blocks of interpretations, and second, of links between these elements. These two dimensions of complexity are called *differentiation* and *integration*, respectively. Differentiation refers to an interpretation's elaborateness, whereas integration refers to its cohesiveness. Interpretations may differentiate between many or not so many different elements of an issue or event; simple interpretations contain a narrow range of information, representing a limited amount of ideas that are employed to describe an issue, whereas more complex interpretations contain more information elements, suggesting a broad range of multiple alternative interpretations of the same issue. Furthermore, interpretations may to a

greater or lesser extent integrate these separate elements into a cohesive whole; simple interpretations have fewer connections between information elements than complex interpretations. A certain differentiation constitutes only one aspect of complexity; the interpretation of a news item can only be called more or less complex if the elaborateness has some level of cohesiveness as well. A person may use many elements, but fail to connect them in any meaningful way. Thus, such a person's interpretation may be highly differentiated yet at the same time it lacks cohesiveness; complex interpretations are both highly detailed and connect details into a cohesive whole.

In this contribution, the focus is on interpretive integration. There are two ways in which a viewer can connect elements. First, on a micro level, he or she may connect two individual elements. Second, on a macro level, many individual elements are implicitly or explicitly connected as they refer to broad socio-cultural categories. Below, we specify these two dimensions of integration, and in the next paragraph we operationalize the concepts.

Micro-integration: Relational elements

A first way in which an interpretation shows cohesiveness is in the linking of individual elements. Based on James Spradley's (1979, 1980) definitions, in previous research we found that a number of broad categories of element types can be distinguished in television news interpretations (Schaap, König, Renckstorf & Wester, 2005). Although every element that is used by people to describe aspects of reality represents some type of *semantic* relationship (i. e., a very basic link between an aspect of reality and some small category, e. g., 'this four-legged wooden thing is a chair') we maintain that some of these relationships, and consequently some of these elements, are of a higher level of abstraction (Höijer, 1989, Luskin, 1987). These are elements that contain actual explicit relationships between two or more concrete elements. References to for instance persons, places and events, and attributes of these things are references to basic units, simply denoting things that are directly observable, concrete phenomena ('simple elements'); for instance 'this is a chicken', or 'the chicken crossed the road'. References to for instance the causes of an event are more abstract, as they link two simple units with a feature that is not directly observable ('relational elements'). For instance, 'this caused the chicken to cross the road' links two phenomena: 'this' and poultry behavior in terms of a cause (cf. Al-Menayes & Sun, 1993; Findahl & Höijer, 1985; Schroder, Driver & Streufert, 1967). The more an interpretation contains such explicit relations, the higher its 'micro-integration'.

Viewers use their prior knowledge of an issue to construct an interpretation of a television news item. Therefore, we may expect that viewers with different knowledge of issues or events use different elements in interpreting such issues

and event, including relational elements. Likewise, the degree to which one is inclined to perceive causes and effects, etc. may also be dependent on prior knowledge.

Macro-integration: Domains of elements

On a still higher level of abstraction, interpretations can contain groups of elements that belong to one or several broad socio-cultural categories, called domains (cf. Judd and Krosnick; 1989; Schaap, Renckstorf & Wester, 2005; Spradley, 1979, 1980; Wahldahl, 1998). A domain is a category in which aspects of reality are grouped that belong to the same social sphere; its boundaries define what belongs to a social sphere and what does not. In other words, a domain consists of all elements, such as actors, acts, events, and objects that are related to the same social sphere. For instance, the domain of 'politics', contains all political persons, political acts, political events, their consequences, whereas the domain 'private world' contains private persons, such as family and friends, and their acts in private life, their consequences, etc.

Whether one uses the categories of a social domain in interpreting the news depends on whether one perceives a connection between an issue or event in the news and that social sphere. As viewers use their own, partially individual knowledge to interpret the news, it can be hypothesized that different news items on different subjects may be interpreted using different domains. Simultaneously, viewers from different individual and social backgrounds may use different domains while interpreting the same news item. Also, the degree to which they use multiple domains can be different for different viewers. If a viewer uses, say, five domains in the interpretation of a news item, this viewer in fact links these categories to each other and to the news item. In other words, such a viewer integrates these domains into his or her representation of the news item, and does this to a larger degree than a viewer who uses only one or two domains in a representation of a news item. In other words, the latter interpretation is less integrated than the former.

Summarized, whereas interpretive differentiation concerns the 'simple' types of elements in interpretations – elements that refer to inclusion and attribution types – integration refers to, first, relations between specific elements, and, second categories of elements belonging to the same social domain.

Measuring interpretive integration

In this study, as well as a previous contribution, we developed a method for classification of verbalized interpretations according to four aspects of differentiation and integration (Schaap, Konig, Renckstorf & Wester, 2005). As we

explain below, this system of categories was partly predefined by categories taken from other researchers (most notably James Spradley). However, developing it was partly an iterative effort as well, in which we searched for specific relationships and domains used by the viewers, in order to develop categories that are specifically used for interpreting (television) news. Below, we predominantly report on the outcomes of the efforts to develop this coding strategy, as well as the data gathering method. At some points concerning the coding strategy however, we report more extensively on how different categories came about. Of course, in this contribution, the focus is almost entirely on measuring integration.

The method for measuring interpretive complexity consisted of four components. First, a data gathering instrument to 'tap' viewer's thoughts on the moment they are watching the news, and second, a three-step procedure to assess the degree of integration in reported thoughts.

Data-gathering: Thought-Listing Technique

To capture news interpretations, participants were invited to watch individually a newscast compiled of regular news items. In order to allow the participants to communicate their interpretations freely and directly, we used a cognitive response method called Thought-Listing Technique (Schaap, 2004). This observation instrument required the participants to say out loud all thoughts they have while they were watching a news program.

We showed an eighteen minute videotaped news bulletin, containing seven items, to nineteen participants (Table 1). The participants were selected to include a broad range in sex, age, and education.¹ The broadcast was edited so that the screen turned 'black' after small 'natural' segments of the news – segments that were constructed in such a way as not to disrupt the normal flow of a news item too much. The segments averaged eighteen seconds in length. Participants were asked to say out loud all thoughts they had while they were watching the news segment at each interval (for a more detailed description of the procedure and its logic, cf. Schaap, 2004). These verbalizations were recorded and subsequently transcribed, resulting in nineteen protocols of verbalized thoughts, with an average length of about 1,965 words ($SD = 1,585.03$; $Min. = 622$; $Max. = 6,827$). The thought protocols represented a direct and detailed report of interpretations during the program, and formed the basis to assess interpretive differentiation. For the current analysis, we used the protocols of all nineteen participants regarding one single news item on political solutions to the 'BSE' or mad cow disease problems in Europe (length: 2:54 min.). Furthermore, we used the protocols regarding the complete bulletin (i. e., four news items), produced by two participants who on face value differed strongly on the complexity of their interpretations.

Table 1. News bulletin for Thought-Listing, NOS 8 O'clock News, 21-11-2000.

Item	Issue	Description	Length m:s
1	<i>Profession-related diseases</i>	Company doctors fail to report sick employees	3:18
2	<i>BSE</i>	The Netherlands will be testing cattle earlier and more often	2:54
3	<i>Israel</i>	Egypt withdraws its ambassador from Israel after rocket attacks on Palestine territories	2:36
4	<i>Euthanasia</i>	Euthanasia directive used by family members to manipulate physicians into euthanasia when care proves too difficult	2:30
5	<i>Exhibition</i>	Dutch Queen and German president open exhibition on Dutch-German relations	2:42
6	<i>Emmy Awards</i>	TV series 'All Stars' wins American Emmy award in 'best drama series' category	2:24
7	<i>Weather forecast</i>		1:18

Note. Item labels are ours; Item 1 was used as a practice item and was excluded from the analyses, as was the weather forecast

Data analysis: Three phases

Measuring interpretive integration required distilling from the thought protocols the *different explicit connections*, as well as the *different domains* used. Measurement took place in three steps: 1. construction of basic sentences, 2. coding of basic sentences, 3. assessing integration scores.

1. *Constructing basic sentences.* People use language to refer to a person, actions, objects, feelings, etc. These references in turn contain indicators for our analytical variables: Relations and domains. As the way participants formulate their thoughts can sometimes be quite diffuse, we broke up each protocol into 'basic sentences'. Each basic sentence represented only one statement loosely following the structure 'object $x \rightarrow$ *semantic relationship* \rightarrow subject y ' (cf. Kleinnijenhuis, Oegema, De Ridder & Ruigrok, 1998; Osgood, Sparta & Nunnally, 1956; Van Cuilenburg, Kleinnijenhuis & De Ridder, 1988). The words and statements in these basic sentences were coded.

2. *Coding of basic sentences. Procedure: micro-integration.* In order to classify individual elements, in the study on interpretive differentiation we used a list of interpretive elements consisting of all possible elementary building blocks of interpretations (cf. Table 2). This list was developed from Spradley's (1979, 1980) matrix of social situations (cf. Schaap, Konig, Renckstorf & Wester, 2005). Spradley maintained that interpretations of any social situation are

made up of elements that correspond to a limited number of elements that make up social situations in general, all related to the building blocks of any social situation: Actors, acts, events, objects, feelings, times, and places. He proposed a slightly more extensive list of element types than we use in this project; in this study a number of his relations were deleted or combined in our coding scheme when these relations appeared not to be used by our participants when watching the news (cf. Schaap et al., 2005).² This resulted in five broad categories of elements that were used for coding interpretations (Table 2). Of these five categories, three can be considered of a more abstract level, as they contain element types that refer to relations: elements that contain causal, logical, or temporal connections. Phrased differently, micro-integration assessed by coding elements expressing relations of *cause-effect* (*x* is a cause/effect of *y*), rationale, or *reasons/functions* (*x* is a reason for *y*; *x* is a function of *y*), and *steps/phases* (*x* is a step/phase in *y*) (whereby *x* and *y* represent any possible element of the types actors, acts, events, objects, feelings, time, and places; cf. Table 2).

All basic elements in the basic sentences were classified accordingly. Coders were required to decide for each element in a basic sentence whether it was a 'normal' non-relation element or an element that contained an explicit reference to one of these types of relations. We established coding reliability using two independent coders trained to use the coding scheme, who practiced coding on 10 protocol segments. They coded a random sample of 20% of all protocols. Intercoder agreement was calculated for exact code agreement. Scott's *pi* for intercoder agreement for the coding of all elements (both simple and relational) was .88 (Scott, 1955).

Table 2. List of basic element types: Simple and relational elements.

Category	Types of elements
<i>Simple elements</i>	
Inclusion elements	<i>Kinds of...</i> : actors, goals and feelings, acts, activities, and events, space, time, and objects
Attribution elements	<i>Attributes of...</i> : actors, goals and feelings, acts, activities, and events, space, time, and objects
<i>Relational elements</i>	
Cause-effect elements (causal relations)	<i>Causes of...</i> : actors, goals and feelings, acts, activities, and events, space, time, and objects
Rationale & Function elements (logical relations)	<i>Reasons for & Functions of...</i> : actors, goals and feelings, acts, activities, and events, space, time, and objects
Sequence elements (temporal relations)	<i>Steps or phases in...</i> : actors, goals and feelings, acts, activities, and events, space, time, and objects

Procedure: macro-integration. Macro-integration refers to the number of different domains used within one interpretation. Domains were defined as spheres of social life. In other words, a domain is composed of all (types of) actors, acts, events, objects, times, places, and feelings, their attributes, causes and consequences, rationales and temporal aspects associated with a particular social sphere. Therefore, we must be able to assign each element in the protocols to a particular domain. To achieve this, we must first assess which social domains viewers may use in their reconstructions of the news program.

Because we had only a very general a priori idea of what domains to expect in news interpretations, we first defined domains in both a deductive and inductive process. It was deductive in the sense that we used a pre-constructed list of 'prototype' domains derived from several lists of news domains constructed by others (cf. Schramm, 1949; Rosengren, 1986; Van Hoof, 2000). Many of these domains are represented in newspaper sections or different sections in news programs; because they are established and explicit categories in the news, one would expect them to be used by the news audience as well. For each domain on this list, we then described the corresponding types of actors, acts, events, etc.

In addition, we operationalized domains using audience categories. One of the main ideas in this project is that interpretations of the news should be studied from the audience point of view. As the elements that viewers used may not necessarily fit the domains expected by news makers and researchers, we assessed elements that would not fit in the previously constructed 'prototype' domains. To assess the domains used by *viewers* the protocols were read in an iterative process to identify additional or modified domains; both the pre-defined and the newly formed domains were treated as 'sensitizing concepts' (cf. Glaser & Strauss, 1967). This was done by applying 'contrast questions'; looking for similarities and differences between elements; is this element similar to the elements in this domain, or is it different (cf. Spradley, 1979, 1980)? This meant that in this phase the form and definitions of each domain were subject to change depending on whether new-found elements would fit into a previously constructed domain.³ Thus, domains were formed from a 'news maker' as well as a 'news user' point of view. Eventually, we defined 16 domains with descriptions and specific examples of the related basic elements, and one additional domain 'other', which is a container category for elements not directly related to any actual domain (this were most often verbs that indicate general actions such as talking, thinking, walking, etc.). This list, an abbreviated version of which is shown in Table 3, was used for the definitive coding of domains in the protocols.

Table 3. Domains.

Domain	Description and examples
Politics	Actors, acts, events, objects, etc. associated with politics: Politicians, government, debating in parliament, implementing policy, its/their attributes, reasons, consequences and phases
Media	Actors, acts, events, objects etc associated with mass media: Journalists, movie stars, watching news, interviews, cameras, images and sounds; their attributes, reasons, consequences and phases
Agriculture	Actors, acts, events, objects etc associated with agriculture: Farmers, feeding cattle, farms, meat, cattle, their attributes, reasons, consequences and phases
Environment, infrastructure & zoning	Actors, acts, events, objects, etc. associated with the natural environment, and infrastructure: environmentalists, architects, engineers, landscape, trees, roads, zoning, city plans, their attributes, reasons, consequences and phases
Economy & finance	Actors, acts, events, objects, etc. associated with economy: Shopkeepers, companies, banks, investing, money, costs, income, debts, their attributes, reasons, consequences and phases
Crime & justice	Actors, acts, events, objects etc. associated with crime, justice, law and order: Police, judge, crooks, laws, law enforcement, stealing, their attributes, reasons, consequences and phases
Health(care) & welfare	Actors, acts, events, objects, etc. associated with public or private health, health care well being, both physical and psychological: Doctors, (mental) patients, feeling sick; operating; treatment; diseases; hospital, their attributes, reasons, consequences and phases
Education	Actors, acts, events, objects, etc. associated with education: Teachers and students, school, studying, a grade, school books, their attributes, reasons, consequences and phases
Science	Actors, acts, events, objects, etc. associated with science: scientists/scholars, university, research, statistics, definitions, their attributes, reasons, consequences and phases
Family life	Actors, acts, events, objects, etc. associated with family life: parents, children, the home, raising children, puberty, their attributes, reasons, consequences and phases
Art	Actors, acts, events, objects, etc. associated with the arts in a broad sense: writers, painters, readers, books, sculpture, museum, fictional characters, their attributes, reasons, consequences and phases
Culture & ethnicity & religion	Actors, acts, events, objects etc. associated with particular culture or nationality/ethnicity and with religion or philosophy: Dutchmen, French, Christianity, language, national flag, habits, their attributes, reasons, consequences and phases

Domain	Description and examples
Leisure & sports	Actors, acts, events, objects, etc. associated with sports, and recreation: Players, sports club, running, a match, stadium, cup, their attributes, reasons, consequences and phases
War & disasters	Actors, acts, events, objects, etc. associated with war and (natural) disasters: soldiers, victims, rescuing, war zone, bombs, storms, their attributes, reasons, consequences and phases
Private world	Actors, acts, events, objects, etc. associated with the personal life of the participant: the participant as private person, friends, family, personal history, acts and events in real life, their attributes, reasons, consequences and phases
Viewing context	Actors, acts, events, objects, etc. associated with the experiment in which the participant is participating: the participant 'as participant', the researcher, talking out loud, watching this news item, the laboratory, filling out a questionnaire, their attributes, reasons, consequences and phases
Other	Actors, acts, events, objects, etc. of a general nature, not associated with specific domains: e. g., talking, thinking, etc.

All 741 elements that the nineteen participants incorporated in their interpretation of the news item were classified into these 17 domains. 95.5% of all elements could be classified into the 16 actual domains (excluding 'other') without any difficulty.⁴ Two independent coders classified elements used representing 20% of the segments. Scott's *pi* for intercoder reliability was .89.

3. *Assessing integration scores.* Micro and macro-integration were defined as the degree of use of relations and of domains respectively. Thus, the number of different relations and the number of different domains in each interpretation was counted. Relation-elements that referred to exactly the same specific relation more than once (e. g., if the exact cause-effect relationship 'I can't concentrate on what he's saying because he talks funny' was used more than once) were only counted one time. So, micro-integration was assessed counting the number of different relations in the three categories per participant. The use of domains was dichotomous; a participant received a 1 for using a domain and a 0 for not using it. To analyze macro-integration, we counted the number of different domains used per participant.

Results

This study was intended to test the feasibility of the research approach for news reception research. The results are presented here for these purposes. To demonstrate the usefulness of the method and the data generated by it, we as-

essed whether the instrument was able to differentiate between interpretations of different viewers. Different viewers have different social, situational and psychological characteristics, which are represented in different knowledge structures. As interpretive structures originate from the kind and amount of knowledge used by viewers to interpret the news, we can assume that viewers with different knowledge structures interpret identical television news items with different degrees of integration. As our research group consisted of participants who varied in three different characteristics (sex, age, and educational level), we expected differences between their interpretations in the number of explicit connections between individual elements, and the number of domains. In the initial analyses, aimed to assess integration differences between different interpretations, we included only the protocols regarding the news item on BSE (item no. 2, see Table 1).

Micro-integration

Below we present two segments of thought protocols produced by two participants while watching the news item BSE. Both discuss the secretary of agriculture, who is present in the news item, defending his policy choices after being criticized by members of parliament. These segments illustrate how two viewers can have the same types of thoughts, with the exception of the connections they make.

Brinkhorst [secretary of agriculture], I don't know what kind of man he is. Highly political, I think. Of course he thinks he's got everything under control. He's got to make a lot of concessions.
(Participant 13)

Yes, I think he [secr. of agriculture] is a bit of measly little man. And of course he's not going to say he's done it wrong, politicians never do. And, well, if he had gone and told parliament what kind of ideas he had than he would've been called inconsistent because he back-pedaled or whatever.
(Participant 1)

Both viewers discuss the secretary of agriculture; they express similar thoughts on his personality and how he does his job; in this aspect the interpretations are fairly similar. An important difference however, lies in the fact that the second viewer considers the reasons the secretary had for doing what he did; he did not tell parliament of his prior plans because than he would have been called inconsistent. This is an example of a logical, or 'rationale' relation; he would have been called inconsistent is a reason for not telling the parliament of his earlier

ideas. So in this regard, although in some respects both interpretations are quite similar, the second interpretation is more cohesive, and therefore more complex, as it makes an explicit connection between two basic elements.

Table 4. Micro and macro-integration in the interpretation of news item BSE per viewer.

Participants	Micro-integration (number of abstract elements)	Macro-integration (number of domains)
1	14	8
2	6	10
3	5	7
4	3	6
5	7	7
6	9	7
7	4	7
8	4	6
9	2	5
10	12	9
11	9	9
12	8	7
13	1	5
14	3	4
15	14	9
16	2	7
17	11	8
18	3	3
19	3	6
<i>N</i> = 19	<i>N</i> 120 <i>M</i> 6.32 <i>SD</i> 4.16	<i>N</i> 130 <i>M</i> 6.84 <i>SD</i> 1.80

On average, interpretations contained over 6 relations; all participants incorporated at least one relation between elements into their interpretation of one news item (*Min.* = 1; *Max.* = 14; Table 4). This means that viewers were able to achieve some level of cohesiveness in their thinking about the news at the moment of watching it. Although it seems obvious for viewers to do this, in previous research this has not always been evident; cause-effect relations for instance are often considered hard to remember and reproduce, even more so

as television news reports often seem to disregard the causes and consequences of events (Findahl & Höjjer, 1985; Graber, 1990). However, not all viewers connected elements to the same degree; in fact differences were quite large ($SD = 4.16$).

Table 5. Micro-integration: Types of relations.

	Minimum	Maximum	Mean	Std. Deviation
cause	0	7	2.00	2.03
rationale & function	0	7	3.12	2.00
sequence	0	5	1.26	1.45
<hr/>				
<i>N</i> = 19				
<hr/>				

The most used connections between elements were rationale/function relations (e. g., reasons for acts and feelings of persons either in the news or connected to the issue, and reasons for the participant's own feelings and acts), followed by cause-effect relations (including such things as the causes of BSE, or the effects of agriculture policies), and sequence relations (Table 5). Differences between mean use of cause-effect and rationale, as well as between rationale and sequence were significant in a paired samples t-test ($p = .031$, and $.001$ respectively, at $\alpha = .05$ two-tailed), but the difference in means between cause-effect and sequence was not ($p = .240$)

Macro-integration

Although viewers may refer to many different actors, attributes, causes and consequences or other elements, the elements in an interpretation may be related to many or only few different social domains, thus connecting an issue to a few or many different other social spheres. For instance, when interpreting an item on agricultural politics, one may refer to elements in only two domains, the most evident for this news item are agriculture (some examples of elements from our participants are: farmers are all out of money; they should test cattle much earlier; cows don't walk around in meadows like that any more), and politics (e. g., she's a member of the Green party; are they going to decide this in parliament?). However, a viewer may interpret the news in reference to other domains, and/or include more than just one or two domains. Examples from our study include economy (consumption, exporting, concerns about money); health (if you eat meat you're going to get fat and get cancer); culture (the French always want to have it their way); media (this is a strange camera angle); and private world (I recently discussed this with a friend of mine).

Participants used an average of almost seven domains in the interpretation of the BSE news item (*Min.* = 3, *Max.* = 10, Table 4). The fact that viewers related what they saw in the news to so many different social spheres seems quite remarkable when one considers that this news item was less than three minutes long. In contrast, in a panel study in which people were asked to mention similar ‘themes’ from the news they had consumed in a certain time period, they were not able to produce very many at all (Graber, 1984). Again, there were differences between viewers in the amount of domains to which they related the news item (*SD* = 1.80; Table 4). In other words, some viewers’ interpretations were more macro-integrated than others. The variation in differences in macro-integration was smaller than was the case for micro-integration of course, as the maximum number of possible domains was only seventeen, differences between the participants were expected to be smaller than differences in micro-integration, as the amount of relations that participants could incorporate in their interpretations was – theoretically – unlimited.

The three most frequently used domains were politics, agriculture, and private world (Table 6).⁵ The domains politics and agriculture were not unexpected in the interpretation of a news item on a parliamentary discussion on an agricultural disaster, which prominently featured politicians as well as agricultural issues, farmers, and images of cattle and farms. Furthermore, similarities in domain use between viewers is likely because most normally socialized members of a culture can be expected to share at least some (important) interpretations of the news (Findahl, 1998). In addition to the ‘Top three’ domains, this item was also interpreted in terms of ‘media’ (mostly news media-related), culture (here: cultural relations and differences between countries that import or export meat), and health (hazards of contaminated meat). Four participants have directed part of their interpretation towards the viewing context, including the experiment in which they took part. Domains such as culture, economy, and crime seemed more unanticipated a priori; although fleeting references to some of these domains were made in the news item, the ‘gist’ of the item is very strongly directed to the political and the agricultural and – although somewhat more implicitly – to health issues. At least, viewers do not limit their interpretations to one or two of the most central domains in order to grasp only the most ‘important’ parts of the message (cf. Graber, 1984). More surprising may be that one viewer did not interpret the item in terms of agriculture and another did not see the item in terms of politics at all!

Table 6. Number of participants that use a domain at least once (item BSE, *N* = 19).

	<i>Politics</i>	<i>Media</i>	<i>Agriculture</i>	<i>Economy</i>	<i>Crime</i>	<i>Health</i>	<i>Culture</i>	<i>Private</i>	<i>Context</i>	<i>Other</i>
<i>N</i>	18	14	18	5	5	11	12	18	4	13
<i>%</i>	94.7	73.7	94.7	26.3	26.3	57.9	63.2	94.7	21.1	68.4

Summarized, according to our viewers, this news item was mainly about what we may call, from an 'objective observer's point of view', the central themes of the item – politics and agriculture – and about the viewer him or herself – what this news has to do with the viewer's private life. In addition, participants frequently used other domains, seemingly more peripheral to the intended message of the item.

Differences between viewers

We used the average scores in each category as criterion to divide participants into categories of either high or low micro and macro-integration. This yielded three interpretive integration profiles (Table 7; Fisher's exact test is significant at $\alpha = .05$). The two largest groups were participants who produced interpretations either high or low on both aspects of integration. So, most participants who used many relations to connect individual elements, also used many domains, and participants who used few relations, were most likely to use few domains as well. These two profiles can be called 'integrated' and 'fragmented' respectively. However, a third profile was also evident; interpretations that contain few relations between specific elements, but simultaneously covering many different domains. Some viewers apparently were inclined to connect the news item to many different domains in society, but did not have much consideration for causal, rationale, or temporal aspects of issues. This also suggests that micro and macro-integration are two separate dimensions of interpretation.

Table 7. A typology of interpretive integration: Number of participants per subgroup (item BSE).

		<i>Micro-integration</i>		
		Low	High	
<i>Macro-integration</i>	Low	7	–	7
	High	4	8	12
		11	8	<i>N</i> = 19

Comparison of differentiation scores of the same research group from the pilot study on differentiation (Schaap et al., 2005) with integration scores from this analysis revealed that differentiation and integration were related empirically, although the two integration scores showed slightly weaker correlations (Table 8). Thus, highly differentiated interpretations were very likely also highly integrated. This also implies that the four indicators of interpretive complexity refer to measurements of related empirical phenomena. In other words, it provides indications for construct validity.

Table 8. Correlations between 4 dimensions of interpretive complexity.

	Elements	Range	Micro-integration	Macro-integration
Elements	–	.98**	.85**	.84**
Range		–	.81**	.77**
Micro-integration			–	.70**
Macro-integration				–

Note: ** Correlation is significant at $\alpha = .01$ (2-tailed, Pearson's r).

Differences within viewers

As said, viewers' knowledge and motivations towards the news supposedly greatly affect news reception. Knowledge and motivations are partly specific to knowledge domains; one does not have much knowledge and motivation in general, rather one has knowledge and motivation in regard to specific subjects (Schaap et al., 2005). Therefore, we expected that the interpretation of different news items would not only vary between different viewers, but also within each viewer, according to differences in knowledge and motivation towards each different news item. In other words, based on this theoretical assumption, our measurement instrument should be able to discriminate not only between interpretations of different viewers, but also between interpretations of the same viewer of different news item. To test this, we selected two participants whose protocols on face value seemed to be located on extreme sides of the simple-complex dimension in terms of overall interpretive complexity, and compared their interpretive integration scores on five news items of about the same length (ranging 2:24 to 2:54). Corresponding to participants 1 and 14 in Table 4, in the following, these participants are called participant A and B, respectively.

Table 9. Integration of the interpretation of five news items by two participants.

<i>News Item and length</i>	<i>No. of 'breaks'</i>	Participant A		Participant B	
		<i>Micro-integration</i>	<i>Macro-integration</i>	<i>Micro-integration</i>	<i>Macro-integration</i>
2. 2:54	10	14	8	3	4
3. 2:36	8	19	9	5	3
4. 2:30	8	20	9	4	2
5. 2:42	10	9	10	–	4
6. 2:24	9	6	7	–	2
<i>N</i>		68	42	12	15
<i>M</i>		13.6	8.6	2.4	3
<i>SD</i>		6.11	1.14	2.30	1.00

There were indeed differences between the two exemplar viewers in both micro and macro-integration; participant A's interpretation was noticeably more integrated than participant B's. The average amount of relations used by participant A was about 5.5 times, and the amount of domains almost 3 times as large as the amount used by participant B. Comparing the scores for each item, it seems that the level of integration was fairly constant within viewers; participant A's interpretation was *always* more integrated than participant B's. This may be explained by differences in structural personal characteristics such as educational level; in this instance participant A had a higher educational level than participant B (cf. Luskin, 1990). As could be expected, each item had some specific domains that were used exclusively or more extensively in the interpretation of that particular item. For instance a 'war' domain was used by many viewers in the interpretation of two items, one on the Israeli-Palestine conflict, and the other on an exhibition regarding Dutch-German relations. A 'health' domain was prominent in interpretations of a news item on euthanasia. Other domains seemed to be referred to with less regard to the specific news content, such as 'media' and 'private world'.

However, there were also differences between interpretations of different news items within the participants. Some news items for one particular viewer evoked more integrated interpretations than other items (but not necessarily the same items for different viewers). Some items are interpreted much more in terms of causal, logical, and/or temporal relations than other items by the same viewer. Furthermore, although within a smaller range, the same viewer may relate some news items to more social spheres than other news items. These differences within viewers may be related to more dynamic viewer characteristics, for instance motivational factors such as interest, involvement, psychological distance, and prior knowledge (Berry, 1988; Findahl & Höjjer, 1985; Giegler & Ruhrmann, 1990; Graber, 1984; Luskin, 1990; Price & Zaller, 1993; Woodall et al., 1983). From the difference in use of relations and domains between the items 4 and 6 in the interpretation of participant A for instance, we may hypothesize that this participant's possessed considerably more knowledge and/or was more interested in news item 4 than news item 6. We conclude that, although within-viewer differences were on occasion subtle, the instrument was able to differentiate between both interpretations of different viewers, and interpretations of different news items by the same viewer.

Conclusions and discussion

Ultimately, the current project was conducted to contribute to understanding of television news effects. Goal of this study was to devise a systematic way of studying television news interpretations by means of analyzing structural

properties of interpretations (i.e., the elements, types of elements, relations and domains). Whereas Schaap et al., 2005 concentrated on measuring the first aspect of complexity, interpretive differentiation, here the focus was on a measurement for interpretive integration.

Results indicate that we are able to measure interpretations and classify them on the basis of these structural components in both a valid and reliable manner. First, reliability of the coding of interpretive integration in verbal protocols was satisfactory. Second, we were able to differentiate between interpretations made by different viewers, and between interpretations of different news items by the same viewers. The findings were in line with theories on news processing and cognitive complexity, which hold that differential interpretations are based in differences in knowledge structures and motivations. Because knowledge and motivations differ both between viewers and within viewers according to different subject matter, interpretations should differ between viewers, within viewers, and between subject matter. On the other hand, structural viewer characteristics such as sex, age, and educational level may limit variation for interpretations by the same individual. For instance, because of low interest in a certain news issue, one individual's interpretation may be less complex than the same individual's interpretation of another issue. At the same time, his/her high level of education may provide skills that keep each interpretation of this individual relatively stable in terms of complexity. Finally, high correlations between all four indicators of interpretive complexity indicate that they refer to four dimensions of the same concept. All these findings provide indications for the validity of the instrument.

Evidently, both the method and the current study have limitations. First and foremost, the sample does not allow for definitive conclusions, neither in regard to the results, nor to the validity of the method. Second, although we made efforts to ensure that the role of researcher's interpretations be as small as possible, some level of context sensitivity, and therefore, subjective choices in the classifying of textual elements from the participant's protocols was still required. For instance, when classifying an element into a domain, a coder must define whether a person that is mentioned by a participant is a politician, a media-person, a farmer, etc. These kinds of interpretive actions are inevitable. However, as our reliability scores indicate, this does not seem to have affected the quality of the coding very much. One last reservation may be that we have considered elements that convey relations 'elements of a special kind'; in the interpretive complexity scores they contribute to both the differentiation of an interpretation (as they are *elements*) and to the integration (as they are *connective* elements). This may be up to debate, as it means that they are counted in the score of both differentiation and integration for each viewer.

In conclusion, we believe we have a method that is capable of producing results that are of interest for understanding the effect of television news. For

example, our findings on the use of relations in the interpretation illustrate this. Researchers have claimed that the news does not induce the making of connections, as the average news item does not contain many causal relations, etc. As a result viewers do not make many connections, and interpret the news in terms of a relatively small amount of 'themes'. This results in viewers having a limited understanding and recollection of for instance causes of events presented in the news, and that they seem to concentrate only on the most important dimensions of news items (cf. Findahl & Höijer, 1985; Graber, 1984). Yet, our study paints a somewhat different picture; it seems that viewers do make causal, logical or temporal connections while watching the news, and use a fair amount of different domains, although they may not always concur with those expected by 'objective observers'. In other words, whereas findings from other research indicate that viewers do not seem to recall precise facts of news items, from our study we conclude that this is not per definition caused by a lack of active reception behavior. Viewers do seem to actively do something with information in the news at the moment they watch the news.

Notes

1. The research group consisted of ten women and nine men. Age ranged from 20 to 64 years ($M = 38$ years). Twelve participants had achieved a low educational level (i. e., any degree up to and including higher vocational education) and seven participants had attained a high education (bachelor's degree or higher).
2. See Chapter 5: Means-end relations, location-for-action relations, spatial were incorporated into other categories, or deleted altogether. The categories rationale and function were combined into one category.
3. We did this by continually posing 'structural questions' to each element: 'What kind of element is this?' Whenever we had classified an element (this is a media-actor; domain media) we proceeded by repeating the question associated with the domain in which an element was classified: This was a media-actor, are there any more media-actors? Are there also media-acts? Are there also media-objects?, etc. Using the content of an element as basis, we formed specific categories of elements in each general category provided by our prototype coding scheme. For instance, George W. Bush is not only 'just' an actor, he is a specific kind of actor; he is a politician, therefore we have a clue to the existence of a domain involving politicians.
4. The 16 actual domains were assessed based on the elements used in the interpretation of the entire news program, whereas our analysis focused on the interpretation of only one news item. Of course, not all domains were used in the interpretation of this particular item.
5. This analysis shows whether or not a viewer used a domain; it does not show the intensity with which a domain was used, if a large or small part of his/her interpretation was dedicated to a particular domain (e. g., whether a viewer used 5 or 50 elements in that domain). It should be noted that there can be large differences between interpretations regarding intensity.

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Chapter 7

The complexity of television news interpretation: Main study

Gabi Schaap

Abstract

In this chapter, previous work on conceptualizing interpretation, and developing and testing a method for analyzing interpretive complexity, is put to use in a small-scale empirical study (N = 60). The study examines whether identical news content is interpreted uniformly or diverse by viewers with different characteristics, especially knowledge and motivations. To test this, a quasi-experimental design was employed in which viewers all watched the same three news items. Verbalized thoughts were analyzed for size, use of elements and connections, and complexity of interpretations. Results indicate that interpretations differ greatly regarding all three attributes. Interpretations are more diverse in terms of specificity and micro-integration than heterogeneity and macro-integration. High interpretive complexity is associated with high knowledge and motivation, both of general and issue-specific nature. Furthermore, degree of interpretive complexity is also related to subject matter.

Background and research objective

In Chapters 2 to 4 we outlined the research problem of this project; the study of news interpretation. In this chapter, we briefly recap a number of key arguments before presenting design, methods, and findings of the project's main study. In this study, the concept and method in the previous chapters are used to investigate differences in interpretations of television news items.

Our starting point was an action theoretical frame of reference for the study of news effects (Renckstorf & Wester, 2001). Most people most of the time have no direct experience with the majority of public issues and events. Hence, news media are the prime channel through which citizens learn about such matters. Yet, that does not make news content a direct cause of audience knowledge, opinions and attitudes. Instead, the audience must first interpret the news. Each individual recipient constructs a representation, a meaningful picture of events and issues

from a news message (cf. Chapter 3). It is this subjective perception of reality and not some objective content or form that is the origin of audience members' attitudes and actions. Thus, interpretation can be seen as a mediating step between exposure to a news message and its eventual consequences. The subjective nature of interpretations implies they are not completely uniform across different audience members. Understanding the different ways the audience constructs meaningful interpretations from the news is therefore vital to understanding the differential 'effects' of news. The present study's basic assumption is that recipients' relevance structures, their knowledge and motivations in relation to a news message play a key role in this interpretive process (cf. Chapter 2).

Unfortunately, conceptualizing news interpretation has been problematic, and – perhaps as a result of this – empirical studies on how people construct a meaningful picture of television news, and the personal and social factors involved in this, have been scarce. Moreover, research tends to underestimate the complex reconstructive and subjective nature of news reception and its consequential pluriformity (cf. Findahl, 1997; Giegler & Ruhrmann, 1990; Graber, 1984; Gunter, 2001; Höjjer, 1989, 1998; Renckstorf & Wester, 2001; Robinson & Davis, 1990; Roskos-Ewoldson, 2004; Shapiro & Lang, 1991; Woodall, Davison & Sahin, 1983). Consequently, there is still little understanding in media studies on the complex path between exposure to news and the construction of images of reality, opinions, and actions. This study does not concern the question whether and to what degree viewers interpret the news 'correctly', or how form and content of the news affect information transfer or interpretation; rather, the study is focused on describing differences and similarities in television news interpretations, and relating them to differences and similarities in the audience.

Thus, one problem with studying news interpretation is how to study it. In the previous chapters, we introduced the concept of *interpretive complexity* as a means of systematically studying news interpretations. According to our logic, there are two potential consequences of interpretive complexity differences. First, more complex interpretations may enable easier and more elaborate recollection of details from the news, as well as a deeper understanding. Second, the fact that people have an elaborate and cohesive interpretation of an issue may affect their longer-term attitudes and opinions (Chapters 2 and 3). Therefore, it is important to investigate the differential levels of complexity with which audiences interpret news reports, and which audience members are inclined to complex or simple interpreting.

Theory and research questions

In Chapter 3 we proposed that interpretations are structures that viewers impose in their minds on a news program. By structures we mean that interpreta-

tions of a news item are (re)constructions of the item made by the viewer that consist of interconnected elements. We focus on one aspect of these structures; the *degree* of use of elements and connections between elements. We chose this particular focus because it provides a means to study interpretation differences systematically. The assumption is that differences in the degree to which interpretations are highly structured (i. e., contain interconnected elements) reflect aspects of differences in meanings. Thus, assessing the degree of structuredness can tell much about different aspects of which interpretations consist, and makes possible quantitative comparisons between interpretations (how much one interpretation differs from another), without needing to assess exact – subjective – meanings contained in them.

Adopting notions from cognitive complexity theories (cf. Schroder, Driver & Streufert, 1967; Luskin, 1990; Zajonc, 1968); we have called the degree to which interpretations contain different elements and connections *interpretive complexity*. Simple interpretations contain a narrow range of information, representing a limited amount of ideas that are employed by an individual to describe an issue, whereas complex interpretations contain many information elements, suggesting a broad range of multiple alternative interpretations of the same issue. Furthermore, simple interpretations have fewer connections between information than complex interpretations, which implies that in highly complex interpretations elements are used in greater interaction with each other so that elements contribute to some cohesive whole, rather than being isolated, disconnected facts. Thus, highly complex interpretations not only are highly *differentiated* (i. e., differentiate between various elements of an issue), but also more *integrated* (i. e., integrate elements into a more cohesive whole).

In our conceptualization, four basic structural components of interpretations relate to the use of elements and the connections between them: Specificity, heterogeneity, micro-integration, and macro-integration (cf. Fig. 1). Differentiation, or elaborateness of interpretations, is reflected in the first two components. First, the most basic and most concrete components of interpretations are their specific individual elements, representative of the specificity of interpretations. Second, on a slightly higher level of abstraction are the types of elements these elements represent, signifying the heterogeneity of interpretations. On a still higher abstraction level, relations among differential elements create cohesiveness, or integration in interpretations. Integration also has two aspects: Micro-integration and macro-integration. On a micro level, people make connections if they perceive causal, logical or temporal relations between two individual elements. On a macro level, interpretations can contain evidence of the grouping of multiple elements in broad socio-cultural categories, called domains. Summarized, interpretive complexity encompasses four structural components of interpretations: Specificity, heterogeneity, micro-integration, and macro-integration. Figure 1 clarifies the various different theoretical con-

cepts regarding interpretive complexity and their relation to the empirical indicators of these concepts introduced in the method section.

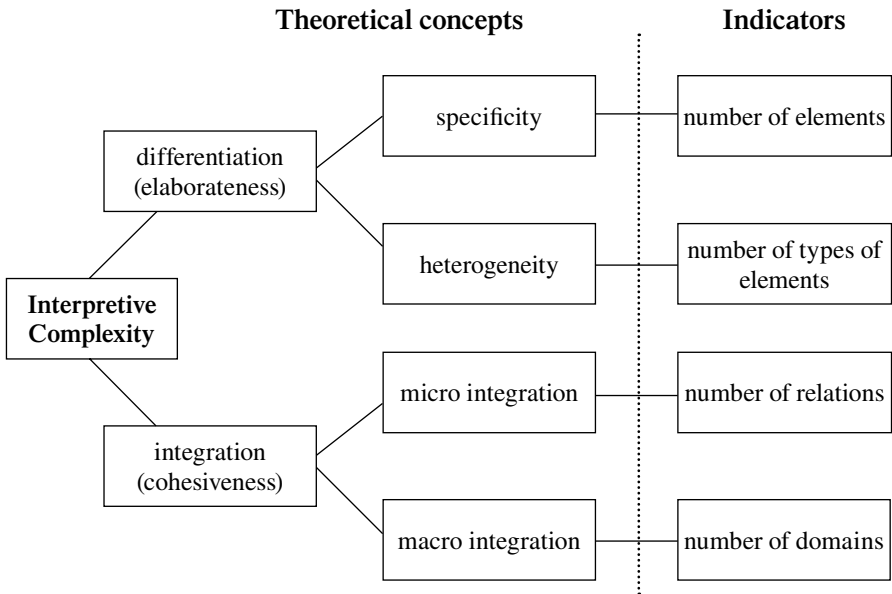


Figure 1. Interpretive complexity: Theoretical concepts and empirical indicators.

Research questions: Antecedents of interpretive complexity

The importance of studying interpretation differences lies in the assumption that at bottom, differences in knowledge gain from or understanding of the news, as well as in attitudes and behavior, reflect differences in news interpretation. According to the action theoretical approach taken in this project, interpreting the news in turn is directed by a person's relevance structure; that is, the combination of personal and shared knowledge and motivations (Chapter 2; Renckstorf & Wester, 2001). Action theory holds that different people, with different socio-psychological biographies have different relevance structures; we expect differences in interpretive complexity to reflect these differences in recipients' knowledge and motivations. Conversely, similarities in interpretations may be due to similarities between viewers. Even very dissimilar recipients will usually share some aspects of their interpretation of a news message because as members of the same culture they share a language, history, values, including for instance what a 'proper' news program should and should not contain (cf. Lemish, 2001). More so, without this shared knowledge any attempt at communication would ultimately be futile (Schulz, 1982). In addition,

form and content of a television news item presumably provide some boundaries to the interpretive freedom (Höijer, 1990).

Interpretation of the news is dependent on both person-specific and issue-specific factors. Person-specific factors are knowledge and motivational traits that are relatively stable with regard to situation; they only change over a relatively long period of time. Issue-specific knowledge and motivation are more flexible; they change according to situation, in our case different issues reported in the news. In each different situation, partly different knowledge and motivations are important for interpreting that situation.

Interpretation is person-specific in the sense that it depends on the relevance structure of the person, the combination of a person's knowledge and motivations. In fact, most every type of experience one has in one's lifetime, including gender and age-related experiences, education, and occupation have affected knowledge and motivations. The amount and kind of knowledge and motivation determines what and to what degree of intensity knowledge is used in the reception of news. A recipient actively organizes new information (e. g., from the news) by assimilating it to already held individual and social knowledge. The higher the level of knowledge, and the better the organization of this knowledge in cognitive structures, the better recipients are able to retrieve individual knowledge elements and put them to use in interpretation, and the better they will be able to connect different knowledge elements to one another. Thus, viewers with much and well organized knowledge (i. e., 'cognitive complex' viewers) should be able to produce interpretations of the news that 1. contain much knowledge elements, 2. of highly heterogeneous nature, 3. many of which are connected through causal, logical, or temporal relations, and 4. which are related to many different social domains. Motivations are the motor behind this use of knowledge; a person will only make extensive use of available knowledge when he or she perceives doing so is relevant for acquiring certain goals.

Summarized, highly knowledgeable and highly motivated people will make more intense use of their knowledge, resulting in a more differentiated and integrated interpretation.

This study starts from two expectations (see Chapter 3): First, recipients who differ in terms of relevance structure will have interpretation structures that consist of *different* elements and relations. Second, the relevance structure to a large degree determines the *degree* to which elements and relations are used in interpretations as well (i. e., their interpretive complexity); the same news report may be interpreted more or less elaborate and cohesive by different recipients.

However, an individual person's knowledge and motivations are always partly issue-specific as well. A recipient does not have much knowledge and is not highly motivated in general, but has much knowledge on some issues and less on others, and he or she perceives some issues as interesting or relevant – in some contexts – and others less so. Thus, subject matter is crucial; from

the perspective of the recipient not ‘the news’ but ‘this specific issue’ matters. Therefore, we expect that interpretations will vary according to both person-specific and issue-specific differences in knowledge and motivation.

In sum, a number of person-specific characteristics determine how people interpret the news. Some knowledge and motivations that are not specific to a certain issue may affect how people interpret the news. But in addition, knowledge and motivations that are specific to an issue will certainly influence interpretations. This study’s main objective is to explore whether uniform newscasts elicit uniform interpretations or whether there are noticeable differences, and to investigate whether variations are attributable to differences in relevance structure in terms of knowledge and motivations. To achieve this goal the study does two things: First, describe differences and similarities in interpretive complexity, and second, analyze relations between interpretive complexity to viewer’s knowledge and motivations, as well as other characteristics. Our research questions address, first, differences between interpretations in terms of size, kinds of components and complexity, and second, the relationship between differences in complexity and viewer characteristics and subject matter:

- Research Question 1: To what degree do interpretations differ in terms of size?
- Research Question 2: What are the differences between interpretations in terms of the nature of components used? Are there differences in the components used in interpretations of different subject matter?
- Research Question 3: What are the differences between interpretations in terms of interpretive complexity? Are there differences in interpretive complexity between interpretations of different subject matter?
- Research Question 4: Are differences in interpretive complexity related to viewer characteristics? Are there differences in these relations between different subject matter?

Based on the theoretical model in Chapter 2, and additional research on news use, information processing and cognitive complexity, we expect that a number of audience characteristics are related to interpretive complexity. Listed below, in theory all of these factors have a direct or indirect relation to relevance structure. Social structural-characteristics, television news use, and news use motives can be regarded as general, person-specific traits, whereas issue-knowledge, information interest, and issue-involvement are more issue-specific characteristics.

Social-structural characteristics. A number of social-structural characteristics may influence how viewers make sense of the news too. Most, if not all of

these demographic factors carry in them both cognitive and motivational aspects (Luskin, 1990; Sotirovic, 2001). The level of one's education and profession for instance, is related to one's cognitive skills and knowledge (including cognitive complexity), but through socialization higher educated people and people in high prestige occupations are also likely to be more motivated to process certain valued information. Education and profession have been found to be positively related to processing skills, and to news recall and understanding (Findahl & Höijer, 1981; Graber, 1984; Luskin, 1990; Robinson & Davis, 1986). Gender and age are also related to recall and understanding, presumably through education, relevance, and familiarity with news media content. Men and older news consumers have been found to remember and understand significantly more of the news than women and younger audience members (Gunter et al., 1984; Hendriks Vettehen et al., 1996; Housel, 1984; Robinson & Levy, 1986; Wenner, 1982). Thus, we may find that men more than women, older viewers more than younger ones, viewers from high educational and professional strata more than viewers from lower strata, interpret the news with use of more elements, types of elements, relations, and domains.

Television news use. The more people use news media, the higher their knowledge level on public affairs issues (Bonfadelli, 1987; Tichenor, Donohue & Olien, 1970). As a result, people who use television news on a frequent basis may use more elements, types of elements, relations, and domains when interpreting certain news items.

News use motives. Audience motives for media use affect the degree of activity with which media content is processed. Recipients who watch the news for cognitive reasons are more active in their news processing than those with primarily diversion motives. Hence, the former have a better recall and a more elaborate interpretation of the news (Beaudoin & Thorson, 2004; Brosius, 1989; Eveland, Shah & Kwak, 2003; Garramone, 1985; Levy & Windahl, 1983; Peeters, 1991). Therefore, cognitive motives for processing may also lead to more differentiated and integrated interpretations than entertainment or leisure motives.

Issue-knowledge. Knowledge of an issue in the news greatly affects reception; knowledge levels are related to the level of reception, that is, whether and at what level viewers connect the news to knowledge in their long-term memory. This in turn determines the level of recall and understanding (cf. Findahl & Höijer, 1985; Giegler & Ruhrmann, 1990; Graber, 1984). Furthermore, viewers with greater knowledge of an issue have more different and more abstract thoughts and a better understanding of relations between subthemes in programs (Höijer, 1989). Correspondingly, we expect viewers with much issue-relevant knowledge to have a more elaborate and cohesive interpretation of a news item dealing with that issue (but not necessarily others).

Information interest. If viewers are interested in the issue in a news item or in similar issues, they process the news more actively (Berry, 1988; Graber, 1984; Luskin, 1990; Price & Zaller, 1993; Woodall et al., 1983). Hence, interpretation of a news item should be more comprehensive and cohesive for viewers who are highly interested in the subject matter than in viewers who are less interested. Thus, we expect to find more elements, types of elements, relations and domains in interpretations of highly interested viewers.

Issue-involvement. The subjective connection a viewer perceives between him or herself and an issue in the news is a psychological state sometimes called issue-involvement. It refers to, first, the perceived general importance of an issue, and second, to its personal relevance. People who are more involved with an issue notice more, and use their knowledge more intensively in thinking about the issue and evaluating the true merits of an issue because, among other things, its relevance motivates them to form a well-substantiated opinion (Barki & Hartwick, 1989; Celsi & Olson, 1998; Levy & Windahl, 1984; Petty, Cacioppo & Schumann, 1983).¹ Again, as a consequence of this higher level of processing these viewers remember and understand more of the news, and their reception of the news contains more importations from personal knowledge (Brosius & Berry, 1990; Celsi & Olson, 1988; Findahl & Højjer, 1985; Giegler & Ruhrmann, 1990; Graber, 1984; Shapiro, 1994). Likewise, we expect viewers to interpret a news item with the use of more elements, types of elements, relations, and domains, if they are highly involved with the issue portrayed in that item.

Method

Research objective and design

The main objective of this study is to explore news interpretation to describe its variations. In order to assess news interpretations, a design was chosen in which participants could verbalize their thoughts at the same time they were watching the news (cf. Chapter 4). Accordingly, regular news items of the main news program in The Netherlands; the *NOS 8- uur journaal* (National Broadcast Foundation 8 O'clock news) were edited in such a way that participants were able to communicate their interpretations in between natural transitions in the items. Confronting participants of various backgrounds with the same news items on a variety of subject matter enabled us to assess differences and similarities in interpretations. In line with the theoretical expectations we aimed to realize differences and similarities in knowledge, interest, and involvement regarding the news issues through the purposeful selection of groups of participants. Therefore, in addition to the assessment of interpretation through the verbal-

ization method, participant characteristics pertaining to social background and relevance structure were assessed via questionnaires. The procedure consisted of three parts. In the first and third part of the procedure all participants completed two written questionnaires. In between, the participants watched the test program and verbalized their thoughts. Duration of the entire procedure, including the news program, was between 45 and 60 minutes. The different stages of the study's data production section are summarized in chronological order in Figure 2.

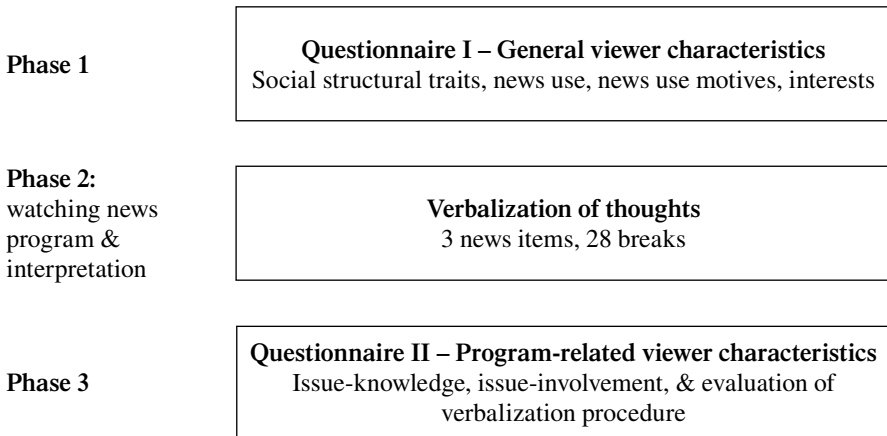


Figure 2. Research design: Data gathering.

Below, selection of participants, composition of the news program, questionnaires and thought-listing procedure, and coding procedure are described in detail.

Sampling

The verbalization method used to assess interpretations is a time intensive data gathering procedure, even more so in the analysis phase. Consequently, the number of participants we were able to include in our study was limited. However, we wished to include enough participants to be able to assess variations in quantitative terms. Therefore, the 60 participants in this study were included on analytic grounds. First, we aimed at getting at including as diverse a group of participants regarding social structural characteristics as possible. In addition, as an important focus is the expected relation between viewer knowledge and motivation on the one hand and interpretive complexity on the other, the composition of the research group was chosen with the aim of including participants of whom a high level of knowledge, interest and involvement was to be

expected with one or more of three chosen news items (on child abuse, teacher shortages, and agriculture in Germany, see Table 2). Regarding the item on child abuse, we approached students in child development studies or related studies, as well as people with (younger) children, together about ten people. In regard to the teacher shortage item, teachers were targeted (people with young children in school were also thought to fit this item), also together some ten participants. For the item on agriculture, students in environmental sciences and customers of organic food stores were targeted. Additionally, the aim was to have an equal distribution of knowledgeable, interested, and involved participants in regard to gender, age, education, and occupational status. Table 1 gives an overview of the participants in the research group resulting from these efforts. Overall, the amount of variation in most of the relevant characteristics was deemed sufficient for our goals.

Table 1. Participant characteristics (N = 60)

		Frequencies	Percent
Social-structural characteristics			
Sex			
	Female	33	55.0
	Male	27	45.0
Age (years)			
	Under 30	29	48.3
	30–49	18	30.0
	49+	13	21.7
Education			
	LO/LBO	3	5.0
	MAVO/MBO	15	25.0
	HAVO/VWO	10	16.7
	HBO	15	25.0
	WO	13	21.7
	WO+	4	6.7
Occupational Prestige			
	Unemployed	6	10.0
	Lowest	9	15.0
	Low	9	15.0
	Middle	12	20.0
	High	18	30.0
	Highest	5	8.3
	Missing	1	1.7

	Frequencies	Percent
Media use		
Watching TV news (frequency per week)		
1 or 2	8	13.3
3 or 4	11	18.3
5 or 6	15	25.0
7 or 8	14	23.3
9 and more	12	20.0
Watching current affairs programs (frequency per week)		
0	3	5.0
1 or 2	21	35.0
3 or 4	20	33.3
5 or 6	9	15.0
7 or 8	3	5.0
9 and more	4	6.7
Knowledge and relevance		
General interest		
Low	29	48.3
High	31	51.7
Interest: Agriculture/ecology		
Low	41	68.3
High	19	31.7
Interest: Care/Welfare		
Low	20	33.3
High	40	67.7
Interest: schools, doctors care		
Low	24	40.0
High	36	60.0
Watching TV news for cognitive use		
High	53	88.3
Low	7	11.7
Watching TV news for entertainment		
High	14	23.3
Low	46	76.7
Watching selectively and attentively		
High	29	48.3
Low	31	51.7

	Frequencies	Percent
Knowledge on child abuse		
Very low	8	13.3
low	15	25.0
Neutral	13	21.7
High	23	38.3
Very high	1	1.7
Knowledge on teacher shortage		
Very low	1	1.7
low	12	20.0
Neutral	18	30.0
High	21	35.0
Very high	8	13.3
Knowledge on agriculture		
Very low	22	36.7
low	10	16.7
Neutral	12	20.0
High	13	21.7
Very high	3	5.0
Personal relevance: child abuse		
Low	19	31.7
High	39	65.0
Missing	2	3.3
Personal relevance: teacher shortage		
Low	24	40.0
High	36	60.0
Involvement: agricultural reforms		
Low	28	46.7
High	32	53.3
General importance: child abuse		
Low	14	23.3
High	44	73.3
Missing	2	3.3
General importance: teacher shortage		
Low	16	26.7
High	44	73.3

Measurement and registration

To capture news interpretations, participants were invited individually to watch a compiled regular newscast. The test program was a specially edited video recording of the number one national news program in The Netherlands, the *NOS 8-uur journaal* (Table 2). Running at a length of 12:05 minutes, the program contained five news items. The first item, intended to 'ease' the participant into the news viewing, was left unedited to give the sense of a normal viewing. In the remaining four items, a pause and black screen were inserted at roughly equal time intervals ($M = 15.5$ seconds, $Min. = 7$, $Max. = 29$ sec.) to allow the participant to verbalize thoughts. Each break was inserted after a natural break in the test program – such as a new scene or theme, a different shot, a new interviewee, or a new statement – so as not to disrupt the natural flow of a normal news program too much. The items contained nine or ten breaks each. The second item was used for practicing the verbalization task, the next three items (named 'Child abuse', 'Teacher shortage', and 'Agriculture' in this text) were used to register and analyze news interpretation.

A test program was constructed resembling a regular bulletin of the *NOS 8-uur journaal* as much as possible. We used existent news items, containing a regular presenter and reporters, and so on. A regular intro and outro, as well as starting with a normal, unedited, major news item served to further heighten the sense of realism. At twelve minutes the program stood as slightly shorter than a normal newscast of about fifteen to twenty minutes so as not to ask too much of our participants in their verbalizing task. For the same reason the usual weather forecast at the end was omitted.

The three 'stimulus' items were selected with three goals in mind. First, items had to be on issues that appealed to some, but not necessarily all participants, so comparisons were possible between interpretations of different viewers with different knowledge and relevance regarding the news items. Furthermore, the items should concern issues relatively unaffected by sudden changes in current affairs that might occur during our observation period. Sudden 'breaking' news related to our news items during the period of study might have influenced an issue's salience, affecting how people interpreted a specific news item in our study. Finally, the items had to be roughly of the same length and number of 'breaks'.

Table 2. Contents of test program

Item	Description	Length (m:s)	No. of breaks
INTRO	Tune + voice-over	0:10	–
1 Israel	Violence and attacks in Israel	2:10	–
2 Communications technology fair	Fair of newest communication technologies	2:16	8

Item	Description	Length (m:s)	No. of breaks	
3	Child abuse	More child abuse than previously thought; anti-child abuse organization demands action	2:09	9
4	Teacher shortage	Newly recruited teachers do not receive adequate education	2:36	10
5	Agricultural reforms in Germany	Reforms into organic agriculture raise consumer expenses	2:30	9
6	OUTRO		0:14	
Total			12:05	

The first major objective of the analyses is to describe differences and similarities in the use of components in interpretations. Our goal here was not so much as pinpointing what aspects of a news program were reproduced and which were not, or if the program was successful in transferring a message, but instead describing differences and similarities between interpretations of a uniform news program. One way of describing how interpretations diverge from one another is to compare them to the news program. Therefore, we used descriptions of the three news items, so that diversions from the items may provide indications of how interpretations diverge from each other. In addition, the news content serves as background information for the reader, adding context to quotes from the thought protocols and the analyses. The descriptions of the news items provided below are constructed based on the researcher's taxation of what from the institutional, producer's point of view would be considered the content of the message. In Appendix A the complete transcripts are accompanied by descriptions of some of the most salient images in the items. As in the next section we start with a short look at the number of words in both program and interpretations, the number of words for each item is also provided. The three news items in total amounted to 1,227 words in written Dutch text, which is equal to 44 words per segment. Throughout this entire text the combination of the three test news items will be referred to as 'the news program'.

Test Item 1: Child abuse. A researcher estimates that the number of cases of child abuse is not 50,000, as thought by the government, but at least 80,000 per year, 80 of which result in death. He explains that new definitions and new methods have led him to this conclusion. Worried child and legal counselors have offered a plan of action to members of parliament. A spokesman of the group, called RAAK, maintains that violence taking place in the private sector is beyond the focus of attention, as opposed to violence in the public domain. Because children cannot raise their voices, RAAK has put together a pamphlet. According to the reporter (in voice over) RAAK blames the government for neglecting the problem. The spokesman says that more attention for child

abuse results in problems for the authorities, as there are capacity problems in child protection programs. This in turn results in children staying longer than necessary in families in which they are abused. RAAK demands more hotlines for children and a secretary for juvenile affairs. Pictures in this item consisted mostly of 'talking heads', some shots of groups of people, buildings, and playing children. For our study, the item was broken up into nine scenes, resulting in nine breaks for verbalization. The item's spoken text consisted of 367 words (in Dutch; 41 words per segment).

Test Item 2: Teacher shortage. Government policy to solve the shortage of high school teachers by recruiting 'zij-instromers' (i.e., people from other sectors of the labor force, such as corporate professionals) and 'herintreders' (retired teachers returning to their former profession) is turning out to be a failure. According to the society of school wardens, these potential teachers quit because of a lack of good tutorage. One aspiring teacher tells his story sitting in a classroom. His school's warden admits that their tutorage has been left wanting. The reporter (voice over) states that 3,500 people without any experience in education are in the same situation. According to a spokesman of the society of school wardens these people become demoralized and eventually quit. He thinks that asking retired teachers to offer their skills and experience as mentors for these new teachers might solve the problem. The secretary of education is reported to agree with this plan, but will not provide funding, which results in the item's closing statement; children of the young aspiring teacher's school will not be able to attend school coming Friday because their 'zij-instromer' is away studying. The images in this item were largely talking heads, and people and children in classrooms. This item contained ten breaks. Its text amounted to 441 words (44 per segment).

Test Item 3: Agriculture. A revolutionary German agricultural policy, revolving around environmentally friendly production and consumer protection, is evaluated one year after its introduction. It seems that consumers begin to experience its largely financial consequences. A reporter (voice over accompanied by images of a butcher's) says that with this particular butcher, people know where the meat comes from. As a result of the BSE-crisis, German consumers started buying less meat, and when they did, they bought it at butchers such as these, even though they are more expensive. A butcher explains that people had had enough of all the scandals and decided they only wanted this special kind of meat. This resulted in the previously conservative German policy to take a new turn, aiming for 20% organic production over time. Having a degree in economics, a lady farmer now owns a flock of highland cows that roam the pastures freely. She claims that while organic agriculture may be more expensive, consumers must undergo attitude change if they want a more natural produc-

tion of meat. Standing in a meadow, the reporter remarks that the success of this endeavor depends on politicians, farmers, and consumers alike. On screen in this item were a number of 'talking heads', meat in stores, cows on a farm and in meadows. The item contained 9 breaks and consisted of 449 words (44 words per segment).

Capturing of interpretations

To capture interpretations, a Thought-Listing Technique was applied (cf. Chapter 4). Every participant received the exact same verbatim instruction to watch a news program, and to say out loud, in the pauses inserted in the program, all thoughts that occurred during watching (Appendix B contains the instruction). During each break, the television screen would turn black, and the video playback would pause. When the participant had verbalized all thoughts, the video tape would resume. Research assistants were instructed to behave as unobtrusively as possible. This meant that during thought-listing the research assistant would take a seat behind the participant, and refrained from reacting to anything the participant said.

Participants were informed beforehand that the study would require them to watch a 'television program', and that the whole study would take a maximum of one hour of their time. They received a gift certificate for their participation. Measures were taken to make the participants feel comfortable and relaxed (e.g., they were served something to drink if they desired so), and were asked to watch the news as they would normally do at home. A little under 60 % of the participants said they had watched the program more concentrated than usual, whereas some 30 % claimed there was no difference with their normal viewing behavior, and a further 10 % indicated to have watched less concentrated than usual. 40 % of the participants said they had reported all thoughts they had while watching the news, in addition to 50 % who said they were unable to report a small part of their thoughts. Only one participant reported to have omitted a large portion of thoughts. In thinking-aloud literature it is accepted that it is unrealistic to expect that a person can verbalize all thoughts, for instance because some thoughts consist of 'flashes' or mere images which are harder to verbalize (cf. Höijer, 1989; Van Someren, Barnard & Sandberg, 1994). So although the procedure cannot claim absolute comprehensiveness, it does give information about people's spontaneous organizing of information to understand events. In this regard, the participants who claimed to have omitted a small portion from their verbalization were probably simply more realistic than those who claimed to have reported every single thought they had. There was no significant relationship between the evaluations of the thought-listing procedure and the amount of words or the 4 aspects of interpretation.

Questionnaires

To avoid interference of viewer characteristics assessment with the capturing of viewer interpretations, viewer characteristics were assessed in two phases (see Fig. 2). A first questionnaire consisted of questions regarding general viewer characteristics: Social-structural characteristics, television news use, and information interests.² This questionnaire was issued before watching the program under the assumption that the questions could have no influence on the interpretation of the program. Following items on socio-demographic features (sex, age, education, and occupation), participants were asked to indicate frequency of watching TV news, and motives for watching the news. Finally, respondents indicated their interest in information about 39 different issues.

After watching the program and verbalizing thoughts, participants filled out the second questionnaire, consisting of eight questions. This questionnaire comprised of four questions asking the respondents to evaluate the thought-listing procedure and their own performance. Subsequently, the questionnaire contained three sets of eight items – one set for each news item – to assess participants' involvement with the item's topic. Finally, participants rated their self-perceived knowledge level on each topic on a five-point scale. As these questions were all related to the program's subject matter, they were asked subsequent to watching the news. The questionnaires are in Appendix C.

Analysis

The coding system

The verbalizations were regarded as reported interpretations. These interpretations of the news program made overt, were coded for the four structural aspects defined earlier: *Specificity*, *heterogeneity*, *micro-integration*, and *macro-integration*. A coding system which used four analytical variables as indicators was developed in earlier studies (Chapters 5 and 6).

First, taped verbalizations were transcribed, resulting in 60 protocols of viewers' thoughts. In Chapters 5 and 6 we described in greater detail the procedure for measuring interpretive complexity, permitting this section be relatively brief here. Measurement took place in three steps: 1. construction of basic sentences, 2. coding of basic sentences, 3. omitting of double elements. First we broke up each protocol into 'basic sentences'. Each basic sentence represented only one statement loosely based on the structure 'object $x \rightarrow$ semantic relation \rightarrow subject y ' (cf. Kleinnijenhuis, Oegema, De Ridder & Ruigrok, 1998; Osgood, Sparta & Nunnally, 1956; Van Cuilenburg, Kleinnijenhuis & De Ridder, 1988).

Table 3. Summary of coding system.

		Types of elements	Specific elements
	<i>Simple elements</i>		
	1. inclusion	<i>Kinds and attributes of...: 1. actors, 2. goals/feelings, 3. acts/activities, and 4. events, 5. space, 6. time, and 7. objects</i>	e. g., politicians, political events (e. g., debates) attributes of political acts
	2. attribution		
Domain 1 (e. g., politics)	<i>Relational elements</i>		
	3. cause-effect	<i>Causes/effects of, Rationale and functions of, steps in...: 1. actors, 2. goals/feelings, 3. acts/activities, and 4. events, 6. space, 6. time, and 7. objects</i>	e. g., causes/effects of political acts, rationale behind feelings towards politics, steps in events in politics
	4. rationale and function		
	5. sequence		
Domain 2 (e. g., economy)	<i>Idem.</i>	<i>Idem.</i>	e. g., economic actors (e. g., enterprises, stores), attributes of economic objects, causes/effects of economic events, etc.

People use language to refer to a person, actions, objects, feelings, etc. These references in turn contain indicators for our four analytical variables: Elements, types of elements, relations, and domains (cf. Figure 1). Accordingly, in the second step, the basic sentences were coded for words or combinations of words referring to specific elements. Each specific element was then classified as belonging to a certain type of element, and belonging to a domain. A list of five categories of general elements was the basis for a coding scheme for the analysis of differentiation and integration of interpretations. Two general categories were types of elements that contained ‘simple references’ to either concrete specific actors, acts, objects, etc., or attributes of these, whereas three categories referred to more abstract complex elements expressing causal, logical, or temporal relations between concrete elements (see Table 3, cf. Chapter 5, and Chapter 6, the entire coding instrument is in Appendix D). In all, for each domain 35 types of elements were recognized (i. e., 5 categories \times 7 types of elements within these categories, see Table 3). Furthermore, each element was classified into one of 17 ‘social domains’ (Chapter 3 and 6). Each of these domains is composed of specific actors, acts, objects, etc. related to that domain in society; politicians and policy to the domain of politics, farmers and farm-

ing to the domain of agriculture, etc. (Table 4). Thus, one element found in a protocol, was classified as specific element, a type of element, and a domain.

For use in quantitative analyses of interpretive complexity, codes were converted into numerical scores. All individual elements in the interpretations contributed to the score of ‘specificity’ of that particular interpretation. All *types* of elements contributed to the ‘heterogeneity’ score (Chapter 5). In addition, if the element was one which referred to a relationship (cause-effect, rationale/function, or steps) it was also regarded as contributing to the score of ‘micro integration’ (Chapter 6). In other words, elements referring to a relationship were regarded as a special type of element, contributing both to differentiation (as they are individual elements) and to integration (as they are elements that connect other elements). Finally, each domain used in an interpretation was counted as contributing to the macro-integration score.

Table 4. Domains.

Domains	Elements in the domain
Politics & policy	<i>Kinds of actors, goals/ feelings, acts/activities, events, space & time</i> <i>Attributes of actors, goals/feelings, acts/activities, events, space & time</i> <i>Causes of actors, goals/ feelings, acts/activities, events, space & time</i> <i>Reason/functions of actors, goals/feelings, acts/ activities, events, space & time</i> <i>Steps in actors, goals/feelings, acts/activities, events, space & time, all related to politics</i>
Media	<i>Kinds of actors, goals/feelings, acts/activities, events, space & time</i> <i>Attributes of...</i> <i>Causes of...</i> <i>Reasons and functions of...</i> <i>Steps in..., related to media</i>
Agriculture	<i>Idem.</i>
Environment & Infrastructure	<i>Idem.</i>
Economy & Finance	<i>Idem.</i>
Crime & Justice	<i>Idem.</i>
Mental and Physical Health & Care	<i>Idem.</i>
Education	<i>Idem.</i>
Science	<i>Idem.</i>
Family	<i>Idem.</i>

Domains	Elements in the domain
Art	<i>Idem.</i>
Culture, Ethnicity & Religion, Philosophy	<i>Idem.</i>
Sports & Leisure	<i>Idem.</i>
War & Disasters	<i>Idem.</i>
Private world	<i>Idem.</i>
The experiment	<i>Idem.</i>
Other	<i>Idem.</i>

For use in the analyses of interpretive complexity, in the third and final step double codes were omitted from the scores. If an individual element was used more than once by the same participant in the interpretation of the same news item – if for instance a participant referred to the secretary of agriculture a number of times throughout the interpretation – the corresponding codes were omitted until just one remained. Thus, multiple references to the same individual element were counted as only one unique element in the definitive complexity scores.³

Viewer characteristics: Construction of variables

Viewer characteristics were measured to explore interpretation differences between different viewers. A number of variables were constructed from multiple item scores on the questionnaires using Principal Component Analysis.⁴ In all cases, an *Eigenvalue* of 1 was used as a criterion for accepting a component. Details of these analyses – component loadings, explained variance, reliability tests – can be found in the notes accompanying this text. All newly constructed variables were calculated as sum scores. All other variables were simple and one-dimensional; scores on each were equal to the scores filled in on the questionnaire.⁵

Information interest. Participants were asked to indicate to what extent they were interested in information about 39 issues. Sum scores of all 39 items constructed the variable ‘general interest’ (Cronbach’s $\alpha = .87$). In addition, we looked for more specific issue-related interests. Principal Component analysis produced ten components, related to ten issues of interest.⁶

Issue-involvement. In various disciplines, involvement is measured by having respondents indicate the extent to which they perceive a relation between themselves and an issue or media message. We used items from Zaichkowsky’s involvement scale (Zaichkowsky, 1985; Barki & Hartwick, 1994).⁷ Respondents indicated on eight five-point scale items the perceived personal relevance, im-

portance, value, etc. of the issues related to each of the three news items. For each of the three lists of items a separate Principal Component analysis was done. For the Child abuse and Teacher shortage news items, this resulted in two components, the first of which could be interpreted as personal relevance of an issue, and the second as a more general importance of an issue. These corroborate with the two dimensions of involvement found by others (Barki & Hartwick, 1994; Celsi & Olson, 1988). The analysis regarding the item Agriculture produced only one component, which was labeled 'involvement'.

News use motives. Motives for watching television news and viewing style were probed with 17 statements regarding television news use. We asked whether respondents planned their news watching, which reasons they had for watching, and their post-exposure behaviors such as interpersonal communication or thinking. Principal Component analysis yielded three ways of using television news: Watching for entertainment and social reasons, watching for cognitive reasons (thinking, getting information), and a news use pattern involving watching the news selectively and attentively (cf. Konig, Renckstorf & Wester, 2004).⁸

Reliability and validity

Two coders were trained in working with the coding scheme. To establish intercoder reliability, both coded every tenth protocol, 10% of the total, which amounted to 556 codes assigned in this sample. On face value, this sample seemed a representative cross-section of the entire batch of protocols, also containing various aspects of interpretive complexity. Average intercoder reliability score on Scott's *Pi* was .84 (Scott, 1955; Wester, 1995). We established intercoder reliability for the four aspects separately. The coding of interpretive heterogeneity required taking two interdependent decisions from the coders; first whether an element fit into the larger categories of Inclusion, attribution, etc. (i. e., whether it was a 'kind', an 'attribute', a 'cause', a 'reason/function', or a 'step' of something). And second, whether within this category, it represented an actor, act, event, etc. Therefore, reliability scores were obtained for each of the two steps independently. Scott's *Pi* yielded the following scores for reliability: Elements = .90; types of elements first step including relations = .77; types of elements, second step = .79, domains = .89. Given the complex nature of coding, all scores were deemed satisfactory.

Reliability analyses of the constructed variables regarding viewer characteristics (Cronbach's α) can be found in the notes accompanying this chapter in which the Principal Component analyses are reported in detail.

The ecological validity of our research design deserves some attention. As with any controlled research setting, the situation in which viewers watched the news program is of course not representative of 'normal' situations of news

viewing. Typically, news is viewed with others present, while doing household chores or other activities (Konig, Renckstorf & Wester, 2004). In addition, some viewers indicated that their level of concentration diverged from their normal way of viewing. Furthermore, the program was edited, thus interrupting the natural flow of a normal news program. This may have affected the natural flow of thoughts of viewers; thoughts may have summoned other thoughts, thus the reported thoughts may not have been concurrent with exposure to the news, but with verbalization. As stated above, this 'unnaturalness' is accepted because we may expect that in the short time span the participants have to report their thoughts, only the most salient thoughts can be reported (Petty, Ostrom & Brock, 1981). Thus, thoughts that were cued by verbalizing other thoughts are probably thoughts that were already at the fore during watching.

A fairly large body of literature claims the validity of verbalization of cognition methods, maintaining that what is measured are indeed actual thoughts' (Cacioppo, Von Hippel & Ernst, 1997; Davison, Vogel & Coffman, 1997; Ericsson & Simon, 1984; Höjjer, 1989; Petty, Ostrom & Brock, 1981; Van Someren, Barnard & Sandberg, 1994). The construct validity of our central concepts, that is the validity of our measurement of interpretive complexity is hard to assess as there are no alternative measurements of interpretive complexity as conceptualized and operationalized here. One of the problems is that our measurement diverges from earlier operationalizations, as they were deemed too confined to specific research questions (e. g., only measuring the use of political concepts, or abstractions, e. g., Neuman, 1981; Schroder et al., 1967). Theoretically, interpretive complexity is related to cognitive complexity; the more knowledge, and the better organized that knowledge, the more complex can be reconstructions. Furthermore, theories predict that in addition to cognitive factors, a higher motivation leads to more intensive use of knowledge, which again results in more complex reconstructions. In Chapter 5, we found correlations between differentiation and educational level, and the correlations found in the current study also testify to the construct validity. Most important in this respect are correlations of complexity aspects with education, knowledge, and motivational aspects. All are in concurrence with these theoretical notions. Illustrative of this is that the motivation to watch television news for leisure was negatively correlated to interpretive complexity. A final test is that all four indicators of interpretive complexity were highly correlated (all at $p > .01$), indicating that they all refer to related concepts (Table in Appendix E).

Furthermore, external validity of the study may be subject to discussion because we did not employ probability sampling. Thus, the question remains whether the results can be generalized to other situations and other samples. These external validity issues are common drawbacks of any research involving controlled settings (Reeves & Geiger, 1994). Comparison to a national probability sample reveals that this was not an entirely exceptional sample,

although there were of course differences (Eisinga et al., 1990, 2000). Most notable, our research group was younger and higher educated than normal (Mean age = 36 years), whereas people in lower prestige occupations were under-represented. Moreover, the study was never intended to generalize to a larger population, but rather as an exploration that should yield a first look into the territory of interpretive complexity of news, providing grounds for new questions and research.

Measurement of viewer characteristics was based upon previously used measurements and constructs. Questionnaire items were taken from two repeatedly executed representative surveys 'Religion in Dutch society', and 'Media Use in The Netherlands', in which they were extensively tested and validated (Arts et al., 1990; Eisinga et al., 1990, 2000; Hendriks Vettehen et al., 1995; Konig et al., 2005), 'Occupational prestige', was defined based on Sixma and Ultee's (1984) 'Occupational Prestige Scale'. For constructs regarding news use motives, and issue-involvement, principal component analyses revealed the same components as found in previous research (Barki & Hartwick, 1994; Celsi & Olson, 1988; Konig, Renckstorf & Wester, 2004). Issue-knowledge was based on the participant's self-assessment, which of course is always a little delicate. Normally, in communication studies factual knowledge of specific issues is tested to assess issue-knowledge; i. e., questions such as: 'what's the name of the vice-president of this country'. In our study this was problematic, as asking such question before watching the news program would activate relevant knowledge that might influence the 'normal' interpretation. Asking the same questions afterwards would also be problematic, as knowledge may have been activated by watching the program. For this reason we chose this solution. Such self-assessment scores have been found to resemble more 'objective' measures of knowledge level to a high degree (Schulz, 1982).

Results

This section consists of two main parts. The first part addresses the first two research questions: Are there differences in the size of interpretations and the components used in different interpretations of a news program? The main objective is to investigate whether there are differences in interpretations through assessing of which components interpretations of a news program consist.

In this section, after presenting the answers to the first and second research question, we argue that the size and components of interpretations are only of limited use for studying variations in interpretations, as the nature of such descriptions presents inherent difficulties for systematic comparison. Therefore, the second major part describes these same interpretations in more quantitative terms, directed towards the question to what *degree* interpretations are differ-

ent. The second part also addresses the question whether differences in interpretive complexity are related to viewer characteristics and subject matter.

Size of interpretations: Research Question 1

In order to get a sense of the variety of interpretations, we first look at the relative size of the interpretations as represented by the number of words. In this section we analyze whether interpretations differ in terms of their volume. The words uttered by the 60 participants during their viewing of the test news program represent a more or less direct report of their thoughts. Each protocol was divided into 28 segments corresponding to the segments in the edited news program, in all 1,680 segments. Excluding verbalizations in which participants said they didn't think anything (i. e., "I had no thoughts", or: "No, I didn't think anything"), verbalizations of procedural nature ("well I was thinking that..." "first I thought...", "Let me see..."), and non-words such as ah, yeah, ghee, and well, well, this database consisted of over 51,000 words; a rich source indeed. What can we learn about interpretive differences and similarities from the size of interpretations?

Below, we present an example of an average-sized interpretation of the item Child abuse (participant 52). This fragment of the interpretation contained 232 words; with 859 words, its total size pertaining to all three news items was average as well. The interpretation is presented in the nine segments corresponding to the nine breaks in the news item (cf. Appendix A). This quotation and all subsequent ones are translated from Dutch verbalizations; thus, the number of words in the segment presented below matches the original Dutch version and may not match its English translation. In addition the number of words of which each section of the news item consisted is presented for comparison.

1. *Yes, that was a short piece, yeah; I'm not having any thoughts on this yet, actually.* [0 words, item = 32 words]
2. *Child abuse is something that doesn't concern me very much. I read it in the newspaper, but it doesn't do much for me, as it were. But it's absolutely incredible that it..., I don't understand how a parent can do such a thing. Unbelievable.* [42 words, item = 32 words]
3. *Yes, I often wonder with those estimates; you hear about many estimates of things on a regular basis, and I think, how in god's name can they estimate that. That's not only the case with child abuse, but also about people that are circumcised and that sort of covert problems. I'm thinking: how in god's name do you get these numbers? And, well, how are you gonna do something about it?* [63 words; item = 45 words]

4. *Yes, yes, I'm willing to believe that this guy [the child abuse researcher] has validated his stuff. Yeah, I'm curious what they, what the next scene is gonna be, what they're gonna do about it.* [26 words; item = 56 words]
5. *Yes, and so the ball is in the parliament's court, but I wonder what if, yeah, what good that's gonna do. Yes, no, I'm curious about what they're gonna do.* [28 words; item = 29 words]
6. *Yes, that's a grayish man, I don't know if he's the man who's capable of suitably propagating such a message. It is important that they find a good solution for it.* [32 words; item = 64 words]
7. *Yes, I can imagine that.* [6 words; item = 16 words]
8. *That shouldn't be possible, really, I mean, yes.* [8 words; item = 69 words]
9. *Yes, I absolutely do not agree with that. Specific secretaries for everything, that doesn't work. There's too many of them anyway. So, yeah, I don't think so [smiles].* [27 words; item = 25 words]

This protocol illustrates what an average interpretation looked like. First, reports of thoughts were rarely formulated eloquently. Instead they consisted of everyday speech, with often incomplete formulations. This sometimes presents difficulties for assessing the exact 'meaning' of such utterances.

Second, this interpretation shows some characteristics typical of above-average sized interpretations. Segment number 3 for instance shows the type of things that people with relatively large interpretations said, elaborating on what is seen and heard in the news item. Simultaneously, segments 1, 7, and 8 are more illustrative of small-sized interpretations, in which viewers scarcely expressed more than their agreement or disagreement with the news item. Extremely large interpretations consisted entirely of segments such as segment 3, whereas small interpretations consisted entirely or mainly of segments resembling segments 1, 7, and 8.

Finally, the example also serves as a first glimpse at the similarities and differences between viewers' interpretations and the news' content. In terms of size as represented by the number of words, some news segments were fairly similar to interpretations of that segment (e. g., segments 5 and 9). Others however, seemed very dissimilar; sometimes viewers used far less words than the news item (cf. segment 8), in other cases, such as segments 2 and 3, the viewer actually used more words than the news item. Apparently, the size of the news item did not absolutely determine the size of its interpretation.

The above protocol represents only one example of an interpretation. If interpretations are very diverse in volume, this is a hint that interpretations of a news program are not per definition as uniform as the program. The participants used on average over 860 words to report their thoughts during the three

items (Table 5). Evidently, this is far less than the number of words of which the news program consisted, but one has to keep in mind that – in contrast to news reports – thought protocols are not well thought-out and extensively formulated texts. Rather, they are spontaneous thoughts, formulated in everyday speech patterns. However, the size of these interpretations diverged greatly between viewers; some seemed to think an enormous lot, whereas others did not seem to think much at all (cf. standard deviations, Table 5). In some cases interpretations were 50 to 100 times larger than others.

Furthermore, interpretations were on occasion many times smaller than the news items whereas in other cases they were four or five times larger than the news item. The maximum size of an interpretation regarding one news item was much larger than the size in words of the news item – some 1,000–2,000 words – the minimum size very much smaller than the news item; 12 words. The latter type of interpretations are those in which viewers sometimes reported not having any thoughts at all, such as in the first segment from the example above (in all, participants reported no thoughts during 187 segments of the news, 11 % of the total amount of segments). It may be that these participants did indeed have no thoughts at all. Alternatively, they may have had thoughts, but failed to report them because the thoughts were not salient enough to be remembered even a short time later. Small-sized interpretations were often limited to some short statement or verdict on the seen sequence; “I agree”, or “Ridiculous!”, or “That’s really horrible!”. In contrast, some large-sized interpretations contained extended reasoning in which all kinds of issues were discussed.

Table 5. Number of words used in interpretation (60 participants)

	Entire program 1,227 words	Child abuse 367 words (9 breaks)	Teacher shortage 441 words (10 breaks)	Agriculture in Germany 449 words (9 breaks)
N	51,763	15,884	19,286	16,523
Mean	862.72	264.73	321.43	275.38
Std. Deviation	789.18	256.24	312.44	260.39
Minimum	77	12	37	12
Maximum	4,162	1,259	1,946	1,313
Mean per break	30.81	29.41	32.14	30.60
Skewness	2.42	2.10	3.15	2.12
Kurtosis	7.24	4.72	12.94	4.98

However, most interpretations were something in-between these extremes. The largest group of interpretations being below average-sized, and only a minority

of the viewers being above-average interpretations, the overall distribution was skewed.⁹ Most interpretations were sized 200 to 800 words; few interpretations were much larger than that. Nonetheless, evidently extremely voluminous interpretations were possible. Three viewers used extremely many words in reporting their thoughts during the entire news program (cases 3, 33, and 54, see analyses of outliers in Appendix F). If we leave these 'outliers' out, the average size was 720.84 words ($SD = 473.40$) with a skewness of .88 and a kurtosis of $-.12$, which is approaching a 'normal' distribution. In other words, although there were large differences in interpretation size, differences within the largest group of viewers were smaller. Or, phrased even more differently, the bulk of interpretations had a more similar volume. The small group of interpretations contained on average 3,558.33 words ($SD = 790.17$).

For each of the three separate news items, the above pattern was largely the same. Firstly, there were no differences in the average amount of words used in interpreting each news item; interpretations for each news item averaged around 30 words per break ($p = .176, .593, \text{ and } .457$ respectively for comparison of the means regarding each item, at $\alpha < .05$, paired samples t-test, two-tailed). The average score per break in the news item takes into account the different number of breaks we put into each news item. We will use these 'standardized' scores again when we analyze the degree of interpretive complexity in Part 2 of the result section). However, some characteristics hint at small differences between interpretations of a specific news item, such as the differences in minimum and maximum scores, skewness and kurtosis, in which the item Teacher shortage is consistently the highest scoring item. Secondly, for each of the three separate stimulus-news items a small group of (partly the same) participants was responsible for above-average sized interpretations.

Discussion research question 1

This first glimpse of the interpretations hints at the richness and diversity of the material. In sum, in terms of size interpretations were very diverse; they diverged from each other as well as from the news items. Some interpretations were much larger than others, and some were much larger – or smaller – in size than the news item itself. But the material also points to some similarities; a small group of interpretations were very large, whereas the larger group contained smaller interpretations. However, within both these groups there are still large differences to be found. If interpretations were this different in size, could their content be equally varied? Below we address this question.

The disadvantage of this diversity is that it poses the problem of how to bring order in this plethora of different words and, presumably, different meanings. The number of words is at best a very rough indicator for the diversity and cohesiveness of viewers' interpretations. For instance, it is very well possible

a person uses many words to say but very little. Equally, an interpretation reported by the use of many words does not necessarily contain more or different things than one using fewer words; one interpretation may consist of many repetitive statements, whereas a second interpretation may say the same or more things in fewer words. How are we to arrive at feasible descriptions and comparisons between all these different interpretations? How can we assess that one interpretation contains different meanings than another, or how much one interpretation differs from another? The exact *content* of interpretations presumably cannot be grasped in any systematic analysis. Therefore, we must look at the way interpretations are *structured*. Interpretations are structures, that is, each interpretation consists of the same types of components, all related to the use of elements and relations between elements. As said earlier, through focusing on the structure of interpretations, we can circumvent the problem of assessing ‘meanings’ to some extent. Furthermore, we can use the *degree* to which components are present in each interpretation – called interpretive complexity – to make quantitative comparisons. Below, we classify interpretations using four structural components (cf. Figure 1);

- the basic *elements* to which the words refer
- the different types into which these elements fit
- the relations made between the elements
- the domains to which these elements belong

Below we describe what components are used in interpretations, addressing each structural component separately. Subsequently, we describe these same components with regard to the degree to which each interpretation contains them. In the final section, relations with viewer characteristics are investigated.

The components of interpretations: Research Question 2

The size of interpretations gave a first clue that interpretations might be diverse, but we do not get to know much about the nature of these differences, other than size. Therefore, we look at the components contained in these different sized interpretations. The goal of this section is to answer the second research question: Are there differences in the kinds of components used in different interpretations of a uniform news program? Our main interest is whether we can see interpretations as diverse or uniform in this sense. Therefore, we describe which components interpretations were built of. This section will be largely descriptive in nature; it gives an overview of *what* elements, element types, relations, and domains viewers used to interpret the news program. In the remaining analyses, we translate these qualitative data into data expressing the *degree* in which interpretations contain different elements, relations, and domains.

Elements

The first structural component of an interpretation is the basic individual element. All the separate elements together provide detail to an interpretation. If different viewers use different elements to make sense of the same news content, at least part of their interpretation of a news program will be different. So the question is: What elements do viewers include in their interpretation? Are there differences between interpretations in this respect?

In all, 12,630 elements were used by all viewers in interpreting the news program. As expected, the elements of which interpretations consisted are elements from both the news items and from the viewer's knowledge. Our goal here is not so much as pinpointing which aspects of a news program are reproduced and which are not, but instead sketching what components interpretations contain. As there are so very many different individual elements in the interpretations, a full description is not possible within the confines of this chapter. Therefore, a somewhat forced structured approach was chosen, which restricts the report of the analysis to one class of elements. In describing how viewers used various elements we will concentrate mainly on the group of elements referring to actors. To describe what different types of actors were used, we compare the actors in interpretations with actors explicitly present in the news items (i. e., mentioned by name and/or seen on screen). As we shall see in the subsequent paragraph, actors were among the main types of elements of which interpretations are composed.

The three test news items contained on face value the following principal actors (i. e., according to a 'journalistic', institutional point of view of the message). The item Child abuse contained eleven principal actors either in the text or on-screen: The anchor lady, the reporter, a researcher, the organization RAAK, its spokesman, members of parliament (mentioned as a group), the secretary of juvenile affairs, and child psychologists, psychiatrists, jurists, and children (all as groups). The teacher shortage item contained ten principal actors: The anchor lady, the reporter, an aspiring teacher, *zij-instromers* and *herintreders* (group), the school warden, the society of school wardens (group), its spokesman, children (group), and the secretary of education. The agriculture item contained the following seven principal actors: The anchor lady, the reporter, a butcher, a farmer, the German secretary of agriculture, politicians (group), and consumers (group).

Many of the actors from the news were part of viewers' interpretations as well, such as the lady farmer, consumers of meat, the butcher, or the reporter in the item 'Agriculture', as demonstrated by this quote, which shows that in this viewer's interpretation, the reporter and some of his attributes play a role:

(...) This presenter is actually Dutch, but he really looks like a German [laughs]. That's kind of funny.
(Participant 60)

and another example containing teachers and students from the item Teacher shortage:

Hm. A sad ending to the story, really, I think. In that children have to get the day off because..., a day off for zij-instromers. Sad.

(Participant 33)

All these actors may be considered the leading characters of the news items. Virtually all viewers incorporated a number of these principals in their interpretation. Viewers also included actors that were not, at first glance, main characters of the item. In addition to principals, actors that were mere 'background extra's' in the item could take on a more prominent part of the interpretation as well, such as the playing children who were seen in only one short shot in the item 'Child abuse':

I wonder why they show playing children in the background with such a horrible story.

(Participant 4)

Additionally, elements in the news item that news producers undoubtedly would have regarded as principal elements were not always incorporated in interpretations. Striking examples of this phenomenon were two actors from the item Teacher shortage and Agriculture. In both items, the government official responsible for the issue was mentioned, in the first item it was said that the secretary of education, Hermans, supported the plans to solve the problems with teacher tutorage but was not prepared to provide funds. In the latter item, the German secretary of agriculture, Künast, was responsible for starting reforms in meat production. Both politicians were mentioned by name in the program. Still, only a relatively small number of participants incorporated these actors in their interpretation; only seven participants referred to Hermans, and even less, three, to Künast.

Conversely, interpretations may contain elements that were not at all part of the original news program. These 'importations', or 'elaborations' may be some of the clearest examples of actual reconstruction, or 'refabrication', of what was probably the intended content of an item (cf. Beentjes & Van Vlijmen, 2001; Findahl & Höijer, 1985; Giegler & Ruhrmann, 1990). Viewers added to their interpretations of the news elements from their knowledge systems to make sense of a piece of information; importations fill in gaps, they provide a context to an event or issue because of similarities or differences of every kind imaginable. As such they often lend a very personal touch to an interpretation. Again, some examples regarding actors illustrate this:

(...) I always think of Holland, I think it was Veerman, former secretary of Agriculture, who introduced the idea of pig flats. That's when I thought:

“*what are we doing!*” (...)
(Participant 23)

This viewer referred to a former secretary of Agriculture who is not part of the news item. This is a good example of the use of previously acquired knowledge on the subject of agriculture (a former secretary of agriculture who has done something similar in a different context), which is ‘activated’ by the news item; this viewer sees a connection between the agricultural reforms in Germany and the pig flats introduced by a former Dutch secretary. In this instance, it is relatively easy to see the connection between this knowledge and the news item’s content. That this was not always the case is demonstrated by the next viewer, who incorporated ethnic groups (a collection of actors) in the interpretation of the Teacher shortage item:

Yes, I thought that this gentleman is an immigrant, and that perhaps it’s very valuable that more immigrants are introduced in education, or become teachers.
(Participant 61)

Nowhere in the item has it been made explicit that the aspiring teacher present in the news item is an immigrant, or has there been any reference to immigrants in any way, shape, or form. This is all inferred by this particular viewer (and by a number of other viewers with him) from linking the actor and his attributes – possibly his physical appearance – to knowledge about ethnic groups. Although the connection with the item’s content is still there, in contrast to the previous example it is much more difficult to see the direct relationship with what was probably the intended gist of the item by its producers. One rather amusing example of elaborating on the item’s contents based on only the slightest connection is the next example where the viewer uses in the interpretation a character from a children’s book. Again we see the use of elements occurs when viewers perceive links between the item and personal knowledge, only in this case, it is merely based on the association evoked by the name of one actor called Duif; a character from Dutch children’s book classic ‘Pluk van de Petteflet’ is called mister Duif:

Hm, I thought of ‘Pluk van de Petteflet’ after seeing mister Duif.
(Participant 54)

Among the most common importations of actors were people from the viewer’s private life: Friends and family, and so on. Much of the news, according to these viewers, was about themselves or the people they know:

I was, very briefly, thinking ...a friend of mine...she is also, ehm... she’s also a teacher now, since recently, and that’s indeed, ehm, what she indicates, because like, ehm, she hasn’t received any mentoring

and I think that's, ehm, it's right what they said.
(Participant 52)

Discussion: Elements in interpretations

In the above, we were searching for differences and similarities between interpretations. A first finding is that interpretations contained an enormous diversity of elements; interpretations referred to a vast array of persons, places, feelings, behavior, etc. Moreover, different interpretations of the same news item may refer to different elements. Summarized, we have found four ways in which elements were used in the interpretation. First, elements in the interpretation may also be the principal elements from the news item. Second, in addition to main elements, secondary elements in the news items – from a news producer's perspective – may be part of the interpretation. Third, some of the main elements in the item may *not* be part of interpretations. And finally, elements from outside the item may be incorporated in the interpretation of the item. Differences in interpretation in regard to the use of elements seem to lie mainly in the use of non-principal elements, the omission of chief elements, and the incorporation of outside elements. Similarities are in the use of principal elements from the news item; every news viewer uses at least some of these. When discussing the complexity of interpretations, we understand interpretations containing more unique elements as being more complex. Thus, interpretations containing both principal and non-principal elements from the news, as well as importations from personal knowledge are more likely to be relatively complex.

To conclude, as far as basic elements are concerned, the evidence thus far indicates that despite some similarities interpretations cannot be called completely uniform. However, such a conclusion is hard to base upon this evidence, as it is hard to tell something about the extent of variability. We have assessed that some interpretations contain other elements than others, or differ from the news in this regard. So there are differences, but much more cannot be said. For more meaningful analyses, we require, first, a systematic classification of elements, and second, quantification of the nominal variable of element use. Below, we use such a classification to count and compare differences in use of interpretive components (cf. Table 5).

Element types

Studying the elements within interpretations gave a more specific idea how viewers interpret the news than merely assessing the size of interpretations. However, classifying these elements enables us to do more precise analyses regarding the types of elements that were used in interpretations. Moreover,

it facilitates the quantification of the use of types of elements, thus making more empirical comparison possible. In other words, by taking a higher level of analysis, analyzing types of elements may add more information about interpretations than looking only at elements.

Below, we define interpretations that use many different types of elements as being heterogeneous. It is possible that some viewers use many elements, but all of the same type, whereas other viewers use as many elements, but instead all of different types (Chapter 3; cf. Neuman, 1981). The question in this paragraph is what types of elements interpretations consist of, and whether interpretations differ in this respect.

If we categorize elements into the 35 different types developed earlier (cf. Table 3, and Chapter 3), a pattern emerges in the types of elements that were used in the interpretation of the three news items. Derived directly from the interpretations of the news item ‘Agriculture’, Table 6 gives some examples of prominent types of elements and the specific unique elements they refer to. It should be noted that many more types of elements were used not mentioned in this table for reasons of brevity.

Table 6. Examples of types of elements in the interpretation of news item ‘Agriculture’

Types of elements	Examples
<i>Actors</i>	Farmers; the secretary of agriculture; Germans; reporter Bert Tigchelaar; the participant him/herself; vegetarians
<i>Acts</i>	Manipulate meat with injections; slaughter animals; this journalist makes interesting items; people do not buy expensive meat
<i>Events</i>	Agricultural reforms in Germany; the Mad Cow crisis; ending up with scary diseases; mass consumption
<i>Objects</i>	Meat; cows; agriculture grants; the German language; the news; money
<i>Places</i>	A meadow; nature preserves; a butcher’s; a farm; in my own neighborhood; the supermarket; Germany
<i>Times</i>	In the past; nowadays; next week; 15 minutes
<i>Feelings</i>	I don’t like meat; people are afraid they get sick; I worry about these developments; folks are tired of it; they feel their money is more important
<i>Attributes of actors</i>	That reporter has got a very strange moustache; that secretary is of the Green party; Germans are very keen on their hygiene; my brother’s got a farm
<i>Effects of events</i>	The meat they get from America * the quality lessens; they filmed it in such a way * you pay more attention to the image than to what’s said; in bio-industries your work harms the animals * you can keep prices low

Types of elements	Examples
<i>Reasons for acts</i>	I don't know much about it * I won't start buying organic meat; it's expensive * you're not gonna buy organic meat; why did she become a farmer?
<i>Steps in acts</i>	The meat is inspected first * then it goes into the stores; people scare at first * later they're gonna buy cheap meat again

Note. * An asterisk signifies the relation in question (e. g., in the case of effects; the meat they get from America * (causes) the quality to lessen)

Looking at the frequency of occurrence, the first thing that attracts attention is that many different types of elements were used by the participants (Table 7). Secondly, some types of elements occurred far more frequently than others. First, by far the most frequently used element types were of the non-abstract types – or ‘simple references’. They referred to *kinds* of ‘things’ (actors, acts etc.) and *attributes* of these things. Viewers can see elements as separate entities, or they can perceive connections (i. e., causal, logical and temporal) between them. Connecting elements makes interpretations more cohesive (Chapter 3). These more abstract elements, in which such complex relations are made, were considerably less prominent. Secondly, on average viewers interpreted the program primarily in terms of actors – including the viewer him or herself – and acts, as well as attributes of both, feelings, and in terms of the objects they use in these acts and their attributes. The most frequently used relational types of elements also referred to actors, acts, and objects. Overall, 19.4 % of the elements in interpretations referred to actors, 28.5 % to objects, and 20.5 % to acts. 5.7 % of the interpretations were devoted to connections of any type. However, despite the prominence of some, mostly non-abstract types, there is much variation between different interpretations in the occurrence of types of elements, as is evident from the consistently large standard deviations.

The consistently smaller roles played by ‘times’ and ‘places’ references, and to a lesser extent, ‘events’, is noteworthy in this context. It seems that in interpreting the news, it was more important to many viewers which people did what, and how they felt about it, than exactly where and when all that happened. This discrepancy may be one explanation as to why research always seems to find such low recall of news facts; viewers don't seem to think many of these facts are very prominent or important parts of the news whereas the importance of these aspects is obvious to news makers (cf. the journalist's axiom of including the Who's What', Where's, When's, and Why's of an issue).

News reception studies hardly ever had an eye for the place in news understanding of ‘feelings’ both of the viewer and of news actors. ‘Feelings’ in our study not only included outright emotions like fear, joy, sadness, disgust and so on, but also other affective aspects such as attitudes (approval/disapproval),

and goals/motives, and wishes (e.g., the prime secretary wants to gain support). The results show that feelings are very much part of the ‘core’ of a news item to many viewers. They help shape the image of a news issue that viewers have, and are therefore a legitimate part of people’s news interpretations.

The overall pattern holds true for all three news items separately; there seems to be a common denominator in types of elements which is quite consistent across all items. Firstly, regardless of the item’s subject matter, on average interpretations concentrated largely on actors and their attributes, their actions, their feelings, and the objects they used (full Tables for each item in Appendix G). And secondly, the abstract types of elements were less strongly represented in the interpretations of all three items (Table 7).

Table 7. Types of elements: Frequency of use (60 participants)

		Child abuse		Teacher shortage		Agriculture		Entire program	
		<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>
Simple references									
1. inclusion	Actors	739	12.32	1,090	18.17	616	10.27	2,445	40.75
2. attribution	Acts	882	14.70	909	15.15	800	13.33	2,591	43.18
	Events	507	8.45	461	7.68	302	5.03	1,270	21.17
	Objects	875	14.58	1,300	21.67	1,425	23.75	3,600	60.0
	Places	112	1.87	94	1.57	212	3.53	418	6.97
	Time	111	1.85	212	3.53	135	2.25	458	7.63
	Feelings	324	5.40	391	6.52	408	6.8	1,123	18.72
	Total	3,550	59.17	4,457	74.28	3,898	64.97	11,905	198.42
			<i>SD</i>		<i>SD</i>		<i>SD</i>		<i>SD</i>
			59.27		68.02		66.60		193.89
Relational references									
3. cause-effect	Actors	23	.38	41	.68	13	.22	77	1.28
	Acts	93	1.55	93	1.55	90	1.50	276	4.60
4. rationale & function	Events	34	.57	64	1.07	35	.58	133	2.22
	Objects	37	.62	43	.72	54	.90	134	2.23
5. sequence	Places	3	.05	–	–	6	.10	9	.15
	Time	1	.02	2	.03	1	.02	4	.07
	Feelings	25	.42	36	.60	31	.52	92	1.53
	Total	216	3.6	279	4.65	230	3.83	725	12.08
			<i>SD</i>		<i>SD</i>		<i>SD</i>		<i>SD</i>
			7.80		8.92		9.23		26.01

	Child abuse		Teacher shortage		Agriculture		Entire program	
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>
Total	3,766	<i>M</i> 62.77 <i>SD</i> 67.07	4,736	<i>M</i> 73.77 <i>SD</i> 76.89	4,128	<i>M</i> 68.96 <i>SD</i> 75.83	12,630	<i>M</i> 210.52 <i>SD</i> 219.79

Note. For reasons of brevity, element types referring to concrete types were clustered under one heading as ‘simple references’, and all elements types referring to relations as ‘relational references’.

Note. Only total standard deviations are presented. Full tables containing all *SDs* are in the appendices

Relations

Above, we reported that relational elements were among the less used types of elements. In this study three types of relations between single elements are distinguished: Causal (this element causes that element), logical (this element is a reason for that element; this element is a function of that element), and temporal (this element is a step or phase in that element). Examples of the kinds of relations made can be found in Table 6 above. To give one indication as to how an interpretation which contains relations is different from an interpretation that does not, we offer two short quotes from two interpretations touching upon the same issues when interpreting the news item ‘Teacher shortage’.

Yeah, that’s, now it becomes apparent that he’s a little bit insecure about it himself. And yes, I think one way or another there’s gonna have to come more tutorage. There’s got to be more, it’s good that the shortage is being solved; I think they should motivate more people to start doing a teacher’s education instead of just picking people from corporate sectors and put them there.

(Participant 47)

It’s probably that they drop out because they don’t get tutorage, but that’s also because they got no staff, I think.

(Participant 33)

Both interpretations deal with the issue of tutorage for teachers in training, which is the main theme in the news item. Both discuss different aspects of this issue, but apart from that, one difference is that the second interpretation refers to one cause of the failing tutorage; there’s a lack of staff. It also brings up an effect of the failing tutorage; starting teachers drop out because they get

no tutorage. The first interpretation does none of these things; here the news is more a collection of separate elements that have merely semantic and not explicit logical, temporal, or causal relations.

As we asked participants to report their spontaneous thoughts while watching the news, that is before extensive thinking and reconsiderations may have taken place, one might expect that in processing the information, viewers primarily concentrate on incorporating disassociated facts of a news story. However, this did not seem to be the case. In all, viewers referred to relations 725 times, which is an average of over 12 relations per viewer (Table 7). Which relations did they refer to, and with which news items?

Table 8. Types of relations split up into three different types: Frequency of use (60 participants)

	Child abuse			Teacher shortage			Agriculture			Entire program		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Causal (Cause-effect)	109	1.82	3.60	139	2.33	4.56	154	2.57	5.28	402	6.72	13.44
Logical (Rationale/ Function)	86	1.43	2.92	116	1.94	2.43	61	1.01	2.64	263	4.38	7.99
Temporal (Sequence)	21	.36	1.28	24	.40	1.93	15	.25	1.31	60	1.0	4.58

Although most interpretations contained explicit relations between single elements, not every type of relationship was used equally often (Table 8). Viewers made causal relations most frequently. They attributed a single cause, for instance event A to event B, or an act A causing feeling B, and sometimes attributed multiple causes to one outcome or vice versa. Logical relations directly succeeded causal relations in frequency. The temporal relationship was by far the most underused relationship of the three. Thus, on average interpretations were similar in the sense that when they used relations, they were mostly of the causal and logical types. With every separate news item in the program, this pattern of use of relations was the same; every time causal relations were the most frequently used relations, followed by logical relations. But again, interpretations vary greatly in the frequency with which they contain relations (cf. SDs, Table 8). Three viewers did not use any relations at all.

The specific relations interpretations contained were often also part of the news item itself; from an institutional definition of the news message, they could often be considered part of the most central parts of the items. For example, frequently mentioned causal relations in interpretations of the item ‘Ag-

riculture' were (variations of); 'biological agriculture makes meat more expensive'. Logical relations largely referred to reasons for acts and feelings. A frequently used relation regarding feelings regarding the news item 'Teacher shortage' was; 'as a young teacher you are afraid to get in front of a school class because you don't receive any mentoring', in which the relation is made between feelings and reasons for feelings. Both are good examples of what from an institutional point can be seen the central tendency in the news program being adopted by the viewers.

Differences between interpretations regarding relations could be attributed partly to whether relations were used at all; some viewers did not, or very rarely, use relations. Apart from that, differences were mainly in the use of relations not explicitly apparent in the news. For example, in interpretations of the 'Child abuse' item, a number of viewers used this relation; 'you'll have to do something about it first before you start appointing new secretaries'. This 'sequence' relation was not part of the news item, which shows that relations between elements were not just restricted to those prescribed by the news.

Discussion: Types of elements in interpretations

Our general research question was to what extent a uniform news program elicits its uniform interpretations. Using categories of elements, we now have a more systematic and empirical idea of the answer to this question. A first outcome is that interpretations contained many different types of elements. However, the most frequently used elements were mainly of the same recurrent types of elements; to a large extent organized around mostly non-relational references to persons and their acts. Relations were used in the interpretation of the news program, although they form a small minority. About 90% of these relations were causal or logical in nature, mostly concerning acts, events, and objects.

Variation in the frequency of element type use was large, most prominently so in the use of relational types. In terms of interpretive complexity (see next section), an interpretation with more types of elements is considered more complex. Based on the findings, one hypothesis is that interpretations predominantly differ from one another in regard to the degree to which they contain certain specific types of elements, such as relations and other less common types.

Viewers may focus on a relatively limited range of element types, such as people and acts, but these may refer to many different people and acts. Consequently, within the uniformity on a higher level of abstraction, there can be much variation on a more concrete level, as seen in the earlier description of the use of specific elements. Perhaps more differences in element types would have been observed if there were more clear differences between the three news items in terms of the types of elements used in them. If for instance one item contained a clear focus on persons and their feelings (cf. human interest)

whereas another would have focused on more abstract elements, such differences would have been more evident. However, there were also differences; some specific relationships as well as relationship *types* were used by many, others by fewer viewers, indicating a variety in cohesiveness between different interpretations.

Taking as a rule-of-thumb criterion an average frequency of one or more for use of an element type, there is a 'core' pool consisting of a total of 17 different types; any interpretation was likely to contain at least these types. We could maintain that a 'standard' interpretation consisted of seven 'Inclusion' types of elements, about five 'Attribution' types, three 'Causes/effects' types, and two 'Rationale/function' types. This consistent core was observed in the interpretations of all three news items, thus being seemingly independent of item content. This indicates that according to the viewers the news program was mostly about actors, and their acts and feelings, and the objects they use.

Domains

Classifying the elements into types has led to more knowledge about variations in interpretations. But elements can also refer to entirely different socio-cultural 'domains' (Chapter 3). The different social domains viewers incorporate in their interpretations tell something about the uniformity of interpretations, this time on a more abstract level than before. If more than one domain is used, the viewer has incorporated knowledge about several social areas into his or her interpretation of a news item, thus connecting one domain with several other domains; in this manner incorporation of more domains increases the cohesiveness of an interpretation. To assess the use of domains we identified 17 social domains. Again, our main goal is to assess differences and similarities, to see whether regarding the use of domains, interpretations of one news program can be called uniform. To illustrate how domains are present in interpretations, consider the following interpretation of the first segment of the item 'Agriculture'.

Yes, coincidentally, I had a conversation with my dad about this the other day. Because I said, yeah, so they have to just... ehm, it's [the meat] just coming from America, and all that, but that means that the cows over here, from our own country, or ah, the meat, it's just going to get very expensive and that it's hardly affordable any more. And it means that quality may be declining as well; because abroad meat quality just isn't as high.

(Participant 30)

This interpretation contained a number of domains: In addition to the domain 'agriculture' (which in this case consisted of the elements: Cows, meat, meat quality is declining), it contained the domains 'economy' (meat is getting ex-

pensive, is not affordable), ‘culture’ (the meat comes from America, abroad, our own country), and finally ‘private world’ (I discussed this with my father). So, in the interpretation of this one segment, this viewer related the item to four different social areas. The second quote below which is the complete transcript regarding the first three segments of the same item as above, is from another interpretation.

Yeah, that’s right, because that meat is going to be more expensive. Yes, it’s demand and supply. That’s logical that prices are of course going up if production is more expensive. Consumers have got the strongest say in this, don’t they? It’s demand and supply, once more, again.
(Participant 44)

This interpretation concentrated on a smaller number of domains. Referring to the domain ‘agriculture’ through the element ‘meat’, it was otherwise primarily focused on the economic aspects of the issue of agricultural reforms: The issue here, according to this viewer, was ‘demand and supply’, the role of production expenses and of consumers in the process of inflation. So, although both interpretations partly dealt with the same issues – meat prices are going up – they differed in regard of the kinds and number of domains. These differences imply that different knowledge was used by the two viewers in interpreting the item. Presumably, such differences in knowledge use will also affect the way the news item is processed and ‘filed’ in memory, resulting in differences in recall.

Table 9. Frequency of use of domains (60 participants)

	Child abuse		Teacher shortage		Agriculture		Entire program		
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Politics & policy	460	7.67	56	.93	89	1.48	605	10.08	13.79
Media	145	2.42	148	2.47	258	4.30	551	9.19	13.59
Agriculture	–	–	1	.02	1,465	24.27	1,466	24.29	19.54
Environment & infrastructure	3	.05	–	–	51	.85	54	.90	2.64
Economy & Finance	49	.82	216	3.60	948	15.8	1,213	20.22	22.14
Crime & Justice	44	.73	2	.03	–	–	46	.77	2.15
Health & care	535	8.92	23	.38	55	.92	613	10.22	13.65
Education	51	.85	2,686	44.77	21	.35	2,758	45.97	39.94
Science	255	4.25	7	.12	7	.12	269	4.48	8.02
Family	886	14.77	64	1.07	5	.08	955	15.9	16.99
Art	–	–	1	.02	–	–	1	.02	.13

	Child abuse		Teacher shortage		Agriculture		Entire program		
	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Culture, ethnicity & religion	62	1.03	62	1.03	186	3.1	310	5.17	7.28
Leisure & sports	4	.07	3	.05	2	.03	9	.15	.65
War & disasters	1	.02	3	.05	1	.02	5	.08	.65
Private world	127	2.12	240	4.0	234	3.9	601	10.02	11.57
Viewing context	29	.48	62	1.03	46	.77	137	2.28	5.25
Other	861	14.35	874	14.57	761	12.68	2,496	41.6	54.18

Note. Only standard deviations for the entire program are presented. Full tables containing all SDs are in the appendices

Now, are interpretations of a uniform news program uniform in regard to the social domains with which viewers link the program? In interpretations of the program as a whole, each one of the 17 domains was used at least once. However, some domains were used (very much) more often than others (Table 9, full tables in Appendix G). Moreover, there is great variation in the frequency of use of particularly the most used domains (cf. *SDs*, Table 9).

The domains used in interpretations of this program can be divided into three large groups: First, the most frequently used domains, which are the domains that are closest related to the main themes of the news program. Second, frequently used domains, also related to the program, but less directly representative of main themes. And third, frequently and less frequently used domains that, from an 'objective' observer's point of view do not seem to have a great connection to the program's intended content (*Note:* in the analyses below, the domain 'other' is not regarded a meaningful domain).

To the first group belong the most frequently used domains. For each of the three individual news items up to three domains were dominant in the interpretation; they were used distinctively more often than other domains. According to viewers the Child abuse item is mostly about health, family, and politics; Teacher shortage was almost solely interpreted in terms of education; and Agriculture focused largely on agriculture and economy. These most frequently used domains are the same domains that we may define as the most central themes in the news items if we regard the news items from an institutional definition (i. e., what was probably intended as 'the message' by its producers). Overall, 42.8% of the elements used were located in the three domains that were representative of the three items' main themes: Family, education, and Agriculture. However, the intensity of use is rather diverse across interpretations (cf. *SDs* Table 9).

The second group of domains consisted of domains also related to (our assessment of) the intended message of the program, but not directly to the main themes. Sometimes domains could be seen as part of the news message, but viewers used them in a manner that concentrated on perhaps somewhat peripheral issues in the item. For instance, Child abuse was interpreted frequently in terms of 'science', which relates to the research mentioned in the item that discovered the high numbers of child abuse. Viewers tended to focus on the researcher in the item reporting that child abuse numbers may be higher than expected. For instance, they asked how the researcher had come to his conclusions, or what the numbers meant in terms of validity. Although 'science' could be regarded as part of the news message, it is not central to the item's message as intended.

Conversely, as was the case with the other interpretive components, some domains evident in the news items were hardly ever part of the interpretations of that news. One example may be the domain 'environment' that is part of the agriculture' item in that it discusses environment-friendly and animal-friendly farming. Yet it was hardly a topic in the interpretation of viewers. Overall, 57.9% of the elements in interpretations were related to domains of either the first group or second group; that is, all domains directly related to what was most likely the program's intended message: Family, health, education, economy & finance, and Agriculture.

In addition to item-specific domains, to this class of domains belong domains that were used extensively throughout the entire news program. These domains recurred during more than one item, often throughout the entire news program, and not just with one news item. For instance, the domain 'politics' was used very frequently and with different news items. Almost every viewer made at least one connection with political themes during the news program. Often, these concerned remarks on what politicians or the government should or shouldn't do to solve problems. This is possibly a pattern for news messages in general, that at least to the viewer almost every news item has some connection to politics. Politics in the real world of course does deal with almost any other social domain, both public and private. However, in terms of the intensity with which the domain is used, the item Child abuse is clearly the item that was interpreted most heavily in political terms. This is despite the fact that in all three items governments and their representatives play an explicit role, and that the item Child abuse was the only item with no explicit references to individual politicians.

Economy was another often used domain, containing references to issues such as money, costs, income, or the economic situation. The news was also often interpreted in terms of culture or ethnicity/nationality. Oftentimes, viewers considered differences or similarities between all kinds of different nations (e. g., Germany, The Netherlands, America, and Argentina) or nationalities, or the ethnicity of persons in the news. One example was the previously discussed

quote about the ‘immigrants in education’. The item Teacher shortage did not feature any explicit reference to ethnicity or cultural groups, yet, induced by one person in the item, several viewers did reconstruct the item in those terms. On average, every individual news item was interpreted more than once in terms of culture/ethnicity, most of all the agriculture item, which can be explained by the fact that that particular item was about the neighboring country of the news viewers, so that it could be expected that for instance comparisons between Germany and The Netherlands would be made.

To the third and final group of domains belong domains that were not explicitly part of the news item’s central message were still used, sometimes quite extensively. One important domain in the interpretation of all three items was ‘media’. Most notable with the item Agriculture, in which the reporter made a stand-up appearance, viewers focused on the reporter in the item, the way in which something was filmed, or the inner workings of news media in general. In other words, to the audience, an important part of news messages was about ‘the news’ itself.

One of the most important themes viewers referred to was the theme of ‘private world’, which refers to the personal life-world of the participant which is evidently not part of the news program actual content. The frequency with which this domain was used may be symptomatic of the degree to which a news item was perceived as directly related to the personal life-world (cf. Garamone, 1985). It is clear that the majority of the viewers perceived such connections; among other things the news is also very much about *me*. In contrast, a small but not unimportant group of viewers (15%) did not indicate that the news had anything to do with them.

Connecting the news to the personal domain could take on different forms, such as:

That’s got to be difficult. I wouldn’t dare to do it.
(Participant 13)

Here, the viewer imagines being in the place of a young teacher who takes on a class without the proper education and mentoring.

I didn’t know that, so that’s news to me.
(Participant 51)

This viewer refers explicitly to his or her own (lack of) knowledge about this item; a first step in linking new information to what is already known about the news or oneself. In the final quote something similar is evident, when the viewer indicates that he/she does have prior knowledge about the issue, but in addition explicates that there is a more direct link or similarity between the content and the person, in that he/she is a teacher him/herself.

I am a starting teacher myself, and yes, that's right, in terms of tutor-age it's often just not right.

(Participant 41)

While an important domain overall, 'private world' was not equally important in the interpretations of each news item. Interestingly, a potentially emotional issue such as child abuse was seen as having the least of all three items to do with the viewer's personal life, whereas the other two items evoked more connections with the personal sphere. Other idiosyncratic domains were for instance 'leisure and sports', which included references to for instance the recreational functions of agricultural lands, and 'arts' which in its single occurrence referred to the children's book mentioned in a quote earlier. None of these domains were part of the original news program.

On a side note, one domain that has been hardly recognized in previous research is that of the 'viewing context'. It seems that when left free, the participant reports that the interpretation of a news item is not limited to elements that are directly or indirectly related to the news content but that a number of elements from the physical and social situation in which the news is viewed are included in the interpretation. Apart from the anomaly of the research setting (which included for instance a researcher and a video-set) these elements included the room in which the news was viewed, the weather outside the window, trees and birds, a neighbor passing by, drinking a cup of tea while watching, or having a smoke. This underlines that news viewing is something that takes place in a certain situation – in which in our case co-viewers, perhaps the most prominent 'elements' in a normal viewing context, were excluded (Csikszentmihalyi & Kubey, 1981; König, Renckstorff & Wester, 2004). Thus, the interpretation of a news program may also include parts from the immediate surroundings that often have nothing to do with the news content but may affect that interpretation.

Finally, the category 'other' acted as a container category for both elements that could not be fitted into one of the other domains, and for elements that are of a very general nature, not easily associated with any particular social domain, such as talking, thinking, etc. The large group of viewers that used elements in this category calls for exploration of additional domains.

Discussion: Domains in interpretations

In this section, we studied the diversity in use of domains in interpretations. A first finding is that most interpretations of one news item do not understand a news item in terms of just one or two main domains but of multiple domains.

Earlier research has found that when receiving news, audience members concentrate primarily on the central tendency of a news story (Graber 1984).

Correspondingly, one might expect that viewers primarily use domains that can be seen as part of the gist of an item. In part, this study does confirm this; the most frequently used domains were those representing the central themes in the news. Thus, we might speak of a certain uniformity in interpretations. In addition however, some domains seem to be applied to the news more or less regardless of specific subject matter. Perhaps these are domains that all viewers generally apply to the news. The recurrence of domains that are used by almost every viewer and with almost every news item, seems similar to the types of elements that were used in interpreting any item by every viewer discovered earlier. This may point to the existence of general news schemas, this time on a thematic level; standard frames of news interpretation that consist of large categories concerning politics, the own private world, the media, and perhaps a number of other categories. Both domains pertaining to the specific content of the item and these general domains may account for similarities in interpretations. However, there is much variation in the intensity of use of domains, so between individual interpretations there is some diversity in this regard too.

In addition, each news item was interpreted in terms of several domains in addition to the central and general ones, often with a secondary relation to the main theme of an item. Furthermore, viewers used domains that were not part of the news content at all, and conversely sometimes domains in the news tended to be ignored. In these phenomena seem to lie the largest variations between interpretations regarding domain use. In addition, viewers not only directed their thoughts towards the news content, but also towards the viewing context ('interaction situation', cf. Chapter 2), despite efforts to keep this situation as unobtrusive as possible, such as through the exclusion of co-viewers. In a more 'natural' situation the viewing situation as domain may be even more dominant in the interpretation.

Discussion research Question 2

One of our main questions was whether a uniform news program elicits uniform interpretations or whether and in what sense it provides room for variation. In the above we attempted to investigate differences and similarities in interpretations by studying the size of interpretations, and the elements, types of elements, relations, and domains they contain. Indications were that interpretations in this study were very diverse on some levels, and more uniform on others.

The body of interpretations in this study consisted of a wide array of elements, of many different types, all sorts of specific relations, and references to many different social domains. There is much variation in elements, types, relations, and domains; some are used extensively, other much less. Furthermore, components in interpretations ranged from strictly related to the news message

to having only the slightest connection to it. This diversity was not unrestricted however, as viewers directed their interpretations towards a limited number and consistent core of types of elements; interpretations consisted largely of actors and their acts, and objects as well as feelings, and attributes of actors, acts and objects. A number of these 'core' of elements referred to relations, predominantly causal and logical relations related to acts, events, and objects. Furthermore, the most frequently used domains were domains that bore a direct relation to the central parts of what was probably the intended message from a producer's point of view – the 'main themes', so to speak. In addition, although different news items often provoked different relevant domains, there did seem to be a number of domains recurring throughout the program, such as politics, the media, and private world. A certain level of commonality may not be surprising; members of the public share much knowledge and perceptions with other members of the public and with the media. These common traits of the social system govern much of the public's and the media's construction of reality. Without such communalities, neither communication, nor social life in general would be possible. Being directed to the central parts of the item, common traits of many interpretations may represent viewers' efforts to understand the central message the news was trying to convey.

Many of the components in the interpretations were not immediately evident in the news, or were not part of the core 'message' of the news item. But the opposite is also true; things that seemed to be central parts of a news item as defined from an institutional point of view did not always return prominently in the interpretation of that item by its viewers. This implies that although shared interpretation patterns exist among viewers of the same news program, independent thought is very much possible, and is not exceptional.

Assessing degrees of difference

Focusing on the use of components has revealed in some detail aspects of diversity and consistency among interpretations of the same news program. Our description of component use has revealed in some detail how viewers made sense of the news program, in a more comprehensive than merely counting the words or assessing reproduction of facts from the news would have. Differences in how people interpret the news are not only in the mere size of their interpretations or the number of facts they 'correctly' reproduce, but also in how they use objects and actors, causes and attributes, and how they see things in the context of different social domains.

However, although we now have a more elaborate picture of the components of news interpretations, we do not know much about how they are related to diversity between interpretations. We know which components were used, and the variance with which they were used by all our participants. But it still

remains difficult to compare interpretations in terms of degree of diversity. Therefore, the next question is *to which degree* the different interpretations differ from one another. To this end, we analyze which interpretations contain more different elements, types of elements, relations, and domains than which other interpretations. As stated above, it seems that all interpretations consist of at least some common elements, types of elements, relations, and domains. Some interpretations seem to also include less commonly used components. Therefore, we may hypothesize that the latter interpretations are the more 'complex' interpretations, that is, more elaborate and cohesive than interpretations that merely contain common components.

Differences in interpretive complexity: Research Question 3

This study's main objective is to determine whether interpretations of the same news program are uniform or diverse. Above, we described the different elements, types of elements, relations, and domains interpretations consisted of. Interpretations of the same news program were diverse in some regards; they contained different elements, etc. than other interpretations of the same program. Furthermore, some specific element types, relations, and domains were more frequently part of interpretations than others. Although these results did indicate that interpretations made by different viewers of the same program are not the same in every aspect, the extent of this variation is still uncertain. For this it is necessary to assess the *degree* of differences in interpretations. Thus, this section focuses on the degree of differences in interpretations, by use of four indicators of interpretive complexity: Specificity, heterogeneity, micro-integration, and macro-integration. In the subsequent section we study whether different viewers produce different interpretations; here we begin with describing variations in interpretive complexity.

According to our theory, knowledge of and motivation towards a specific knowledge domain, in addition to general knowledge and motivations, affect how viewers interpret the news. Therefore, we assume that how people use components in interpretations is related to the subject matter presented in a news program. The results up to now partially support this view; interpretations of individual news items contained many elements, relations, and domains that were different from those used in interpretations of other items, although many similar types of elements, relations and domains were observed as well. Therefore, with the specific aim of determining degrees of variation, below we report: 1. How the four indicators of complexity were distributed in regard to the overall news program, and 2. How the four indicators were distributed if we take into account the different topics of each news item.

Complexity differences between interpretations

In this first analysis, we study differences in interpretive complexity not taking into account differences in subject matter, instead first concentrating on the degree of variation in interpretive complexity regarding the entire news program (i. e., the three stimulus items lumped together). If the news program's content directly determined an interpretation's complexity, one would expect only limited variation in amounts of elements, types, relations, and domains in each interpretation.

Measurement

The number of *singular* occurrences of a component in interpretations was analyzed; that is, the number of *unique* elements, *unique* types of elements, *unique* relations, and *unique* domains present in each interpretation. This deviates from the procedure followed in Research Question 2, where we counted each time an element, etc. was encountered, regardless if the same element had occurred in the same interpretation before. The rationale behind this is that interpretive complexity refers to the degree to which a given interpretation recognizes aspects of various nature of an issue. If an interpretation consists of many references to the same aspects, this does not make it more complex, only more elaborate. To recapitulate, the four indicators of interpretive complexity were as follows (cf. Figure 1):

- *Specificity*: The number of unique elements (differentiation)
- *Heterogeneity*: The number of unique types of elements (differentiation)
- *Micro-integration*: The number of unique relations between two individual elements
- *Macro-integration*: The number of unique domains

The question is whether each interpretation contains about the same amount of elements, types of elements, relations, and domains as any other interpretation. We assessed the degree of variation through use of standard measures of central tendency and variation (mean, median, standard deviation, range) as well as other measures for describing frequency distributions (skewness and kurtosis).

As the first analyses concentrate on diversity in interpretations of the entire program, interpretations were regarded as reconstructions of the entire news program, and specificity, heterogeneity, micro-integration, and macro-integration were analyzed accordingly ($N = 60$). Thus, in methodological terms, here the recording unit is the interpretation of three news items together (i. e., the unit of which characteristics are recorded), whereas the unit of analysis is a person (i. e., the 'cases' used in statistical analyses). This meant counting references to unique elements, types of elements, etc. for each of the 60 interpretations separately. Thus, for instance each unique domain was counted one time

only in each individual interpretation, even if it was referred to more than once in the same interpretation.

Results from the analysis procedure as described in the method section are reproduced in Table 10. In addition, graphic representations of the distributions are presented in Figures 3–5. In the histograms of the four variables the accompanying normal curve is projected, for optical comparison with a normal distribution. Below, we discuss the four aspects of complexity separately.

Results

Table 10. Distribution of interpretive complexity scores for entire news program

	Specificity (no. of elements)	Heterogeneity (no. of el. types)	Micro-integration (no. of relations)	Macro-integration (no. of domains)
<i>N</i>	10,769	998	680	677
Mean	179.48	16.63	11.33	11.28
Std. Deviation	135.31	3.99	11.17	1.91
Median	130.50	16.0	8.50	11.0
Minimum	30.0	9.0	0	7.0
Maximum	682.0	26.0	55.0	15.0
Skewness	1.88	.20	2.0	−.011
Kurtosis	3.90	−.29	4.51	−.41

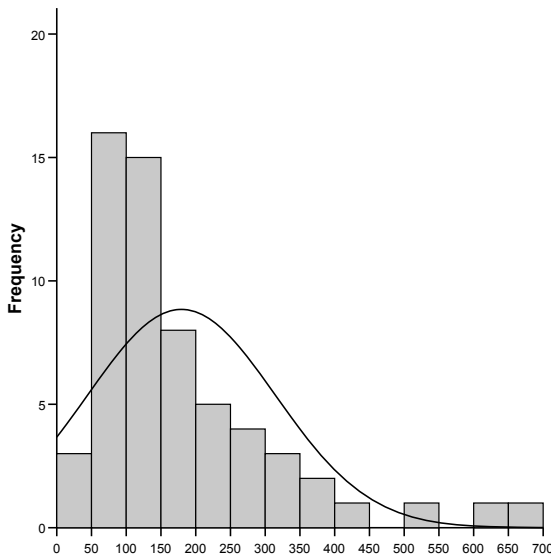


Figure 3. Specificity: Distribution of number of elements per interpretation

Differentiation: Specificity. We defined highly specific interpretations as containing many different elements such as individual actors, acts, events, etc.; such interpretations are specific as they contain many different details. On average, the interpretation of the three news items combined consisted of almost 180 individual actors, acts, objects, attributes, causes, etc. (Table 10). But do interpretations of the same news program differ in specificity? Figure 3 shows that values of specificity were dispersed along a large distance. This is confirmed by a large standard deviation and a large range of 652 elements between minimum and maximum scores (Table 10). However, the distribution of the values was skewed; the median value is lower than the mean value, that is, most interpretations were below average in specificity (cf. normal curve in Fig. 3). Examining the box plot of the distribution identified a group of four exceptionally specific interpretations (cases 3, 14, 33, 54; cf. Appendix F), three of which were the same extremely ‘wordy’ interpretations previously encountered.

This high skewness makes it useful to look at the distribution without the most extreme interpretations. Without these four interpretations, the distribution approaches normality. Interpretations contained over 150 elements ($M = 152.23$, $SD = 87.03$, $n = 56$), whereas the extremely specific interpretations contained over 560 elements on average ($M = 561.0$, $SD = 115.29$). Within both groups, standard deviations were large. Furthermore, within the low specificity group the range between minimum and maximum scores was 345 elements ($Min. = 30$, $Max. = 375$), within the very specific group it was 269 ($Min. = 413$ – $Max. = 682$). These findings indicate that there were large differences in specificity between interpretations.

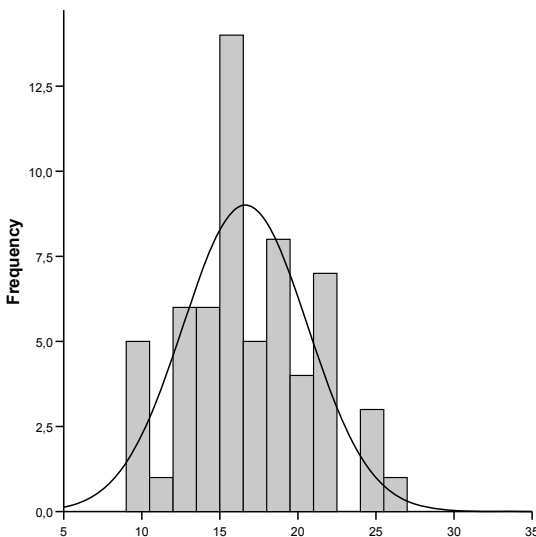


Figure 4. Heterogeneity: Distribution of number of element types per interpretation

Differentiation: Heterogeneity. An interpretation may be quite complex in terms of specificity. However, the same interpretation may be quite homogeneous, that is, the many elements in this interpretation may be largely of the same type, testimony of a detailed interpretation that nonetheless only spans a limited range. To investigate whether the basic elements in interpretations were heterogeneous, the number of *types* of elements to which these elements belong were counted. This study differentiates between 35 types of elements (cf. Table 3). That interpretations were not homogeneous is indicated by the fact that on average an interpretation contained 17 of these types, with a maximum of 26.

With a range of 9–26 types, variations in the degree of heterogeneity seem quite large; the most heterogeneous interpretation contained about 75 % of all possible types of elements, whereas the least heterogeneous interpretation contained merely 25 %. However, this variation must not be overestimated. As seen above, almost 75 % of the types of elements referred to only a limited range of element types, mostly actors, acts, and objects and their attributes. Here, we see that the distribution is approximating normality, and standard deviation is relatively low, indicating that the variation in the number of types has its boundaries; the bulk of interpretations contains between about 12 and 22 types (cf. Figure 4, *SD*, skewness, and kurtosis in Table 10). However, the low standard deviation is probably partly attributable to there being a limited number of types of elements.

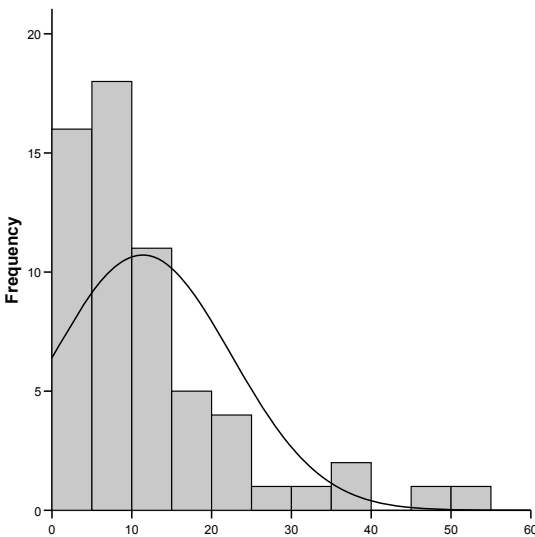


Figure 5. *Micro-integration: Distribution of number of relations per interpretation*

Integration: Micro-integration. A differentiated interpretation need not necessarily be a cohesive interpretation; even highly specific and heterogeneous

interpretations may fail to relate details in a causal, logical or temporal manner. Viewers were capable of relating individual elements while watching the news; interpretations on average contained eleven individual explicit relations, which is almost 6.5 % of the total amount of elements used – the number of possible relations was unlimited (Table 10). Although only a small proportion of the total amount of elements was connected in interpretations, there is a large variation (Table 10, *SD*; Figure 5). The range between low and high number of relations was extensive; some interpretations contained over 40 relations whereas three interpretations did not refer to any explicit abstract relations.

The median again is lower than the mean, indicating that akin to specificity, distribution of the scores was highly skewed (cf. also the normal curve in Fig. 5). In other words, most interpretations contained less than eleven relations. This was due to the same small group of cases as seen with specificity (cases 3, 14, 35, and 54), plus an additional case no. 8, who were also extremely micro-integrated interpretations. These extremely micro-integrated interpretations contained on average 41 relations (*SD* = 9.67). Distribution within the larger group of less micro-integrated interpretations was representative of a normal, symmetrical distribution. The majority of these contained between one and ten relations (*M* = 8.64; *SD* = 6.36, *n* = 55). Again, as seen from standard deviations, individual differences within the two groups could be large, especially in the larger group, indicating that even within these groups differences in cohesiveness could be great (cf. *Min.-Max.* low micro-integration group = 0–25, high-integration group = 32–55). This indicates that interpretations were diverse in terms of micro-integration.

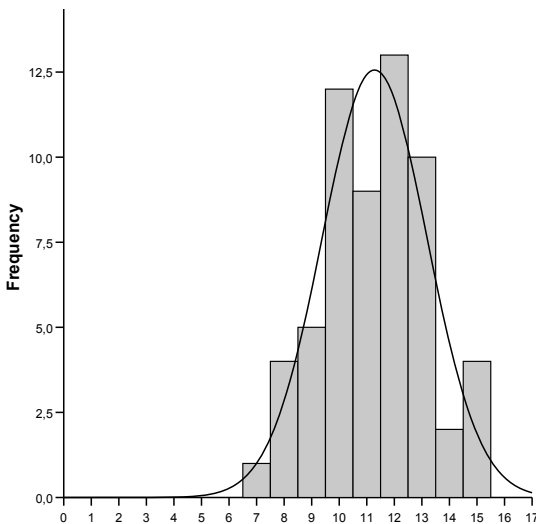


Figure 6. Macro-integration: Distribution of number of domains per interpretation

Integration: Macro-integration. Macro-integration indicates the integration of the interpretation in terms of the number of socio-cultural domains incorporated in each interpretation. Some viewers may have highly specific, heterogeneous, and micro-integrated interpretations that concentrate only on one or two social domains, whereas others may include numerous different areas of society. Generally, interpretations had a fairly high level of macro-integration; of a maximum possible number of 17 (cf. Table 4), interpretations related the news program on average to 11 unique domains. Some interpretations contained almost all possible domains.

With a range of 7–15 domains, some interpretations are much more macro-integrated than others. Earlier analyses showed that in general a limited number of domains were most salient across interpretations, but that a larger number of lesser used domains were also present. Table 10 and Figure 6 confirm this finding; by far most interpretations contain between 9 and 13 domains, which can also be gained from the somewhat ‘spiky’ shape of the normal curve in Figure 6. Similar to heterogeneity, the distribution of macro integration contained no extreme high or low scores. In other words, interpretations are diverse in the degree to which they contain different domains, but a relatively large part of the degree of domain use is similar across many interpretations.

Conclusions

From these results we concluded that interpretations were diverse in terms of complexity, ranging from (sometimes extremely) complex to relatively simple on four aspects. Interpretations seemed more diverse on some aspects than on others, but comparison of the variances is difficult as they were measured along different scales. In order to compare diversity between variables measured on different scales, we used the variation coefficient V (Bolle, Göbel & Lenoir, 1971). This coefficient presents the standard deviation as a proportion of the mean (SD/M). V for the four indicators was: Specificity: .75 (.57 $n = 56$), heterogeneity: .24; micro-integration: .99 (.74 $n = 55$); macro-integration: .17. Thus, interpretations vary more in terms of specificity and micro-integration than heterogeneity and macro-integration. Interpretations varied on all aspects of interpretive complexity to some extent, but overall the greatest differences between individual interpretations were in the degree to which they referred to individual elements, and the degree to which they related those elements on a basic level.

Interpretive complexity differences between news items

Above we described interpretive complexity for the three news items taken together. This was done to get a picture of the overall variation in interpretive complexity, but in doing so, we did not take into consideration that differences

between news items might relate to complexity differences in interpretations. One might expect that an item's content is inconsequential, for instance because its interpretation is only dependent on the viewer's general capabilities and willingness to process information, regardless of specific knowledge and motivation. This is seemingly suggested by the above analyses, as the entire program did not produce similar interpretations. But earlier, differences in the use of especially elements, relations, and domains between each news item were found. For each news item, many different elements, relations, and domains were used (whereas differences in the use of types of elements were less evident). This gives reason to suspect similar differences in interpretive complexity related to item content. Thus, the question is whether differences in complexity are related to the specific topic of a news item. To answer this question, the four complexity aspects were analyzed for each news item separately. If differences in content of the news items do not matter, we should not find any remarkable differences in interpretative complexity aspects between the three test items.

Measurement

In this section we analyze interpretations of separate news items. Therefore, in contrast to the analyses of interpretations of the entire news program, the recording unit is an interpretation of one news item. Thus, here for each news item separately, 60 individual interpretations were analyzed for references to elements, types, relations, and domains. For instance, a unique domain was counted only once per news item, even if an interpretation referred to the same domain more than once. For the next news item, a reference to that same domain was counted again.

To enable a fair comparison between news items, we accounted for the different number of 'breaks' for verbalization assigned to the interpretations of each news item in the test program (Table 2) by using the average scores 'per break' when comparing the scores of each news item (Table 11).

Results

The same pattern as with the total news program recurred with all three separate news items; specificity and micro-integration showed larger variation than heterogeneity and macro-integration. Furthermore, with each news item a virtually identical, relatively small group of interpretations were extremely specific and micro-integrated. Variation in complexity did not increase or decrease with different subject matter; variance for each indicator was similar for each separate news item. This indicates that interpretations of the news had about the same range of diversity regardless of subject matter. Therefore, subject matter did not increase or decrease diversity between interpretations; for every news

item, differences between individual interpretations were equally large. Below we examine if, despite this recurrent pattern, there are differences in interpretive complexity between the news items, again for each indicator separately.

Table 11. Distribution of interpretive complexity scores for three news items

	Specificity (no. of elements)	Heterogeneity (no. of el. types)	Micro-integration (no. of relations)	Macro-integration (no. of domains)
Child abuse				
N	3,150	688	190	380
Mean	52.50	11.47	3.17	6.33
Std. Deviation	46.37	3.87	3.72	2.06
Median	36.0	11.50	2.0	6.0
Mean per break	5.83	1.27	.35	.70
Minimum	5.0	4.0	0	2
Maximum	246.0	21.0	18	11
Skewness	2.07	.35	1.81	.38
Kurtosis	5.06	-.20	3.91	-.39
Teacher shortage				
N	3,970	779	266	336
Mean	66.18	12.98	4.43	5.60
Std. Deviation	48.84	3.43	4.72	1.88
Median	52.50	13.0	3.0	6.0
Mean per break	6.62	1.30	.44	.56
Minimum	13.0	5.0	0	1
Maximum	301.0	21.0	29.0	9.0
Skewness	2.44	.28	2.89	-.07
Kurtosis	8.47	-.08	12.06	-.48
Agriculture				
N	3,648	710	224	369
Mean	60.80	11.83	3.73	6.15
Std. Deviation	51.41	3.78	4.33	2.25
Median	47.50	12.0	3.0	6.0
Mean per break	6.76	1.31	.41	.68
Minimum	3.0	3.0	0	2
Maximum	261.0	22.0	19	14
Skewness	1.94	.11	2.0	.70
Kurtosis	4.0	.13	4.08	1.47

Differentiation: Specificity. The interpretations of the three items on average contained about the same amount of elements for each news item per break (Child-abuse-Teacher shortage: $p = .058$, Child abuse-Agriculture, $p = .064$, LT-AW, $p = .775$, all at $\alpha < .05$, paired samples t-test, two-tailed). However, if we consider only the largest group of less specific interpretations (i. e., excluding the four consistently extremely specific interpretations), there were indeed differences in the specificity with which each item was interpreted. Interpretations of the item Child abuse on average were less specific than interpretations of the item Teacher shortage ($p = .02$; Child abuse $M = 4.95$, $SD = 3.76$; Teacher shortage $M = 5.71$, $SD = 3.10$). There were no differences between interpretations of the other items (Child abuse-Agriculture $p = .17$; Agriculture $M = 5.62$, $SD = 3.76$; Teacher shortage-Agriculture $p = .82$). So, not all news items were interpreted equally specific.

Differentiation: Heterogeneity. Earlier, we found that interpretations were concentrated around certain types of elements (Table 7). Did this mean that every news item was interpreted equally heterogeneous? That is, were there differences in the number of types of elements that were associated with the individual news items? Comparison of the mean heterogeneity scores (per break, Table 11) did not yield significant differences between the items (Child abuse-Teacher shortage: $p = .57$, Child abuse-Agriculture $p = .38$, Teacher shortage-Agriculture, $p = .68$). As distributions for heterogeneity could all be considered 'normal', accounting for extremely heterogeneous interpretations was irrelevant (i. e., there are no 'outliers'). Thus, in accordance with our earlier findings, all news items were indeed interpreted with use of a relatively fixed number of twelve types of elements.

Integration: Micro-integration. Did interpretations of one news item contain more relations than another? Similar to specificity, a small number of interpretations of all items were extremely 'micro-integrated'. This was most obvious with the news item Teacher shortage (cf. skewness and kurtosis in Table 11). The average number of relations per break made by the entire research group did not vary with each news item (Child abuse-Teacher shortage: $p = .063$, Child abuse-Agriculture $p = .159$; Teacher shortage-Agriculture, $p = .611$). However, in the group of relatively modestly micro-integrated interpretations (i. e., excluding the five aforementioned extreme interpretations), interpretations of the item Teacher shortage included more relations than of the item Child abuse (Child abuse-Teacher shortage $p = .003$ (Child abuse $M = .26$, $SD = .26$, Teacher shortage $M = .37$, $SD = .31$, $n = 55$), Child abuse-Agriculture $p = .35$; Agriculture $M = .30$, $SD = .26$; Teacher shortage-Agriculture $p = .09$). In other words, interpretation of one news item was indeed more micro-integrated than that of another.

Integration: Macro-integration. Were there differences in the number of social domains that interpretations of the different news items contained? As with heterogeneity, distribution of macro-integration scores was more or less 'normal', which means there were no extremely macro-integrated interpretations. There were differences in macro integration relating to different news items; interpretations of the items Child abuse and Agriculture contained more domains than interpretations of the item Teacher shortage (Child abuse-Teacher shortage $p = .000$; Child abuse $M = .70$, $SD = .23$; Teacher shortage $M = .56$, $SD = .19$; Teacher shortage-Agriculture $p = .000$, Agriculture $M = .68$, $SD = .25$). There was no difference between the items Child abuse and Agriculture ($p = .497$). This is contrary to the tendency we have seen for the other components, where the item Teacher shortage was interpreted the most complex on two aspects. Apparently, viewers had a more specific and more micro-integrated interpretation of this news item, but at the same time perceived it as having to do with less social domains; in the eyes of the viewers Teacher shortage covered the most 'restricted' ground in terms of references to social spheres. This corroborates with our earlier conclusions that interpretation of the item Teacher shortage was very strongly focused on only one domain; 'education'.

Conclusions

All three separate news items showed the same pattern of interpretive complexity as with the total news program. None of the items lead to interpretations with drastically different diversity in complexity (neither less nor more diversity). This means that the same conclusion drawn for the entire set of news items is valid for each separate news item; no single news subject produced a singular uniform interpretation, and interpretations are equally diverse from one item to the next.

However, different news items did produce different levels of interpretive complexity. A given item may be interpreted more specifically, micro-integrated, or macro-integrated than another. Differences were primarily found between the item Child abuse, which was interpreted the least complex on two indicators, and the item Teacher shortage, which was interpreted the most complex on two indicators. In contrast, the item Child abuse was interpreted most cohesively in terms of macro-integration; in interpretations of this item viewers referred to the highest number of social domains. Possible explanations for this difference will be given in the next section. For now, as there are consistent differences between the two items, we conclude that differences in interpretive complexity must have something to do with differences in subject matter. In sum, subject matter of the news does not enlarge or decrease variety in interpretive complexity, but it does affect the degree of complexity. These findings indicate that subject matter matters; interpretive complexity is partly determined by the subject of the news.

Discussion research Question 3

News interpretations were not per definition undetailed, morselized representations; they often contained many different elements, which were often perceived as being connected in one way or another. In other words, a highly elaborate and cohesive interpretation of the news was possible. One may have expected that as viewers all watched the same news program, this would yield uniform interpretations. This was not the case, however, not all interpretations were equally elaborate or cohesive; one major finding of Research Questions 1–3 is that a uniform news program may lead to a striking diversity of interpretations in terms of complexity. In addition to the diversity in components of interpretations hinted to in earlier analyses, there was great variety between interpretations in terms of the degree to which they contained these components. Some interpretations, while of a news message with a fixed level of complexity, were far more specific, heterogeneous, micro-integrated, or referred to a wider range of social domains than others. This indicates that interpretations also vary in the kinds of components they contain; some interpretations contain relations or domains that other interpretations lack.

However, variation between interpretations was not equally as great for each aspect of interpretive complexity. Differences in specificity and micro-integration were strongest, in part due to a small group of extremely specific and micro-integrated interpretations. Interpretations were less diverse regarding heterogeneity and macro-integration. This corroborates with earlier findings that only a limited number of element types was used extensively by all participants, and that the focus of interpretations was primarily on a relatively small number of main domains. Apparently, through their shared cultural background, viewers agree more on aspects of an issue of higher levels of abstraction. It is valid to expect that members of the same society agree that a news item is about persons and that these persons do things, and on what the main social domain is that the item is about. What members of a society would agree on to a lesser degree is what *specific* persons are important actors related to an issue, and what precisely are causes and consequences of their actions.

Diversity in interpretations was found even when disregarding differences between subject matter reported in different news items. Comparison of interpretations related to different news items demonstrated the diversity in complexity to be very similar for every news topic. Thus, for every news item, interpretations had similar degrees of diversity on all aspects of complexity (e. g., on no item interpretations were much more diverse in heterogeneity than on another item). This means that it does not matter what the topic is for how diverse a news item is interpreted, which would have led to one given news item showing large variation between interpretations in complexity, while another news item would have had much less variation. Thus, differences between news topics do not widen or

decrease the range of variability in interpretations, the gaps between complex and simple interpretations remain the same regardless of topic.

Simultaneously however, different news items did yield interpretations with different complexity levels; one item encouraged all viewers to more complex interpretations than other items. So subject matter in part does affect the level of complexity with which it is interpreted; some issues seem more suitable for a complex interpretation than others. Although it may seem logical to attribute this to subject matter per se (a possible explanation being that some issues reverberate more in a society at a given time than others, or are more salient in a given period), it may not be ruled out that other differences in the news items, such as differences in presentational features, have affected interpretations. Complexity of informational content has been known to have the same effect as described above; increase of informational complexity resulted in increase in complexity decision making, but not in increasing or decreasing differences between simple and complex individuals (Schroder et al., 1967). A general conclusion from these findings, in combination with above qualitative findings is that if one observes different news subjects, differences in interpretation emerge that stay beneath the surface if differences in subject matter are not taken into consideration.

The analyses related to Research Question 2 indicated that many different elements and relations were used in the interpretations, whereas types of elements and domains were less diverse. The above analyses have demonstrated that the degree of component use was not equal across all interpretations. These two results provide indications that highly complex and more simple interpretations are different from each other in terms of both degree of complexity and components; complex interpretations do not only contain more but also different elements and types, parts of the highly complex interpretations refer to different causes and consequences for events, reasons for actions, and phases in issues, and relate a specific issue to more other social spheres. One might say that highly complex interpretations are reconstructions of an issue that look beyond the most obvious possible characteristics and dimensions, resulting in perhaps a more multidimensional 'sophisticated' look on news issues. Our theory predicts that people with the most elaborate and organized knowledge, and who are motivated to use this knowledge in interpreting the news, are the people who produce the most complex interpretations. This is the question we investigate in the next section.

The relation between interpretive complexity and viewer characteristics: Research Question 4

The study's goal is to investigate variation in interpretations and their relation to differences between viewers. Above we found differences in interpretive complexity, using four aspects of interpretation related to its complexity; some inter-

pretations were more specific, heterogeneous, micro-integrated, or macro-integrated than others. We proposed that differences in *complexity* are associated with differences in *content* of interpretation, at least in terms of the components of interpretations. Now the question is: *Why* do these differences and similarities exist? Thus, the objective of this final section is to explore whether variations in interpretations are systematically related to viewer characteristics.

According to our theory, interpretations differ from one another because news reception processes are driven by partially personal knowledge and motivations (i. e., relevance structures). We expect that viewers whose personal characteristics are relevant for watching the news have more complex interpretations of that news. Most notably, we search for relations between interpretive complexity and characteristics associated with relevance structure – knowledge and motivation. Viewers who share certain levels of knowledge and motivation should also share a certain level of interpretive complexity.

However, differences in knowledge and motivations are not simply person-specific; they are specific to knowledge domains (see Chapter 3). Viewers have more knowledge of and are more motivated towards some issues and less for others. Consequently, differences in interpretive complexity should also be related to the subject matter reported in the news. The above analyses showed interpretive complexity levels were different for different news items. Likewise, we expect that interpretive complexity differences are associated with personal characteristics as well as a news item's topic. Therefore, we also investigate whether different groups of viewers produced interpretations of different complexity for different news items.

Analysis

We used bivariate correlations to analyze relations between social-structural characteristics, media use, and knowledge and relevance factors with the four aspects of interpretive complexity. In addition, in order to control correlations for partiality, *Beta*-scores were calculated (multiple regression). It should be noted that it was our aim to explore which viewer characteristics are related to complexity of television news interpretation, and not to test a theoretical model. All following tables show summaries of bivariate correlations (Pearson's *r*) and multivariate analyses (*Beta* coefficients).

The relatively small number of participants forced us to restrict the number of variables in the multivariate analyses. For this reason, some specific variables from the correlational analyses were combined for the multivariate analyses. In each case, interest in, and personal relevance or importance of the issue were judged conceptually similar; the variables were conceptually related to one another in the sense that they all represented motivation towards the subject matter. However, variables were combined only if they were empirically

similar as well, that is, if they showed high correlations. Specifics of combined variables are reported below.

Knowledge and relevance variables were consistently very strongly correlated. However, as they represent two conceptually different entities (knowledge and motivations), they were not combined into one variable. However, this presented a problem; as a result of their strong correlation they ruled each other out in the multivariate analyses. Therefore, all multivariate columns below show models which exclude the variable issue-knowledge. This means that, although in the multivariate columns we report on explained variance in interpretive complexity related to involvement and interest in issues, in fact we cannot distinguish between these factors and the relationship between interpretive complexity and issue-knowledge. In each table, we have placed the *Beta* coefficients for issue-knowledge between brackets. These are the coefficients for the regression models with issue-knowledge and without involvement/interest. *R*² scores for these models are provided in the text, and regression models with knowledge variables are in Appendix I.¹⁰

Interpretive complexity differences between viewers

To study whether different viewer groups interpret the news at different levels of complexity regardless of subject matter, interpretive complexity levels were analyzed for the entire news program without distinguishing between the three separate news items. For the regression analyses, general interest in information and general involvement were combined into one variable in the regression analysis, because of their conceptual and empirical similarity.¹¹

Table 12. Relation between interpretive complexity and viewer characteristics for entire news program (bivariate and partial correlations)

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β
Social structural characteristics								
Gender (0 = m, 1 = f)	-.190*	-.248*	-.109	-.112	-.130	-.190	-.059	-.111
Age	-.027	-.083	.019	-.015	-.067	-.088	-.131	-.061
Education	.235**	.117	.225**	.105	.211*	.144	.280**	.180
Occupational prestige	.185*	.045	.235**	.143	.124	.005	.140	.004
News Use								
Watching news/ current affairs programs	-.031	-.253*	-.038	-.229	-.047	-.244*	-.265**	-.396***

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β
Watching selectively and attentively	.256**	.311*	.235**	.239	.242**	.290*	.046	.207
Knowledge & motivation								
General knowledge	.201*	[.027]	.159	[-.008]	.219**	[.065]	.108	[.029]
News watching motives: cognitive	.348***	.318**	.305***	.261	.338***	.303*	.184	.287**
News watching motives: amusement	.041	-.117	.060	-.040	.108	-.033	-.071	-.140
General interest	.184*	-	.153	-	.189*	-	.131	-
General involvement	.247**	-	.218**	-	.170*	-	.070	-
General involvement and interest	-	.096	-	.088	-	.037	-	-.039
<i>R</i> ²	31.1		23.7		25.1		24.7	

Note: * $p = .10$, ** $p = .05$, *** $p = .01$; *r* is 1-tailed; *R*² regression models excluding issue-knowledge; General involvement = personal relevance and importance

The degree of complexity of interpretations of the news program was associated with certain specific viewer characteristics. The general pattern points towards relations between factors pertaining to relevance structure and complexity of interpretations. Of the social-structural factors, gender, educational level, and occupational prestige were related to differences in aspects of interpretative complexity (Table 12). Men produced more specific – but not more heterogeneous and integrated – interpretations than women, higher educated viewers had more differentiated and integrated interpretations than lower educated viewers, and viewers in high prestige occupations constructed more differentiated interpretations than others. After multivariate control, only the relation between gender and specificity was found significant.

Two news use factors were also associated with interpretive complexity, both in zero-order and in multivariate correlations. The inclination for selective and attentive use of broadcast news was one of the strongest correlates with complexity aspects; people who purposefully select the news and watch it attentively had highly differentiated interpretations and used more relations in interpreting the test program. People who frequently watch current affairs programs interpreted the news using fewer elements, relations, and domains than participants who watch these programs less frequently.

Knowledge and motivation factors are of chief interest here, as they are the most 'direct' reference to characteristics of relevance structure. All cognitive and motivational factors showed significant bivariate correlations with at least some complexity aspects. One exception, consistent with the expectations, was that watching the news out of leisurely motives was not related to any aspects of interpretive complexity. Viewers who put on the news because they want to be informed had more complex interpretations than viewers who fit this image to a lesser extent, save for macro integration. Viewers with more general knowledge had more specific and micro-integrated interpretations, whereas highly involved viewers had more differentiated interpretations that contained more relations than less involved viewers. However, after multivariate control, of these factors only watching the news for information purposes is significantly related to complexity aspects (model including issue-knowledge: Specificity, $R^2 = 30.5$, Heterogeneity: $R^2 = 23.1$; Micro integration. $R^2 = 25.4$, Macro integration $R^2 = 24.6$).

Conclusions

The overall pattern in bivariate correlations was largely consistent with our expectations. Viewers of whom it may be expected that their relevance structures contain much and well organized relevant knowledge and who are motivated to use this knowledge produced more complex interpretations. This was not only the case for 'direct' measures of knowledge, interest, and news watching motivations, but also for more indirect measures educational level, occupation, and news use patterns. Above, we proposed that all these latter factors contain at least some aspects of knowledge and motivation related to news consumption (cf. Luskin, 1990). Thus, in general, viewers with ample knowledge and motivation have more elaborate interpretations, in which details are related on a micro as well as on a macro level, whereas those with minor levels of previous knowledge and motivation, are less willing or able to consider a topic in much detail, and resort to fragmentarism, having less ability or motivation to integrate.

When controlled for partiality, at the level of the entire news program differences in neither level of knowledge nor information interest and involvement resulted in interpretive differences. The factors that retained a relation were still accountable for by using the same above reasoning. Viewers who watch the news selectively and attentively are more inclined to watch the news while using their knowledge to some degree of intensity. This only resulted in using more elements and relations, and not in interpretations that were more heterogeneous or macro-integrated. In other words, while interpretations of attentive and selective news viewers contain more elaborate detail, and more causal, logical, and temporal reasoning, they do not incorporate more diverse

details, or refer to a larger array of social domains. This may indicate that such viewers do not necessarily have more, or better organized knowledge, just that they have the inclination to use present knowledge at a more intense level. A motivation for cognitive use of the news also makes a viewer more likely to put present knowledge on a topic to good use; cognitively motivated viewers have more complex interpretations, with the exception of heterogeneity. Based on previous research, one would have expected men to have significantly more complex interpretations of the news. However, men only produced more specific interpretations than women. This use of actors, acts, objects, etc. is most similar to what is most often measured in studies of news recall, in which women frequently are found to underperform compared to men. Here, the difference does extend to neither the heterogeneity of interpretations, nor relational reasoning or reference to various domains in society. Still this one difference is there, perhaps because parts of men and women's everyday life worlds are still different. Different life worlds involve different knowledge and motivations, which lead to different interpretations.

Interpretations of frequent current affairs program watchers were low in specificity and integration. A possible explanation is that knowledge structures and thinking based largely on exposure to television tend to be less complex than those based on – supposedly more complex – print information (Graber, 1984; Sotirovic, 2001).

The four aspects of interpretive complexity had different patterns of relations with viewer characteristics; viewer characteristics were not consistently related to all aspects of complexity in the same way. For instance, gender differences were related to differences in specificity, but not the other three indicators, knowledge was related to specificity and micro-integration and not to heterogeneity and macro-integration, etc. Earlier we have seen that specificity and micro-integration showed similar distribution patterns, and heterogeneity and macro-integration were also similar to one another. Interpretations were most diverse with regard to specificity and micro-integration, because of their less abstract nature. Consequently, this higher degree of variation led to a larger number of relations with viewer characteristics for both aspects. Furthermore, specificity and micro-integration are both conceptually and empirically related. Specificity is a prerequisite for micro-integration; the more elements a viewers uses, the greater the number of relations between those elements possible. The aspects are empirically related as specificity was assessed as the number of elements, including the number of relations which were regarded as special kinds of elements. It is therefore expected that specificity and micro-integration will often co-occur. Heterogeneity is also conceptually and empirically related to specificity – the number of types of elements is related to the number of elements used – but due to the smaller variation, there were less correlations. Macro-integration is the least strongly related to all other indica-

tors (cf. Appendix E). Despite the minor variation of heterogeneity and macro-integration, they were related to a number of viewer characteristics.

We conclude that different viewers do interpret the news at different levels of complexity. However, most viewer characteristics are only indirectly, that is, in a theoretical sense, related to relevance structure. In other words, if measured without regard for subject matter, differences in interpretive complexity are best explained by differences in structural, or person-specific, and not by issue-specific characteristics. Furthermore, the pattern of relations is not completely consistent. Some viewer characteristics are related to some but not all aspects of interpretive complexity. Although this may be partly explained by differences in conceptual and measurement level, it may also be partly empirical; for instance having a high status job may lead you to produce more differentiated interpretation, while it may not be important for making your interpretation more integrated.

Interpretive differences between news items

Above, interpretive complexity was measured without regard to the idea that viewers most likely have different knowledge and motivation for different subject matter, and that this affects their interpretation. Even so, a number of differences between viewers, most strongly gender differences and differences in media use and motives for media use, accounted for differences in interpretive complexity. The findings indicated that viewer groups different in structural, cross-context characteristics showed the strongest interpretive complexity differences.

However, according to our theory, this is not a realistic conception of the reception process as knowledge and motivation are always related to specific domains. Furthermore, earlier we found differences in levels of complexity between news items with different subject matter. In other words, complex interpretations are not just specific to persons with certain structural characteristics (e. g., men always have more complex interpretations of any news issue), but complexity is also related to the issue reported in the news. Therefore, we must take into account whether relations between viewer groups with certain characteristics are different for each individual news item.

If subject matter of items is relevant for interpretive complexity, we expect that different viewer characteristics relevant for the interpretation of the entire news program will be related to interpretive complexity for every news item (e. g., men will not have a more complex interpretation than women of every news item). Second, characteristics that are more specific to the specific subject in a news item, such as issue-interest, issue-knowledge, and issue-involvement, will be relevant for interpretive complexity. Therefore, in the correlational analyses, for each separate news item, the specific issue-interest, issue-knowledge, and issue-involvement relevant to the subject of the news item were included.

Test Item 1: Child abuse. For the first news item – on child abuse – we integrated the variables ‘personal relevance’ and ‘importance’ of the issue child abuse with ‘interest in schools, care and doctors’ on account of their strong correlation. The result was one variable, called ‘issue-involvement and interest’ which was used in the multivariate correlation analyses in order to reduce the number of variables in the model.¹²

Table 13. Relation between interpretive complexity and viewer characteristics for item Child abuse (bivariate and partial correlations)

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>R</i>	β
Social structural characteristics								
Gender (0 = m, 1 = f)	-.141	-.184	-.152	-.176	-.059	-.104	-.098	-.196
Age	.049	-.037	.133	.057	.037	.007	-.041	-.061
Education	.194*	.091	.152	.068	.168	.079	.185*	.141
Occupational prestige	.202*	.086	.197*	.060	.151	.073	.073	-.053
News Use								
Watching news/ current affairs programs	.043	-.123	.067	-.184	-.001	-.187	-.051	-.167
Watching selectively and attentively	.261**	.301**	.311**	.328***	.248*	.248	.176	.236
Knowledge & motivation								
Issue-knowledge on child abuse	-.035	[-.097]	-.020	[-.065]	-.020	[-.078]	-.044	[-.111]
News watching motives: cogni- tive	.271**	.267*	.327***	.336**	.333***	.343**	.251**	.274**
News watching motives: amuse- ment	-.063	-.203	-.029	-.208	-.012	-.139	-.052	-.164
Interest in schools, care and doctors	.053	–	.062	–	.118	–	.201*	–
Personal relevance	-.117	–	-.142	–	-.120	–	-.172*	–
General importance	.145	–	.183*	–	.190*	–	.103	–

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>R</i>	β
Issue-involvement and interest	-	.061	-	-.006	-	.092	-	.081
<i>R</i> ²		22.6		27.1		22.8		18.3

Note: * *p* = .10, ** *p* = .05, *** *p* = .01; *r* is 1-tailed; *R*² regression models excluding issue-knowledge

As with interpretations of the program as a whole, social structural differences were related to interpretive differences. Highly educated viewers and viewers in high status occupations had more complex interpretations of the item Child abuse in some respects (Table 13). In contrast, gender differences played no role. After controlling for other factors, none of these variables were related to interpretive complexity.

Differences in media use were again related to interpretive complexity; viewers who say they consciously seek out the news and watch it attentively produced more differentiated and, only in bivariate relations, more micro-integrated interpretations. Watching broadcast news was not related to interpretive complexity.

Some relevance structural differences were important. People who watch the news for cognitive uses had more complex interpretations of the news item Child abuse. Viewers who found the issue of high general importance interpreted this item more heterogeneously and used more relations. Of note is that participants who indicated that the issue was highly relevant to them personally, produced interpretations that contained less domains than interpretations of people who did not find the issue relevant. Furthermore, whereas interpretive complexity of the entire news program was related to general knowledge levels, knowledge about the issue Child abuse was not significantly related to any complexity aspects. After control, only differences in cognitive motivations for news watching remained significant. The combined variable of issue-involvement and interest was not related to complexity in second order correlations. In sum, the item child abuse was not interpreted differently in terms of complexity by some groups (cf. men, news watchers) that were important in differentiating interpretations of the program as a whole. Furthermore, save for cognitive motives, differences between viewers pertaining directly to relevance structure were not related to interpretive complexity (model including issue-knowledge: *R*² = respectively 23.0, 27.4, 22.6, 18.7).

Item 2: Teacher shortage. For use in the multivariate analyses regarding the item Teacher shortage, the variables ‘general importance of the issue’ and ‘in-

terest in schools, care and doctors' were taken together as one variable on account of their strong correlation. This new variable was called 'Importance and issue-interest'.¹³

Table 14. Relation between interpretive complexity and viewer characteristics for item Teacher shortage (bivariate and partial correlations)

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>r</i>	β	<i>R</i>	β
Social structural characteristics								
Gender (0 = m, 1 = f)	-.100	-.163	-.045	-.023	-.038	-.105	.022	-.024
Age	-.053	-.114	-.028	-.08	-.072	-.156	-.095	-.021
Education	.229**	.107	.196*	.068	.186*	.065	.329***	.258*
Occupational prestige	.185*	.076	.243**	.182	.198*	.167	.133	-.039
News Use								
Watching news/ current affairs programs	-.028	-.242	-.031	-.264*	-.037	-.182	-.100	-.292**
Watching selectively and attentively	.290**	.361**	.269**	.300*	.304***	.311*	.169	.268
Knowledge & motivation								
Issue-knowledge on teacher shortage	.167	[.082]	.112	[.048]	.254**	[.168]	.243**	[.148]
News watching motives: cognitive	.339***	.308*	.321***	.279*	.302***	.179	.190	.200
News watching motives: amuse- ment	.042	-.125	.179	.014	.164	.055	-.009	-.110
Interest in schools, care, doctors	.103	-	.039	-	.193*	-	.023	-
General impor- tance	.168*	-	.056	-	.140	-	.176*	-
Importance and interest	-	.036	-	-.072	-	.114	-	-.111
Personal relevance teacher shortage	.107	.037	.090	.057	.186*	.067	.253**	.245*
<i>R</i> ²	29.0		27.5		26.3		26.0	

Note: * $p = .10$, ** $p = .05$, *** $p = .01$; *r* is 1-tailed; *R*² regression models excluding issue-knowledge

Interpretations of the item Teacher shortage were more complex for viewers with higher educations, and more differentiated interpretations and micro-integrated by viewers in more highly prestigious jobs (Table 14). In multivariate correlations, education was related to macro-integration.

The pattern for frequent news watchers and selective and attentive users was similar to the pattern pertaining to the entire program. Frequent news watchers produced less heterogeneous and less macro-integrated interpretations, and selective and attentive users had more differentiated and micro-integrated interpretations in multivariate relations.

Knowledge and motivational characteristics of viewers were related to complexity. Viewers with much knowledge about the issue teacher shortage had more integrated interpretations than viewers with less knowledge. Again, viewers having cognitive motivations for watching the news factors had more differentiated and micro-integrated interpretations of the item. Viewers interested in schools and other care issues used more relations. Finally, viewers perceiving the issue of teacher shortages as personally relevant and of general importance had more specific and macro-integrated, and more integrated interpretations than viewers who had such affections to a lesser extent. After multivariate control, complexity aspects were related to news watching motives. But the most notable difference with the news item Child abuse was that personal relevance of the issue was positively related to macro integration (model including issue-knowledge, excluding personal relevance and importance-interest: $R^2 = 29.3, 27.3, 26.8, 23.1$). In other words, there were slightly different processes at work in the interpretation of news items Child abuse and Teacher shortage. In the case of the item Teacher shortage, more issue-specific characteristics were important.

Item 3: Agriculture. For the multivariate analyses, ‘Involvement with the issue Agriculture’ was combined into one variable with ‘interest in agriculture and environmental pollution’. The new variable was dubbed ‘Issue involvement and interest’.¹⁵

Table 15. Relation between interpretive complexity and viewer characteristics for item Agriculture (bivariate and partial correlations)

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>R</i>	β	<i>r</i>	β
Social structural characteristics								
Gender (0 = m, 1 = f)	-.279**	-.230*	-.183*	-.092	-.243**	-.280*	-.074	-.136
Age	-.066	-.125	-.083	-.090	-.118	-.101	-.223**	-.180

	Specificity		Heterogeneity		Micro-integration		Macro-integration	
	<i>r</i>	β	<i>r</i>	β	<i>R</i>	β	<i>r</i>	β
Education	.225**	.102	.328***	.229	.198*	.195	.352***	.291**
Occupational prestige	.127	-.011	.188*	.045	-.025	-.206	.103	-.066
News Use								
Watching news/current affairs programs	-.094	-.281**	-.014	-.203	-.079	-.201	-.203*	-.377***
Watching selectively and attentively	.163	.160	.108	.094	.080	.113	.202*	.330**
Knowledge & motivation								
Issue-knowledge on agriculture	.436***	[.285*]	.351***	[.252]	.263**	[.077]	.242**	[.112]
News watching motives: cognitive	.350***	.305**	.242**	.178	.258**	.249*	.329***	.285**
News watching motives: amusement	.125	.050	.105	.112	.109	.032	.149	.055
Interest in agriculture and environment	.386***	–	.292**	–	.343***	–	.132	–
Issue-involvement	.430***	–	.337***	–	.238**	–	.300***	–
Issue-involvement and interest	–	.308**	–	.263*	–	.165	–	.060
<i>R</i> ²		40.0		28.3		26.3		40.8

Note: * $p = .10$, ** $p = .05$, *** $p = .01$; *r* is 1-tailed; *R*² regression models excluding issue-knowledge

Of the social-structural factors, gender, age, education, and occupational prestige level were all significantly related to aspects of complexity (Table 15). Men produced more differentiated and micro-integrated interpretations of the item Agriculture, younger viewers used more domains, highly educated viewers had more complex interpretations overall, and interpretations of viewers in higher status jobs were more heterogeneous. After multivariate control, two social-structural factors, gender and education, were correlated with interpretive complexity aspects. Male viewers had more specific and micro-integrated interpretations than female viewers; higher educated viewers had more macro-integrated interpretations than lower educated viewers.

Broadcast news use was again important in accounting for interpretive differences. Viewers who watch news programs more often used fewer elements and domains, also after multivariate control. Watching the news attentively and selectively as a news use pattern accounted for higher macro-integrated interpretations.

The news item Agriculture represented most strongly the pattern we expected regarding the role of relevance structure. All cognitive and motivational factors showed strong correlations with complexity, again except watching the news for amusement purposes. Viewers who were motivated to watch the news for information produced more complex interpretations. Likewise, interpretations by viewers with much knowledge on the subject, and by highly involved viewers were more complex, and viewers interested in agriculture and environmental issues had more differentiated and micro-integrated interpretations. After controlling for other factors, interpretations by viewers with high levels of issue-knowledge were more specific, and highly involved and interested viewers interpreted the item more differentiated (model including knowledge, excluding involvement-interest: $R^2 = 38.3, 27.3, 24.8, 41.3$). In other words, in addition to social structural and media use factors, in interpreting the item Agriculture issue-specific knowledge and motivations were important.

Conclusions

Results regarding Research Question 3 showed that the four indicators of complexity had the same degree of variation for each of the three news items. To some extent, the above analyses present a different case; with each news item the diversity in complexity of interpretations may be different; these differences in variance are associated with differences in viewer characteristics. For instance, with one news item the degree of domain use may be rather homogeneous for one viewer characteristic, but be varied when associated with another characteristic. Likewise, macro-integration may be different for two categories of a variable with one news item (e.g., high versus low education), but these differences may not be present with the next item. In other words, differences between interpretations are related not only to differences in news content, but also to certain viewer characteristics that viewers share; it is the combination of these two factors that does the trick.

Again, viewer characteristics related to knowledge and motivation – cognitive motives for watching the news, selective and attentive watching as a normal watching strategy – were correlated with interpretive differences with all news items. The social-structural factors are to a lesser extent related to complexity; gender is only related to specificity and micro-integration with one news item, education is only associated with use of more domains; a high education thus provides the knowledge, and/or motivation to connect a topic to other do-

mains in society, but it does not matter much for the other aspects of complexity. However, the fact that all mentioned factors are all structural, non-issue specific viewer characteristics, that is, traits that do not change when the subject reported in the news changes, indicates that interpretive complexity is partly related to person-specific, structural characteristics which only change slowly over time.

Issue-specific factors related to interpretive complexity were different for each news item. These were factors that can be seen as more direct indicators of viewers' relevance structures in a specific context; issue-knowledge, issue-involvement, and issue-interests. The relative importance of the factors was different for each news item. There were relatively few differences in interpretive complexity between different viewers with the item Child abuse; only different styles of news use and cognitive news use motives accounted for differences. For the most, all viewers interpreted this item with the same level of complexity, regardless of their knowledge, interest, and involvement. Interpretation differences were related to more issue-specific traits with the item Teacher shortage, and more so with the item Agriculture. For viewers to be able to achieve a high level of interpretive complexity it is important with these two items to have a high level of knowledge about the issue, and a strong interest with, or involvement with the issue.

In conclusion, findings point to the significance of differences in relevance structures in accounting for interpretive differences. In addition to structural characteristics, viewer characteristics specifically related to the subject matter were relevant for interpreting two out of three news items. Thus, it depends on the subject in a news item which mechanism is active; with some subject matter, only person-specific factors will affect interpretive complexity, whereas with other subjects viewer traits that are only specific to that specific issue will play a role as well.

Discussion research question 4

The goal of this study was to search for differences in television news interpretation. Four aspects of interpretive complexity were used as indicators for these differences. After assessing that differences and similarities in interpretive complexity exist, the next issue was determining if these differential levels of interpretive complexity were associated with differences between viewers in knowledge and motivation. There were two additional reasons for this. First, to assess whether the previously found differences in interpretations were merely random occurrences or whether they were true, meaningful differences. Furthermore, with these analyses we are able to better interpret the results found regarding research question 3. Although patterns and correlations are not always consistent or very strong, our findings provide indications that for some

news items, most viewers are at a similar level of complexity of interpretation if they share fairly basic structural traits, but for other news items only viewers with more specific knowledge and motivations produce highly complex interpretations. It seems to depend on the interaction between subject matter and viewers' knowledge and interest which mechanism is active.

We expected viewers who shared aspects of relevance structures (certain levels of cognitive and motivational aspects) to also have a similar level of interpretive complexity. Indicators from both bivariate and multivariate analyses point roughly in the same direction. In general, viewers who possess more knowledge and more motivation to process the news will produce more elaborate and cohesive interpretations. These findings corroborate with the expectations that interpretive complexity is partly something that is specific to persons.

A number of these characteristics are independent of issue-specifics. News use patterns and motives are important factors regardless of the news item's subject matter. Thus, viewers who are not heavily dependent on broadcast news, and viewers who watch news to be informed rather than amused produce more complex interpretations of the news, no matter what the context of that news is in terms of subject matter or personal knowledge and preferences. Two findings indicate that interpretive complexity is also related to the specific subject in the news. First, characteristics that are context-specific, that change for each individual viewer if the reported subject matter changes, such as interest in a subject, involvement with a subject, and knowledge of a subject played a role in the interpretation of different news items. Thus, it is not just a general interest in information or need for cognition, or knowledge of public affairs in general, or involvement with news in general, but specific knowledge and motivations that are important in interpreting the news. Second, different traits of viewers that were not issue-specific played a role in interpreting different items. Thus, highly educated viewers produced more macro-integrated interpretations of some news items, but not others. Although one's education does not change with every new news subject, its relevance for interpreting that news item apparently does. Therefore, we conclude that interpretive complexity is a consequence of the interplay between a viewer and the news topic.

In regard to Research Question 3, we showed that when viewed for the research group as a whole, although the level of interpretive complexity varied with each news item, the variation between interpretations in complexity was the same for each news item. Here we must adjust that statement. If we look at different viewer groups within the total group, we see that the diversity does often increase or decrease with every news item. Whereas with one news item, there is no significant variation in complexity between viewers of different gender for instance, with other news items there is.

As said, which viewer characteristics were related to interpretive complexity was slightly different for each news item. With the use the finding for Research

Question 3, that the three news items were interpreted at different levels of complexity, we can now determine why these differences occurred, and speculate about the role of the specific subjects in the news items. A notable finding was that in the interpretation of the item Child abuse personal relevance, interests, and knowledge were relatively unimportant, whereas with the other two news items, levels of knowledge, involvement, and interest regarding the issues were related to interpretive complexity. Research Question 3 showed that in three out of four aspects, Child abuse was interpreted the least complex. The issue Teacher shortage had the most elaborate and micro-integrated interpretations, and the item Agriculture fit somewhere in between these two (Table 11).

Interpretations of the news items Teacher shortage and Child abuse show similar distributions regarding issue-specific relevance structural factors, such as knowledge, interest, and involvement (Table 1). The majority of the viewers said to have much knowledge of these issues, found them both interesting and personally relevant. Viewers were much more diverse in their motivations towards the item Agriculture, and relatively few claimed to have much knowledge on the issue. Consequently there were more relations between viewer characteristics/relevance structure and interpretive complexity. Teacher shortage and Child abuse show less variation in viewer characteristics, but they have different patterns of relations with interpretive complexity. Interpretive complexity of the item Teacher shortage was related to knowledge and motivations; many viewers deemed the issue relevant and claimed possession of much knowledge, so it is logical that the interpretation of this item is the most complex as well as that having more knowledge and motivation was related to a greater complexity. But, although viewers appreciated the issue Child abuse similarly in terms of prior knowledge and relevance, the item is interpreted the least complex of all items, and there are few relations between viewer characteristics and interpretive complexity. Apparently, in interpreting the item Child abuse it was less relevant whether one had much knowledge or felt a great personal connection with the issue Child abuse than with the other items. How could this be?

The explanation may be that Child abuse was a somewhat unique news item, the issue involving very strong basic cultural orientations; socially shared knowledge and attitudes on human relations. It may be that these general notions take precedence over particular personal knowledge and relevance when interpreting the item. One other hint in favor of this hypothesis is that the domain 'personal life-world' is used the least in Child abuse interpretations compared to the other issues, which means that viewers less frequently connected the issue to their own private situation, despite its proclaimed 'personal relevance' (cf. Table 9). It is 'common sense' that Child abuse is an atrocity. More specific or specialized knowledge or personal relevance of the item is thus not as discriminating as with the other news items. If interpretations are less based on shared notions, and more on specific knowledge and personal

relevance, differences will be easier attributed to person-related characteristics. This may have been what happened with the items Teacher shortage and Agriculture. Teacher shortage was seen as relatively well-known and interesting and relevant by the viewers, but did not have the special context of a cultural taboo, and thus it is interpreted highly elaborate and micro-integrated (and perhaps also most to-the-point, in that viewers concentrated on a limited amount of domains). The issue Agriculture was perhaps the most 'specialized' issue, as it involved specific knowledge and motivations regarding fairly small section of society, namely biological meat consumption, and agricultural reforms in a foreign country. One indication against the hypothesis that the interpretation of Child abuse is based on strong shared knowledge is the finding that although the degree of complexity was relatively low with this item, the diversity between individual interpretations was similar to that of the other three items. If an issue is interpreted based on shared notions, one would expect less diversity between interpretations. In short, this matter deserves some further attention.

Summary and Conclusions

This study was conducted to explore differential interpretations of television news by its audience. Our starting point was an action theoretical notion of the audience; when people are confronted with news messages, they are making sense of what they see and hear by reconstructing the news message. Subjective interpretations are the major result of this meaning-making, their content and structure having consequences for how and what people remember and understand, and eventually for their attitudes and actions. We have argued that most research on audience processing of television news has concentrated on the latter phenomena, thereby largely omitting a principal element of the process. Furthermore, research on how people deal with television news has been done mostly from the 'objective observer's' point of view (cf. Chapters 3 and 4). The main argument for conducting this project was that if we are to understand how people deal with the news in daily life, more attention should be given to the interpretation viewers make of news issues from their point of view.

Viewers differ from one another in many respects; in this study, we were interested in exactly *how* uniform or diverse viewers' their interpretations of the news are. Therefore, the main objective of this study was to explore and describe variations in interpretations of identical television news messages. Our general research question was: To what extent do uniform news reports result in uniform interpretations made by viewers? To be able to assess the degree of variation between viewers' interpretations, interpretation was conceptualized in terms of interpretive complexity, being the degree of differentiation

and integration of the interpretation people create of news reports. This was measured by assessing the use of elements and types of elements (differentiation), and relations and domains (integration). The main assumption was that viewers' knowledge and motivations determine how and to what degree they use their knowledge and the information from the news, which affects the degree to which interpretations are *differentiated* and *integrated*. Furthermore, knowledge and motivations were assumed to be related to specific news topics. Because different viewers have different stocks of knowledge and relevancies, we expected that even though they watched the same news items, their interpretations would differ in the nature of components and complexity.

Summary

Research questions and main results

The study addressed four separate but subsequent research questions. The first three research questions focused on describing differences (or similarities) between interpretations in terms of size, structural components, and interpretive complexity. We concluded that interpretations were diverse in regard to all these aspects. In other words, the answer to the general question is: No, interpretations of identical news reports are not uniform in these respects. The final question focused on exploring relations between viewer characteristics and interpretations differences. Below, we summarize the main results from the study.

Research Question 1. To what degree do interpretations differ in terms of size? One may assume that some viewers are more inclined to devote much thought about some issues than other viewers. Simply the amount of thought devoted to interpreting a news item may lead to differences in the volume of interpretations. Summarized, we reported the following findings:

- Interpretations were very diverse in size; some interpretations were much larger than others
- Interpretation size was not directly related to the size of news items; some interpretations were much larger – or smaller – in size than the news item
- There are some similarities in size; relatively few of interpretations were very large, whereas the bulk consisted of smaller interpretations

In conclusion, these findings provided first indications to the extent of interpretation differences.

Research Question 2. What are the differences between interpretations in terms of the nature of components used? Volume of thoughts is a very crude measure of news reception. Therefore, Research Question 2 addressed the issue of interpretation differences in terms of what structural elements they con-

tained, that is the specific elements, types of elements, relations between elements, and social domains. Analysis yielded the following results:

- There was much variation in elements, types, relations, and domains that were used by all viewers; some were used extensively, other much less
- Different viewers used different elements, etc.
- Different news items evoked different elements, etc.
- Diversity between interpretations is not unrestricted. Interpretations consisted largely of actors and their acts, and objects as well as feelings, and attributes of actors, acts and objects. In addition, although different news items often provoked different relevant domains, a number of domains recurred with every news item, such as politics, the media, and private world
- Many of the components of interpretations did not stem from the news or were not in what may be seen as central parts of the of the news item
- The opposite was also true; central parts of a news item did not always re-appear prominently in the interpretation of that item by its viewers

In sum, interpretations contained a large array of elements, types, relations, and domains. Some of these could be traced back to the news program, whereas others seemed to have only an indirect connection to the program. Second, interpretations were concentrated primarily on acts and actors, and the objects that are used by them, and to a lesser extend to time and place, and the causal and logical explanations related to their behavior. These results partly corroborate with earlier research on recall, in which viewers were found to recall primarily information related to actors and events (cf. Findahl & Højjer, 1985). Finally, the majority of reconstructions were related to some degree to components inherent in the news program. One conclusion however is that parts of the interpretation seem to have little to do with the supposed intended message.

Research Question 3. What are the differences between interpretations in terms of interpretive complexity? In order to assess to what degree interpretations varied – something which cannot be told from the previous analysis – we analyzed variation in interpretations in terms of *interpretive complexity*. Interpretive complexity has four dimensions: Specificity, heterogeneity (together representing differentiation), micro-integration, and macro-integration (representing integration). The qualitative data from the above analyses converted into numerical data, differences in interpretive complexity were measured quantitatively through four variables: the number of singular elements, types, relations, and domains. Analysis of differences in interpretation on these for aspects resulted in the following answers to our research question:

- There was much diversity between interpretations in all four aspects of complexity; not all interpretations were equally differentiated or integrated

- Interpretations were most diverse in terms of specificity and micro-integration, and less diverse regarding heterogeneity and macro integration
- News items with different subject matter were interpreted at different degrees of complexity, but variation in complexity between individual interpretations was similar for every news topic

Thus, interpretive complexity differences turned out to be on occasion great, even though every participant watched the same news items. These differences were stable across different news topics. But some topics for some reason apparently evoked less complex interpretations than others.

Research Question 4. Are differences in interpretive complexity related to viewer characteristics? As our theory predicts that audience members use their relevance structure to actively shape their interpretations, we expected these differences in interpretive complexity to be related to audience characteristics, most notably knowledge and motivation. Therefore, the fourth research question was directed towards investigating empirical relations between audience characteristics and interpretive complexity. Answers to this research question can be summed up as follows:

- Viewers who possessed more knowledge and more motivation to process the news produced more differentiated and integrated interpretations
- This was valid in regard to both knowledge and motivation specific to the news topics – such as knowledge of an issue –, and of more general nature – such as motives for watching the news
- To a degree, different viewer characteristics were related to different aspects of complexity with different news items

Summarizing, different viewer groups interpreted the news at different degrees of complexity. The results were interpreted as showing that the factors affecting interpretive complexity were all related to the viewer's knowledge and relevance ascribed to news topics. Viewers with ample knowledge and high relevance will have more specific and heterogeneous interpretations, using more logical, temporal, and causal relations, and relate a news topic with more social domains than other viewers. However, knowledge and motivations alone do not account for all differences in interpretive complexity; it is the relation between knowledge and motivations on the one hand and subject matter on the other that determines the level of complexity with which a news item is interpreted.

Conclusions

Our theoretical perspective postulates that viewers make use of their knowledge to construct an interpretation of a news report. Furthermore, differences in current knowledge and motivations between groups of viewers are respon-

sible for many differences found in both components and complexity of interpretations. All findings from the current study can be aptly interpreted in terms of these assumptions.

First, when watching the news, viewers make extensive use of their stock of knowledge. This is demonstrated by the many importations of personal knowledge, or shared knowledge not directly related to the news item into the interpretations. Thus, even at this early moment of reception, viewers use their knowledge to give meaning to a news item.

Second, the fact that many viewers extensively use their own stock of knowledge accounts for the differences in the components of interpretations by different viewers of the same news items. This is because a person's stock of knowledge is the result of a life long of partly very personal experiences and socialization. Different people have different biographies, resulting in different knowledge structures, which in turn produce interpretations that contain different elements, types of elements, relations, and domains.

Third, the importation of personal knowledge into an interpretation also results in differences between interpretations and what was most likely intended as the message of the original news report. This personal knowledge about for instance events in one's personal history, about friends and family, and so on, cannot come from the news item. Furthermore, in addition to importing knowledge from the personal life-world, viewers tend to ignore (sometimes central) parts of the news. As a result, no interpretation is a carbon copy of the 'actual' content of the news.

Fourth, we have found that interpretations of the same news reports differ greatly in complexity. The reasoning that extensive use of knowledge leads to differences in interpretations is also true for interpretive complexity differences found in this study; the more extensive the use of personal and shared knowledge by a viewer, the more knowledge elements and types of elements are used in constructing an interpretation, resulting in a more specific and heterogeneous interpretation (i. e., containing more elements and types of elements). But it does not stop there, while interpretations attest to the (on occasion extensive) use of knowledge, there is also evidence that knowledge is interconnected while interpreting the news.

Fifth, the degree to which one uses knowledge in interpreting television news is not a matter of chance, it is affected by one's knowledge of an issue and the relevance one attributes to it. The more knowledge one has, and the more relevant it is to use that knowledge, the more knowledge is imported. Apparently, high knowledge and motivation not only lead to interpretation containing more elaborate knowledge, but also more cohesive knowledge.

Sixth, although there are many differences in the components of interpretations of the same news item, on a general level interpretations are somewhat congruent. As the main parts of the interpretations seems directed towards the

gist of the news (according to 'institutional' definitions), interpretations may stray from the intended message on a regular basis, but the range of interpretation differences seems to be kept within certain boundaries by agreement on what is the main topic of the news.

Finally, not all news items are interpreted equally complex; some news items are structurally more complex in interpretations than others. Thus, interpretive complexity is related to the topic at hand. The best example from this study of such seeming agreement in interpretations over a topic is the item Child abuse. This item was interpreted the least complex of all items, the interpretations involving relatively few different elements, types of elements, and relations. This congruency can be explained by the assumption that all members of a given society share certain basic general notions. Within this culture, child abuse as a phenomenon is seen in similar terms by almost every individual, it is universally condemned. Therefore, an item on this subject does not require very elaborate thought involving much personal knowledge. Also, more personal relevancies seem less important by comparison. Rather, interpretations revolve more around shared, culturally accepted knowledge. Still, some viewers use more of this knowledge than others, apparently motivated by a perceived relevance of news in general rather than this particular topic.

The general question underlying the current study was: Do uniform news messages evoke uniform or diverse interpretations? If we summarize the main conclusions of this study on interpretive complexity, what can be said about the interpretation of television news? The main conclusion from the above is that with each news topic there are different groups of viewers that have different interpretations of the topic. We learned that different groups of viewers construct interpretations that differ not only in *size* and *components*, but also in *elaborateness* and *cohesiveness*. Quantitative differences in interpretive complexity reflect interpretations that are qualitatively different in terms of the nature of components they contain. These differences in interpretations, both in components and in complexity are the result of more than just demographics and media use. The different viewer groups are a function of the relation between personal knowledge and motivations on the one hand and a particular topic on the other. Consequently, different viewers have different interpretations of the same topic, and the same viewers have different interpretations of different topics, but these groups are partly dynamic, their composition is different from topic to topic. This means it is not easy to predict beforehand how the news will be interpreted by whom. To some viewers, some news topics are personally relevant and relate to much of their background knowledge. These are the viewers that are willing and able to invest more energy into building a more elaborate and cohesive whole from a news report, thus constructing a more detailed and multidimensional view of a news report. For many viewers, however, this relation between themselves and a topic is not particularly strong.

In contrast, viewers who perceive less personal relevance towards a particular subject construct more simple interpretations, they provide less detail, and their interpretations have hardly any integrative features. These simple interpretations also contain the least self-generated details; most of the information in them stems directly from the news program. In other words, more complex interpretations are more independent from the news' content. According to our theory, the way in which different viewer groups interpret the news, both in terms of components and complexity, is directly consequential for further mental processes such as recall and understanding, the construction of an image of reality, attitudes, and further actions. The final chapter will discuss the potential consequences of differences in interpretive complexity between viewer groups for these phenomena.

Limitations

This study was intended as an exploration of how viewers reconstruct the news, using an instrument that is sensitive to the audience point of view. We argued that not an 'objective' message but a subjective reconstruction of that message results in further mental and physical effects of the news. This interpretation of the message in itself can be regarded as the main 'effect' of mediated messages in general; exposure to a media message results in not a copy of the message-as-intended, but rather in a construction that is meaningful to the receiver. All further consequences depend on this reconstruction (cf. Renckstorf, 1980a, b, 1996). This explains the relatively modest attention given to the message in the project; only to the topic of an item was taken into consideration as a nominal variable. Consequently, conclusions regarding the role of various message characteristics in evoking components and complexity of interpretations are only possible up to a certain limit. Future research on interpretive complexity should therefore make this a priority issue. In the next chapter we provide some potential research directions in this regard.

The specific goal and design present some limitations for different aspects of validity. The study's exploratory nature is evident in the relatively small and selective sample. Also, sometimes low significance levels were used. Furthermore, we selected only three news reports, each with their own specific topic and form. It is unclear to what degree our choice has affected the results. For instance, although we included in the analyses variations in topic, other variations between the items such as different complexity of the item, different presentational features, etc. were not assessed in this study.

Notes

1. Involvement is seen as a major factor in determining how people process information and how their attitudes change. The concept is used in many scientific disciplines, most notably psychology, marketing research, organizational studies, and information-system research. Nevertheless, there is only limited agreement on how to define and operationalize involvement (Fiske & Taylor, 1991). One important difference has been made between intrinsic or personal involvement, and extrinsic, or task involvement. In this study, we use the first definition of involvement, which we call issue-involvement; the idea that an issue has a personal relevance or meaning for someone. Our definition and measurement concurs with conceptualizations and findings from the first three of the previously mentioned disciplines (cf. Barki & Hartwick, 1994; Petty & Cacioppo, 1986; Petty, Cacioppo & Schumann, 1983; Sherif & Hovland, 1961; Celsi & Olson, 1988; Zaichkowsky, 1985; Greenwald & Leavitt, 1984). Involvement is seen as not a characteristic of behavior (e. g., political activism, or participation in society), but as a mental state. It should also be distinguished from attitude, which is a different type of psychological state. Involvement is an “affective or evaluative judgment of some person, object or event” (Barki & Hartwick, 1994).
2. The questions were taken from two repeatedly executed representative surveys ‘Religion in Dutch society’, and ‘Media Use in The Netherlands’, in which they were extensively tested and validated (Arts et al., 1990; Eisinga et al., 1990, 2000; Hendriks Vettehen et al., 1995; Konig et al., 2005)
3. We chose not to combine the scores of the four separate indicators of complexity into one ‘interpretive complexity score’, for a number of reasons. First, the problem is that we would not know how to combine them; should the various aspects be regarded as additive or multiplicative? For one, the level of each individual variable is different (cf. elements and types of elements). Furthermore, elements containing relations were regarded both as elements in their own right (and accordingly count as elements for the ‘specificity’ score) and as elements of a special kind, namely containing relations, for which reason they are also counted as contributing to micro integration. Furthermore, as our main focus is to describe in detail the various structural aspects of interpretations. Combining them into one variable would be equal to losing much information
4. Principal Component Analysis (PCA) was used as an instrument of data reduction as we wanted to reduce the number of variables to be used in further analyses. As a search for abstract or latent variables was not a goal in itself, but merely the construction of new scales, use of PCA, combined with a reliability test, was warranted.
5. Except for ‘Occupational prestige’, a somewhat more complex variable that was defined based on Sixma and Ultee’s (1984) ‘Occupational Prestige Scale’.
6. PCA regarding interests was as follows: Oblimin rotation, after second extraction, ten interpretable components remain. Missing values were deleted listwise. To facilitate interpretation of the components, only loadings $> .5$ were acknowledged. This reduced the number of variables with 60 percent, whereas only 25 % of explained variance was lost.

Reliability tests were conducted on each of the new constructs (Cronbach’s α), producing the following results:

Alpha scores of constructs:

Interest in:

1. social/society/politics: $\alpha = .81$
2. sensation: $\alpha = .84$
3. economy and finance: $\alpha = .86$
4. sports/leisure/army ('masculine information'): $\alpha = .62$
5. hobby/reading/art: $\alpha = .67$
6. local government and policy: $\alpha = .65$
7. care/social affairs: $\alpha = .58$
8. agriculture and environment: $\alpha = .66$
9. advertising/weather/self-development: $\alpha = .52$
10. schools, care, doctors: n. a.

Sum scores of all variables in each of the constructs were taken as scores for the constructs. In the correlation analyses, only items deemed relevant on theoretical expectations were included

*Principle Component Analysis, Interests: Component loadings
(N = 59 expl. variance = 74.4%)*

	Component									
Interest in information about...	1	2	3	4	5	6	7	8	9	10
health	-.13	.13	0	0	0	.24	.77	0	0	0
pedagogics, education	.26	-.11	-.16	-.24	.24	0	.64	0	0	0
technology, science	0	.15	.34	-.40	0	0	-.17	.36	-.28	-.36
relief work	.71	-.13	0	0	0	0	.22	-.20	0	.35
relationships	0	.23	.17	.27	.42	.10	.29	0	-.27	.14
employment	.10	.11	.18	0	-.28	-.24	.65	0	.14	-.13
government policy	.54	0	.35	0	0	-.33	-.11	0	.15	-.21
environmental pollution	.20	-.15	.20	0	0	0	0	.72	0	.16
county policy	.27	0	.11	-.22	-.25	-.67	-.15	-.12	0	.13
theatre, literature	.25	0	0	.19	.53	-.30	0	.11	.18	.16
hobby	0	.10	-.13	0	.68	-.22	0	.22	0	0
sports	0	-.19	0	-.80	0	0	.19	0	0	0
Local labor market	0	.16	.22	0	.24	-.58	.21	-.36	-.19	0
regional novels	0	0	-.11	-.16	.78	0	0	0	0	0
economy	0	0	.90	0	0	0	0	0	-.13	.10
finance	0	0	.90	0	0	0	0	0	.15	0
political parties	.51	.14	0	-.11	0	-.37	0	0	.12	-.30
county housing and environment	-.18	0	0	0	.12	-.85	0	.24	0	0
media landscape	.41	.24	.18	0	.30	0	-.29	0	0	-.34
justice and security	.38	.30	.21	-.38	.12	.14	-.10	-.39	.21	0
leisure	-.10	0	-.14	-.69	.28	0	0	-.12	-.20	.34

Interest in information about...	Component									
	1	2	3	4	5	6	7	8	9	10
army, police	0	.32	.22	-.67	0	0	0	0	.19	0
agriculture	0	0	0	-.13	.19	0	0	.74	0	-.18
schools, care, doctors	.19	.19	.19	0	0	0	0	0	0	.84
disasters, accidents	0	.84	-.20	0	0	0	.13	0	-.15	.12
crime	0	.89	0	0	0	0	0	0	0	0
foreign countries	.12	.43	.21	0	0	-.17	.16	.39	.39	-.11
religion, philosophy	.69	.15	-.15	0	0	0	.11	.19	0	.11
advertising	-.16	0	.18	-.11	0	0	-.21	-.23	-.70	-.23
minorities	.85	0	0	0	0	0	0	.17	0	0
stock exchange	-.15	-.19	.86	0	0	0	0	.12	0	0
weather	.20	.16	0	0	-.32	-.12	0	.14	-.71	.20
Self-actualization	.23	0	.14	.24	.36	0	.23	0	-.55	0
local justice, celebrities, and disasters	-.13	.35	0	-.20	0	-.16	-.14	-.18	-.43	.46

Note. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 38 iterations.

7. The eight items in the involvement scale were taken from a 20 item scale by Zaichowsky (1985). After adjustments according to suggestions by Barki & Hartwick (1994), and omitting items that after translation from English into Dutch produced exactly the same terms (e. g., 'it matters to me' and 'is of concern to me') eight of the 20 original Zaichowsky items remained. Furthermore, we reduced the original seven point items to 5 points, to simplify filling out the items. Furthermore, there is doubt whether a more detailed scale would have any meaning (Barki & Hartwick, 1994).

For each of the three news items, PCA produced interpretable components after two extractions (see below). For two items, two components could be interpreted as 'personal relevance' and 'general importance'. In our view, personal relevance comes closest to our concept of involvement, signifying a perceived relation between a person and an issue. Importance seems somewhat more related to 'social relevance'. For news item 'Agriculture' only one component emerged, which we dubbed 'involvement'. Cronbach's α for each component was $\alpha = .85$ and $.77$ for personal relevance and importance respectively of the item child abuse, $\alpha = .93$ and $.81$ for personal relevance and importance of the item Teacher shortage respectively, and $\alpha = .97$ for involvement with the issue 'Agriculture'. Sum scores were taken as scores for each participant on the new constructs. Participants that failed to fill out any items were omitted, whereas for participants with only a small number of missing item scores – this was the case for only one participant in the 'Agriculture items' – a sumscore was calculated based on the items they did fill out.

PCA, Involvement Child abuse: Component loadings
(*N* = 58; *expl. variance* = 79.4%)

The issue of child abuse...	Component	
	1	2
concerns me	.74	.19
is relevant to me	.96	-.14
means a lot to me	.88	0
is essential	0	.89
is necessary	0	.90

Note. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 4 iterations.

PCA, Involvement Teacher shortage: Component loadings
(*N* = 58; *expl. variance* = 81.8%)

The issue of teacher shortages...	Component	
	1	2
is important to me	.89	0
concerns me	.96	0
is relevant to me	.95	0
is interesting to me	.71	.18
is essential	.24	.80
is necessary	-.12	.98

Note. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 4 iterations.

PCA, Involvement Agriculture: Component loadings
(*N* = 59; *expl. variance* = 86.4%)

The issue of agriculture in Germany...	Component	
	1	
is important	.93	
concerns me	.94	
is relevant	.90	
means a lot to me	.94	
is interesting to me	.93	
is appealing to me	.93	

Note. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.

8. PCA: Oblimin rotation, Missing values were deleted listwise. After 2 extractions the analysis produced three components. Only variables loading above .4 were considered in the interpretation.

PCA, News use: Component loadings (N = 60 expl. variance = 59.4%)

	Component		
	1	2	3
I watch the news because I want to keep informed	.17	.65	-.13
It is important to watch the news from start to finish	0	.82	0
I watch the news to have interesting things to talk about	.34	0	.61
I plan my evening so I can watch the news	0	.87	0
I watch the news because it is sociable	0	.27	.64
After the news I think about what I've seen and heard	.78	0	0
I watch the news to keep track of important issues	.37	.11	.32
I Watch the news because it is about people like me	.36	0	.32
I watch the news because it is exciting	-.14	-.17	.88
I dicuss the news with others	.85	0	0
I watch the news to form an opinion	.85	-.11	-.15
I keep track of the time to not miss the news	0	.89	0
I watch the news to relay information to others	.64	.13	0

Note. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 7 iterations.

Items in components:

Component 1 – cognitive motives: After the news I think about what I've seen and heard; I discuss the news with others; I watch the news to form an opinion; I watch the news to relay information to others

Component 2 – watching the news selectively and attentively: It is important to watch the news from start to finish; I plan my evening so I can watch the news; I keep track of the time to not miss the news (watching the news to keep informed is not included in the scale, raising the α from .83 to .86)

Component 3 – amusement motives: I watch the news to have interesting things to talk about; I watch the news because it is sociable; I watch the news because it is exciting

Reliability

Sum scores were used as scores for the new constructs.

Cronbach's α 's: Cognitive motives: $\alpha = .79$, Watching selectively/attentively: $\alpha = .86$, Amusement: $\alpha = .60$.

9. *Skewness* is the degree of symmetry of a distribution. A normal, symmetric distribution has a skewness of 0, distributions between -1 and 1 are regarded as 'normal'. A distribution with a significant positive skewness, such as is the case with amount

and micro integration, has a long right tail, or in other words, most scores are in the lower regions, and only relatively few scores are very high.

Kurtosis measures the extent to which observations cluster around a central point. For a normal distribution, the value of the kurtosis statistic is 0. Positive kurtosis, which is the case with amount and micro-integration, indicates that the observations cluster more and have longer tails than those in the normal distribution (negative kurtosis indicates the observations cluster less and have shorter tails).

Although scores for the item Teacher shortage were relatively most asymmetric and most clustered, with all news items for amount and micro-integration were strongly clustered around the lower scores, signifying that most participants were concentrated in the lower scoring groups and that scores in these regions were less dispersed than the higher scores.

10. Regression method: ENTER, missing values were excluded listwise. Residue analysis did not yield outliers with values above 5 standardized residual (De Vocht, 1999, p. 215). Regression models without cases with relatively high residuals did not show dramatic differences regarding the important predictors.
11. Therefore, general interest in information and knowledge level regarding all three items were included in the analyses, as well as overall involvement scores, as opposed to issue-specific interest, knowledge and involvement. Knowledge and involvement scores were attained by adding individual scores for each separate item (e. g., general knowledge is the sum score of knowledge on child abuse, knowledge on teacher shortage and knowledge on agriculture), whereas general interest was calculated as the sum score on all of the questionnaire's interest items. For the regression analyses, general interest in information and general involvement were combined into one variable in the regression analysis, because of their conceptual and empirical similarity ($r = .318$, $p = .013$; Cronbach's $\alpha = .43$).
12. $r = .455$, and $.365$, at $p = .000$ and $.005$, Cronbach's $\alpha = .63$.
13. $r = .306$, $p = .017$, Cronbach's $\alpha = .47$.
14. $r = .605$, $p = .000$; Cronbach's $\alpha = .70$.

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Chapter 8

Interpreting television news: Summary, discussion and look to the future

Gabi Schaap

Abstract

In this chapter, we reflect on the entire project. As many points regarding the vices and virtues of the project's different parts have already been made in the respective chapters, we offer only a brief summary of the project's main results in the 'Summary' section below. Next, in the 'Discussion' section, we discuss these results in terms of the project's theoretical and methodological assumptions in an attempt to assess the project's contribution to the field of television news research. Finally, based on the findings of the main empirical study, we identify three potential directions for future research.

Summary

Research problem

This project's starting point was the as of yet partly unanswered question of television news effects on its audience. Implicitly or explicitly, research on the impact of television news is often based on an 'optimistic' idea of the role of television news in society. In this view, in today's society the possession and accumulation of knowledge is a means to empowerment, making knowledge one of the most central qualities an individual can possess (Grabe, Zhou, Lang & Bolls, 2000). The news media's task is to provide every citizen equally with information on important public affairs. But research findings have been disappointing (cf. Barrie Gunter's 'Poor reception', 1987). To a very large extent, the audience appears to be neither willing nor able to reproduce news stories and their details, or even more general facts in the news correctly. While some blame the audience for lack of engagement or mental ability, others point to the news itself. Especially television news is seen as counteracting instead of facilitating coherent reception of information. Too much information, presented too fast, in incoherent, sensationalist formats, combined with a limited mental ca-

capacity for information processing make rational processing almost impossible (cf. Cohen, 2001; Lang, 2000). So, are we to understand that the scale is now tipped towards the 'pessimistic' side? That, although they should, viewers do not want and/or are not able to deal with the news in a way that is useful in society? In answer to this question, researchers have long since pointed out that the audience consists of active interpreters of the news, each of which brings his or her own set of goals and motives, and knowledge; they are not facts reproducing machines. Therefore, in order to understand how television news affects the audience, it does not suffice to take up the viewpoint of an 'objective observer', deemed able to decide what is correct and useful information that should be gathered from the news. Instead, researchers should try and understand what the audience members themselves think is useful and correct. This 'audience perspective', which emphasizes the active role played by audiences in the mass media process, was central to the current project. From this perspective stems the general question of the project: (How) Do different audience members interpret the same television news content differently?

Theoretical perspective

The action theoretical frame of reference was the theoretical basis for the project, holding that audience members are intentional, reflective beings that attach subjective meanings to news messages (cf. Chapter 2; Renckstorf & Wester, 2001). Adopting such an interpretive perspective to the study of television news effects has a number of consequences. In this view, television news is seen as merely offering 'objects' that require interpretation by their receivers, and not objectively observable, self-evident information. A news viewer may or may not decide to take notice of a news report. If so, each viewer, from their own vantage point of social and psychological specifics, has to define the meaning of different aspects of a news report. This is a complex cognitive and affective process, in which previously acquired knowledge and new information are combined, sometimes requiring the reformulation of old accepted knowledge, and eventually resulting in a reconstruction of a news report and its context. This interpretation, and not some 'objective' message, is what determines the potential further actions a viewer may take, be it mental or physical. The main assumption, therefore, is that different viewers, with different social and psychological background may attach different meanings to the same news reports, on which they found their further actions, which are consequently equally prone to diverge. The news consumer is thus indeed much more than merely a reproductive machine; news consumers have varying amounts of knowledge ('stock of knowledge') on public and private affairs and put it to use, they may recognize information in the news, but they are *active* users of knowledge in the sense that they take information and then adapt and shape it until it fits *their*

motivations and their view of the world. Thus, it does not per definition suffice to simply measure what people do with the news by measuring the number of reproduced facts some 'objective' agent think they should remember (Woodall, Davis & Sahin, 1983).

The conclusion that viewers construct their own subjective interpretation of a news message, has important consequences for the view on the mass communication process. These consequences have been pointed out by Renckstorf (1977). Traditionally, the mass communication process has been seen as consisting of a number of elements that require the attention of communication researchers. First, an 'objective' message (with an empirically observable form and content as produced by communicators); depending on the circumstances, this message may or may not have an effect. Second, the recipient; a member of an audience with certain specific social and personal characteristics. Third, audience behavior as a consequence of media messages. Renckstorf adds to these a fourth element; the 'subjective media message'; that is, a message as it exists only in the interpretation of an audience member (p. 47). In his view, a truly 'objective', media message, that is, a message that has a constant, observable 'meaning' may not even exist. This point of view is at the root of this project's focus. *Viewers' interpretations of a message*, and not some 'objective' message affects their subsequent behavior. Therefore, in addition to the other elements of the mass communication process, research should focus on this subjective message. We have translated this into the main research question on variations between television news viewer interpretations. In our closing paragraph, we outline some fields for future research that covers all the above elements of mass communication.

Review of research on television news

When we conducted an extensive review of the research on television news (Chapter 2: 'Three decades of television news'), we discovered that some of the above elements were researched far more extensively than others. Using the action theoretical frame of reference, 10 domains of research were defined, covering areas from the selection and production of news, (cf. domains 'situation', 'institutions') its content and form ('information'), characteristics of the audience and the situation in which the news is consumed ('relevance structure', 'social networks', 'interaction situation'), and active behavior by the audience prior to, during and after news consumption ('definition of the situation', 'action strategies', 'objectivation', and 'socialization'). Some 250 studies of news research were reviewed in these 10 domains in order to assess the nature and quantity of research in each field in television news research. Despite the conclusion that much is known in many research domains, particularly on news production processes, form and content, and some consequences of television

news, at least four voids in the field were identified. Research topics in the domains of ‘interaction situations’ (the physical and social context in which the news is being watched), ‘action strategies’ (in this case routine vs. active coping with news information), ‘social networks’ (interpersonal channels), and ‘objectivation’ (viewing patterns) all deserve more attention. In addition, some domains have seen ample research, but have not always yielded satisfactory results. One such topic was research on news interpretation from an audience point of view, which was chosen as the central focus of this project.

Although during the decades covered in the overview, an increasing number of scholars have labeled audience interpretations an important area of research, it is still a relatively underdeveloped field in communication research. We argued that research in this area is important first and foremost because interpretation is a vital step in the reception of a news message, one that determines a message’s short term and long term consequences, such as recollection, understanding, evaluations, opinions, and views of the world. As argued above, this involves studying the ‘subjective’ message constructed by the recipient. In the main study of this project the question was how viewers employ their knowledge and motivations to interpret information in news reports, and how this may lead to different consequences. Thus, in terms of the 10 domains in the overview, the project focuses on the research domains 4 (information), 6 (relevance structure), and 7 (definition of the situation).

A concept of interpretation

In subsequent chapters we maintained that the hiatus in television news research on interpretation was partly attributable to a lack of suitable concepts and methodologies. In direct relation to this issue was the question whether the current practice of measuring recall of facts should be the most fruitful way of studying how a message is received by the news consumer. Diagnosing that research has shown much of what viewers do *not* do with the news (i. e., recall and understand it) but much less of what they *do* do with the news, this project was dedicated to contribute to this field by developing a concept and method for measuring interpretation.

In Chapter 3 (‘Conceptualizing television news interpretation by its viewers: The concept of interpretive complexity’), this interpretation – or subjective message – was regarded as a viewer-constructed ‘model’ of the ‘objective’ message. The main problem has been to arrive at a concept which captures the subjectivity, but simultaneously represents common features of interpretations that allows ‘objective’ comparison. Our solution was to regard interpretations as models that have ‘universal’ structures. These structures stem from the use of knowledge.

The social action perspective regards personal and socially shared knowledge as central in the whole process of the communication of news. Both in

macro level terms of the effects television news has on knowledge levels in society, and in micro level processes in which knowledge of the individual viewer shapes individual reception and subsequent actions. That is perhaps the most central part of what constitutes audience activity; selecting and addressing new information from the environment with already acquired knowledge. The centrality of knowledge as the basic tool with which to make sense of the world has been recognized by a number of disciplines. Thus, a concept of news interpretation should incorporate references to this central element. Cognitive psychologists and political scientists interested in political knowledge levels have dealt with similar issues as this project: How to assess knowledge and/or mental activity differences between different social groups or people in different situations? The concept used in this project was based on the solution they found for this problem; one way of conceptualizing such differences is the amount and valence of peoples' cognitive responses (cf. Chaiken, 1980; Fiske & Taylor, 1991; Petty & Cacioppo, 1986; Schroder, Driver & Streufert, 1967; Suedfeld & Tetlock, 1977; Zajonc, 1968). A focus on the *structure*, rather than on the *content* of interpretations, has the advantage that there is no need to classify interpretations as 'correct', or 'incorrect', as is common in recall studies, and neither is there the problem of having to assess the 'meaning' of interpretations. Therefore, it was a good alternative to study the interpretation from an audience point of view, as the researcher does not have to pass judgment on the content. The idea has materialized into all sorts of concepts, under many different labels, among which cognitive or conceptual integration, cognitive complexity, integrative complexity, and in political science, ideology and political sophistication. All these labels are rooted in the same idea, which, adopted to media studies, can be described as follows: That levels of thoughtfulness or activity/passivity of reception can be represented by the number of cognitions and the degree to which these are connected to one another. Thus, although it stems from the same idea as knowledge gain research – how people deal with the news can be studied by looking at how people use knowledge – this idea encompasses more; ultimately, by means of this concept, one studies the level of reception.

The general idea of our theoretical perspective and of those mentioned above was that how people make sense of the world (here: television news items) depends on their knowledge structures (called 'relevance structures' in this project's theoretical frame), and that these structures have two basic structural features: First, they contain certain amounts of individual knowledge and second, this knowledge is – to a greater or lesser extent – interconnected. We argued that when people interpret the news, the result is a reconstruction of a news event that is based in these cognitive structures. In reference to the above studies, we dubbed the amount and types of cognitive elements in an interpretation *differentiation*, and the level of connectedness between them *integra-*

tion. Together differentiation and integration were seen as two dimensions of ‘*interpretive complexity*’ (Chapter 3). As it has been known that people make more intensive use of their previously acquired knowledge when highly motivated, we hypothesized that viewers to whom a news report is relevant, and whose cognitions related to this issue are more differentiated and integrated would consequently produce more complex interpretations than people who are less motivated and who possess less complex knowledge on the subject.

Measuring interpretive complexity

One major reason for conceptualizing interpretation as interpretive complexity, was its potential to be used in measures of audience interpretations from a true audience perspective, while at the same time retaining a firm base in theoretical notions, ensuring systematic measurement.

The audience point of view was established methodologically firstly by employing a data gathering instrument which enabled viewers to communicate their reconstruction of the news in an undisturbed way – without interference of researchers, questions, etc. – and in their own time and idiom. Frequently used in a diverse range of research, this project employed ‘cognitive response’ techniques, in which participants are requested to verbalize their thoughts. Thus, we aimed at capturing not the reproduction of selected news facts, but the entire reconstruction. A pilot study resulted in the choice of a thought-listing technique. This procedure enables viewers to report their thoughts on a news item in between short segments of news, as opposed to reporting them concurrent with watching the news (Thinking-Aloud method), which proved to be too demanding (cf. Chapter 4: ‘Using protocol analysis in television news research: Proposal and first tests’).

Subsequently, a procedure for measuring the degree of complexity of these reported thoughts was developed (Chapters 5; ‘Measuring the complexity of viewers’ television news interpretation: Differentiation’, and 6: Measuring the complexity of viewers’ television news interpretation: Integration’). There have been many different operationalizations of (cognitive) complexity, most of which have been developed with very specific research question in mind that are mainly relevant for studies in psychology and political sciences (cf. Burlison & Caplan, 1998). Furthermore, some of these measures have been judged somewhat crude and subjective (Luskin, 1987). Therefore, a large part of the project focused on developing a method useful for assessing the degree of complexity in interpretations of television news.

Development of this instrument was based on three ideas. First, the theoretical concepts of differentiation and integration, which dictated that both separate elements and connections between such elements should be assessed. Second, ethnologist James Spradley’s (1979, 1980) matrix of elements describing social

situations provided a systematic way of assessing the elements and connections that may exist in interpretations. According to this model, each situation, and therefore each interpretation of a situation, consists of recurrent types of elements and relations (actors, acts, events, objects, times, places, and feelings, and goals, their attributes, causes and consequences, etc.). Third, qualitative analysis of the protocols of participants themselves initiated amendments to Spradley's categories. The result was a coding instrument for the registration of four aspects of interpretive complexity in two dimensions: differentiation referred to the aspects of *specificity* of an interpretation and *heterogeneity* of the elements used, integration referred to *micro-integration*, or the degree of basic connections between elements, and *macro-integration*, or the number of large social categories referred to in an interpretation. Indications for the validity and reliability of this measurement procedure were encouraging (cf. Chapters 5 and 6).

These components constituted a measurement strategy that allows systematic observation and comparison of interpretations, both qualitatively and quantitatively. Through charting of the different elements and connections contained in interpretations the instrument facilitates analysis of the differences in *the types of components* between interpretations. In addition however, a more quantitative approach is possible, through the assessment of the degree of use of different kinds of elements and connections in each interpretation. This way, the *degree* of difference between interpretations can be analyzed.

Results of a small-scale test study with the analysis strategy showed the tendency of interpretations to contain either high or low differentiation in all aspects (i. e., to show both high specificity and heterogeneity, or low specificity and heterogeneity) and high or low integration in all aspects (i. e., interpretations with many micro level relations also contain many macro level connections). Thus, if an interpretation was highly differentiated in one aspect it most likely was so too with regard to the other aspect, and if an interpretation was differentiated it was probably also highly integrated. That is, highly elaborate but relatively incohesive interpretations were scarce. Furthermore, the study revealed first indications that a person's interpretation of one news item could be highly complex, whereas the same person's interpretation of another news item may be much less complex.

The main study

Again, our main interest was measuring the 'subjective' messages constructed by viewers from 'objective' messages. The previously developed method was applied in a larger scale 'main study' on the relation between audience knowledge and motivations and differences in interpretive complexity (Chapter 7: 'The complexity of television news interpretation: Main study'). Because of

its focus on the consequences of audience characteristics, as opposed to on the impact of message attributes, the design was quasi-experimental; participants were chosen for predicted high or low levels of knowledge and motivation regarding three specific news topics ($N = 60$). We hypothesized that interpretations of the same news items, made by cognitively and motivationally different viewers, would be different in terms of both the nature of structural components and degree of complexity. The main results can be summarized in three points.

First, viewers take information from the news and run with it, shaping and reshaping parts of it, ignoring others so that what they construct from a news item may be quite different from (what was presumably intended in) the original news message. They do so by applying knowledge from their own relevance structure to what they see in the news.

Second, differences between the interpretations viewers create from the same news items are occasionally vast, both in terms of components and level of complexity. Across topics, the same large differences between interpretations of different viewers remain stable. Thus news topics do not limit or extend the range of differences between interpretations. However, topics are related to the degree of complexity of each individual interpretation; for some topics both the simplest and the most complex interpretations are less complex than for other topics.

Third, differences between interpretations are related to differences in relevance structure (knowledge and motivation), both in a general form (e. g., general news watching motives) and more specifically related to the news topic (e. g., issue-related knowledge and involvement).

With these findings, we have demonstrated in some detail aspects of 'during-exposure' activity of television news viewers (cf. Levy & Windahl, 1984). Of course, from earlier research it was already known that recipient knowledge plays a key role in news processing. It is clear from our findings that the initial reception of a complex stimulus such as television news is not limited to lower-order automated physiological processes of attention, but that it also involves higher-order processes of sense making (cf. Shapiro & Lang, 1991). Furthermore, we now know that although this activity focuses to a large extent on what was probably intended by news producers (journalists, media organizations) as the gist of a message, a large part is directed to 1. aspects related to but not belonging to the core of the 'objective' (intended) message; 2. non-message induced knowledge, such as knowledge from the personal life-world; and 3. the news message as something that is produced (in certain ways, for certain reasons, to certain effects). These strategies result in news interpretations being dissimilar from the 'news message-as-sent'. Furthermore, it leads to differences in the elaborateness and cohesiveness of interpretations. This is because these processes are guided by knowledge and motivations; motivated and

knowledgeable viewers are more inclined to use all of these strategies when interpreting a news item, instead of just including message-induced and message related aspects as less motivated and knowledgeable audience members would. This leads to their interpretations being more specific and heterogeneous, and more cohesive on both a micro and macro level. In comparison, non-motivated viewers' interpretations lack detail and connectedness.

Discussion

To a large extent, this project was exploratory in nature. Consequently, there are many points to this project that merit discussion, some of which have been addressed in earlier chapters. In this section, we concentrate on only a few issues: After some remarks on the place of this project in thinking about individual-level and societal effects of news, we discuss how our research findings may contribute to our understanding of the relation between audience activity and effects of the news. Subsequently, we address both methodological and conceptual issues.

This project was an attempt to address a void in news interpretation research, by developing alternative ways to study audience interpretations. A fundamental assumption in arguing the importance of studying interpretations was that they form an intermediate step between the exposure to the content of a news message and its effects. In the project we have covered at least two issues in television news effects research in regard to this relation. One is a friction between research and findings on recall and understanding of factual information on the one hand and the supposed intricacy of news reception by active audiences on the other. Measures of recall and supposedly 'correct' understanding of news are based on an idea of the news message as an objective 'stimulus' with some self-evident meaning that should under normal circumstances produce uniform, predictable audience reactions. A news item contains objectively recognizable 'facts' that any viewer should be able to reproduce. This idea contrasts with the idea that viewers actively shape received information in order to make some personal sense of it. In the latter idea, measurement of accuracy of reproduction is based on subjective judgments on what is in fact information (cf. Livingstone, 1990; Woodall, Davis & Sahin, 1983).

A second issue touched upon in this project is a continuing uncertainty about the relation between knowledge on large scale aggregated effects of television news and individual dealings of individual audience members with the news. Both matters have made it difficult to get a clearer picture of the mechanisms behind news effects. Efforts in news research have been largely devoted to either explaining large scale effects of news on macro-sociological levels, or individual effects on micro or psychological levels. The former approach has fo-

cused for instance on knowledge levels in society (cf. knowledge gap research), salience in society of public affairs topics (cf. agenda setting research), or voting preference. The latter approach has centered largely on (cognitive) processing of information from individual news reports. While both have yielded important results, they have been directed at seemingly different phenomena, and their results are sometimes difficult to reconcile. Macro level analyses do not satisfactorily explain the mechanisms behind large scale processes such as opinion change (or lack thereof), whereas micro level analyses are usually not apt to uncover longer term, aggregated effects.

An approach such as the one in this project can contribute to understanding the relation between macro and micro effects of television news. Of course, it does not solve the problem, but we argue that it can be useful to view both micro level effects and large macro-sociological effects of the news from a social perspective of knowledge structures (cf. Bandura, 2001; Höjjer & Werner, 1998; Spradley, 1972; DiMaggio, 1997; Farr & Moscovici, 1984; Augoustinos & Walker, 1995). This view recognizes that interpreting the news, and consequently the effects of news messages, is both individual *and* collective. It is individual in the sense that when viewers construct their interpretation of the news, they do this in their own minds, on the basis of individual knowledge and motivations. In addition, individuals make sense of everyday life – which includes media messages – through knowledge, ideas, and thoughts that they share with other members of a society. The first, immediate outcome of the encounter between a viewer and a news item is largely individual; a constructed interpretation of a news report. But parts of this interpretation come from shared culturally knowledge. Finally, individuals are part of larger aggregates of individuals. Consequently, large-scale effects originate in both the collective aspects in the minds of individual audience members, and in the sum of individual interpretations in aggregates of individuals (cf. Bandura, 2001; DiMaggio, 1997). As said, focusing on the structure of interpretations (i.e., the elements and connections) is one way of transcending purely individual meanings given to individual messages, while recognizing cognitive aspects of interpreting the news, and making individual as well as collective aspects empirically measurable. Below, we sketch some of the consequences of this view for how we look at news effects, as well as a number of consequences for future research.

Audience activity and television news effects

In this section, we try to assess how the results from our main study may contribute to understanding the relation between the audience as active recipients and the effects of news messages. The project's main finding can be summed up in saying that identical news messages in terms of content and structure can lead to a great diversity in interpretations, which are affected by differences

between viewers. As stated throughout this book, by measuring and analyzing interpretation we are actually studying (one form of) audience activity. While the study's design does not allow for extensive generalization of the findings, it does provide some points for further exploration of the role of audience activity in news effects. Below, we hypothesize on how audience activity as measured in this study relates to news effects, taking the social action perspective and the findings from our study as a point of departure.

Taking the earlier concept of the 'subjective message' (Renckstorf, 1977) and its relation to audience consequences as a point of departure, we address two basic issues. First, we argue how 'subjective messages' – interpretations that are not factual duplicates of the news message in terms of structural components – may have consequences for how the news affects viewers. Second, we hypothesize how audience differences – in knowledge and motivation – result in differences in the 'subjective message's' interpretative complexity and how this may have longer-term consequences.

How different components of interpretations lead to different news effects

The content of a news program does not have a one-on-one relationship with its interpretation by viewers. Consequently, an interpretation is not a carbon-copy of the message-as-sent, but the message-as-received that has an effect, or not. From the perspective sketched here, news effects, including the absence of uniform effects, are a question of how people have organized and use their social and individual knowledge. When sufficiently motivated, viewers choose what to use from their individual and shared knowledge what to use in making sense of the news, as from a 'toolkit' (DiMaggio, 1997). Simultaneously, there is also reason not to overestimate the viewer's power or inclination to be idiosyncratic; routine everyday interpretation may rely much on socially established knowledge that is applied to the news irreflexively and uncritically. Consequently, most of the time the core of audience interpretations is representative of the core of the message as intended by its producers. Still, if viewers with different backgrounds interpret the news differently to some extent, on a different level of complexity even, what are the consequences?

There are two domains in which the initial interpretation of the news may have consequences; First, on the recollection and understanding of information in the news, and second, on the formation of opinions and attitudes. Some of these consequences can be extrapolated from combining our findings with those from other studies, others remain for now only hypotheses that still need investigating. Interpreting the news involves the use of personal and shared knowledge by recipients. In interpreting the news, viewers use information from the news and import knowledge from their own knowledge system into their reconstruction of a news report. Importations of personal knowledge are

thought to play an important role in news reception; they are used to make sense of new information by filling perceived information gaps. Exactly how this process works however is still relatively unknown (Giegler & Ruhrmann, 1990; Shapiro & Lang, 1991). Our main study provides some more information on the use of importations; viewers often make sense of a news item by importing knowledge that is not directly related to the issue or event portrayed. In addition to general knowledge about such domains as politics, strictly personal knowledge about people's own lives is fused with information from the news. Furthermore, specific knowledge that is in some way, but much less directly related to the news, is also used to construct meaning. A consequence of importing knowledge that is personal, or not directly related to the issue is that it may lead to an understanding that was not originally intended by the messenger. Viewers construct interpretations that are meaningful to them, but not necessarily to news producers, researchers, or politicians, or other viewers.

This phenomenon may explain the consequences of news watching for recall and understanding as well as opinion formation (evidently, these have not been measured in this project). Importations are responsible for many of the differences between the intended news message and its interpretation by various viewers. The elements and connections used in the initial interpretation of a news item leave behind traces in memory, that at later times – for instance when encountering a similar news issue, or a news researcher – can resurface. If little or no elements and connections were included in the initial interpretation, they have much less of a chance to be included in later cognitive processes, and as a consequence, they will disappear eventually. Moreover, the more details and connections in news interpretations (i. e., the more elaborate and cohesive interpretations are), the easier it presumably is to remember individual elements and connections (Fiske & Taylor, 1991). Thus, it depends on the elements and connections that are included in that first interpretation of a news item whether or not the same elements are likely to be remembered. One example from our study is that details about people in the news and their acts are on the foreground in interpretations, most likely because they are important in knowledge representations in general (cf. Graber, 1984). Other concrete details as well as more abstract elements containing complex relations are less easily accessible in knowledge and are therefore more difficult to include in one's interpretation. Because of this focus in interpretations, what is remembered most often from the news at a later time is often also primarily centered on people and their acts, and less on for instance causes and consequences (Graber, 1984; Findahl & Höijer, 1985).

From this reasoning it can be surmised that that short-term complexity of interpretations leads to longer-term complexity of cognitive structures; the more knowledge is contained in an interpretation, the more knowledge is later available for incorporation in opinions, use in interpersonal communication, etc. (Anderson, 1980; Beaudoin & Thorson, 2004). Likewise, the type of com-

ponents used in interpretations, and the degree of complexity of short-term interpretations may affect the complexity with which we see the world in the longer term. For instance, from previous research on cognitive complexity we know that more details and more organization in knowledge systems lead to more balanced, less extreme opinions. A more cognitive complex individual is able to integrate more diverse and even inconsistent information (cf. Burlison & Caplan, 1998; Fiske & Taylor, 1991; Luskin, 1987; Neuman, 1981; Schroder et al., 1967; Sotirovic, 2001; Hinze, Koenig & King, 1962, 1964; Linville, 1982; Scott, 1963; Zimring, 1971). Likewise, differences in complexity of interpretations of individual news messages may ultimately lead to differences in extremity of attitudes and opinions. Our study showed that if interpretations contain relatively low numbers of elements and connections, the image of a news event will most likely contain only components from the news. In other words, these viewers' interpretations are more dependent on the 'original' news message, whereas more complex interpreters are more likely to be able to develop their world view and opinions more independently (cf. Findahl, 2001). Also, more complex interpretations of events and issues may mean less susceptibility to priming and agenda setting by the media and an inclination to be persuaded more by arguments instead of symbolic display or source characteristics (Iyengar, Peters & Kinder, 1982; Petty & Cacioppo, 1986). As seen in the main study, active news interpreters are no exception; however, the more 'passive' interpreters may constitute the majority of the television news audience.

The role of knowledge and motivation, and interpretive complexity in differential news effects

Viewers' motivations and prior knowledge are important antecedents of cognitive processes. Although we have not studied it ourselves, other research gives reason to suspect a relation between knowledge and motivation and the complexity of interpretations on the one hand, and recall/understanding and attitudes and opinions on the other. Giegler & Ruhrmann (1990) found that extensive use of importations from personal knowledge was related to high motivation. Our own study showed that interpretations containing more importations have a higher degree of interpretive complexity. Viewers with higher levels of knowledge and motivation use *more* of their knowledge than viewers with low knowledge and motivations, they use *more varied types* of knowledge, *connect more* of that knowledge, and make references to *more other knowledge domains*. Furthermore, motivation and interpretive complexity were correlated. Thus, we may have found an explanation for the familiar relation between differences in motivation and level of recall and understanding of news (Findahl & Höjjer, 1981, 1985; Giegler & Ruhrmann, 1990; Luskin, 1990; Renckstorf & Rohland, 1980; Robinson & Davis, 1990; Robinson & Levy, 1986; cf. Levy & Windahl, 1984).

This relation may be indirect, via interpretative complexity; because motivated viewers make more extensive use of their own personal knowledge, they are able to construct a more differentiated and cohesive image of a news report at the moment of watching. In turn, this more complete and cohesive interpretation, made already at the moment of reception, makes it easier to understand and recollect information in the longer run (Anderson, 1980; Beaudoin & Thorson, 2004).

Members of a society share some aspects of their knowledge and motivations with some other members. Differences in interpretive complexity between viewers with different motivations and knowledge may suggest that different social groups, that is, groups with different systems of shared knowledge and goals and interests employ different – socially established – news interpretations, just as their individual members do (cf. Lindlof, 1988). Some may be more complex than others, but they may also contain different knowledge than others.

Thus, some viewers are less able to achieve a certain level of detail and coherence; their mental ability and/or efforts do not allow them to progress beyond relatively sketchy and fragmentary images of an issue or event. This adds to the idea that news is especially for the initiated – and motivated (cf. Findahl & Höijer, 1985). News may help those members of the public who already have ample knowledge and motivation to use information more efficiently in further actions, and construct even more sophisticated opinions, while it does not help less knowledgeable and interested people to do so. Such mechanisms, in which motivation and knowledge differences lead to interpretive differences may ultimately result in intergroup contrast and polarization, both in terms of knowledge (such as the relation between observed knowledge gaps and motivational differences in groups, cf. Kwak, 1999) and opinions (cf. Tajfel, 1981). It is important to note that often the knowledge and motivation needed for this to happen must be fairly specifically related to a particular news issue, that is, a more general need for cognition, or interest in the news in general was often found to be insufficient to produce complex interpretations.

In conclusion, audience knowledge and motivation are central to the effects of news. The knowledge and motivation that can be summoned when interpreting the news determine the degree of complexity with which a news issue is interpreted. This in turn may determine how people think about and behave towards social issues. There is reason to believe that through this mechanism different ‘interpretive groups’ are created. Thus, micro-mechanisms may have consequences on much larger scale.

The concept of interpretive complexity

A major premise in the current project was that it is possible to regard interpretations as structures with a certain degree of complexity. As stated above, the concept of complexity of cognitions originated as a kind of improved representation

of knowledge levels. It referred not just to the facts people have in their heads about certain issues, but also, although this is not always made explicit, to the quality of their knowledge in a somewhat objective manner. The term 'political sophistication' – which is the political science variation of cognitive complexity focusing on political knowledge only – attests to this; complexity, if not synonymous with, is certainly conceptually related to the quality of knowledge or thoughts. Individuals are regarded more sophisticated, thoughtful, or active if their cognitions are numerous, cut a wide substantive swath, and are highly cohesive. The idea in the current project was similar; more active news viewers produce more substantive and more cohesive interpretations, enabling them to better weigh pros and cons, thus forming a more balanced view of social problems; the basis for rational citizenship. As stated in Chapter 4 for instance, this is one of the added values of our approach over standard recall research; not just the reproduction of selected news facts but more than that is taken into consideration, which is more in line with the idea of news reception as a complex process.

One may ask; is a more complex interpretation indeed a better interpretation? Apart from the fact that more complex does not inherently mean morally better, or even more objective, it is hard to determine what exactly viewers should pick up from the news to fully enable them to execute their civil and personal duties (McQuail, 2001). This is especially true for this project. If there is one thing that the main study has stressed, it is that viewers themselves determine what is important to them about a news report. It is precisely because in our measuring of interpretive complexity we made no distinction between what we thought was politically relevant or irrelevant, or what was related to the news message and what was not (as is the case in most psychological and political research) we were able to get to this conclusion. However, simultaneously this same strategy makes it more difficult to say that someone's understanding in the above sense of a news issue is 'better' if he or she incorporates for instance knowledge from his or her private life into the interpretation of that issue – which does make an interpretation more complex. The fact remains however that viewers do these kinds of things on a routine basis.

Methodical issues

As said earlier, the contribution of the method used in this project may be that it enables systematic analysis of interpretation differences. This is achieved by analyzing the structural components of interpretation, instead of trying to assess interpretation content.

In the current project the focus was (almost) entirely on analyzing differences between interpretations of the same news items, and not on the relation between a news message and its interpretation. One reason was very simply that at this stage, our focus was on finding a method for assessing differences

between interpretations made by different viewers. More fundamentally, one of the main suggestions of the action theoretical approach in this project is that 'the' content of a news message does not exist in any empirically observable way; there is only the subjectively perceived content in the head of an individual perceiver. Thus, of major importance is that the subjective interpretation and not some objective form or content has an effect on the recipient. Notwithstanding these arguments, it is possible to use our method for studying the relation between news form and content and interpretations, in addition to subject matter, attributes of the news probably invoke different interpretations by different people. As explained below, the relation between news content and interpretation should be a first focus for future research.

One route could involve using the measurement method for the analysis of news message complexity. Although in this project we have limited the analyses to 'texts' produced by audience members, our measurement strategy can just as easily be used to analyze the complexity of media 'texts' (cf. Chapter 5). This way, by assessing both the complexity of the message and of its interpretation, the relation between message and interpretation could be clarified. In a similar vein, as stated earlier in Chapters 3 and 5, complexity measures may be done for content and interpretation of other news genres, and perhaps in other cultural contexts as well.

The validity of the registration and analysis of interpretive complexity is an important issue, which has also been addressed in Chapters 4 and 5. In media research, measuring cognitive responses has been largely limited to the study of attitude change in relation to persuasive communications (Petty, Ostrom & Brock, 1981). A fairly large body of literature claims the validity of verbalization of cognition methods, in the sense that such methods are deemed adequate for assessing a valid portion of the actual thoughts people have (cf. Cacioppo, Von Hippel & Ernst, 1997; Davison, Vogel & Coffman, 1997; Ericsson & Simon, 1984; Höijer, 1989; Petty, Ostrom & Brock, 1981; Van Someren, Barnard & Sandberg, 1994). As far as our study is concerned, we cannot claim that we have captured every and all thoughts our participants had. Our participants were not under any time pressure when verbalizing, they were provided with as much time as needed to verbalize their thoughts as completely as possible. Although a majority stated they had not verbalized every thought they had, this procedure most likely ensured that the most salient thoughts were reported (Van Someren et al., 1994; Höijer, 1989).

Regarding our measurement of complexity, there is the question of construct validity. Measurement of complexity deviated somewhat from earlier operationalizations of complexity, so that we cannot completely account for its validity on the grounds of these earlier studies (cf. Luskin, 1987; Neuman, 1981; Schroder et al., 1967). In addition, the pattern of relations between viewer characteristics and the four aspects of complexity is not as straightforward as expected; we did

not find that differences between viewer groups were related to the same complexity aspects in the same way every time. This leaves the question how the four indicators of interpretive complexity relate to each other and to the concept of interpretive complexity. Correlations between the four indicators are strong however. Furthermore, correlations between complexity scores and theoretically akin concepts, such as education knowledge, and cognitive motivations give indications for validity. Although we obtained some basic indications of construct validity from both literature and the current study, we have not in this project conducted more severe tests. Although it may be difficult to do so, in the absence of comparable instruments, such tests – for instance of concurrent and congruent validity – should be done to further ascertain the value of the method.

Reliability of the measurement strategy was relatively high, given the intricacies of coding verbal utterances. This is important in considering the strength of findings, but it also indicates that it may be possible to replicate analyses in different contexts, including different media content and different audiences. One exception may be the measurement of domains. Although reliability is strong enough, the domains used in this study may be less universally transposable to contexts that are 1. not related to news (such as television drama), and 2. culturally very different (i.e., social domains are probably not always trans-cultural). In sum, validity and reliability issues should be investigated further. Combined with our thoughts on the concept of complexity, there is still some work before we can speak of the concept and measuring instrument of interpretive complexity as a fully finished product.

Methodologically, this project deviates somewhat from standard news effects research. It does have a strong basis in theory and research on knowledge gain from news, but it also profits from other fields of research, such as interpretive reception approaches. This gives our approach a two-headed appearance. On the one hand it is a quantitative approach, in that levels of complexity were assessed and used in quantitative analyses. But it is also qualitative, through its facilitating of free of interference communication of thoughts, and its qualitative analysis of these thoughts to amend a previously developed coding strategy. This positioning on the borderline between quantitative and qualitative research may be seen as problematic, because the project is none of these completely. Qualitative researchers may argue that the project did not completely adhere to rules for ‘proper’ qualitative research (for instance because an a priori system of categories was used), and quantitative researchers may do the same for quantitative research (for instance because of sampling issues). Although some of these criticisms may be justified, the dual character of this project may also be seen as beneficial. This project is an explicit effort to bridge the age-old gap between these two schools of thought. Adherents of both schools have been known to claim the sole ability of their methodology to reveal the empirical ‘truth’, and to deny that same quality to their opponents.

Some have argued that in order to develop a better understanding in how media affect their receivers, scholars should develop methods that integrate qualitative and quantitative methods, so that in-depth understanding of audience meanings may be coupled with systematical analysis and generalizability (cf. Hendriks Vettehen, Renckstorf & Wester, 1996). Although the current project has not achieved this in full, it does present a small-scale illustration of how it may be achieved in the field of television news research.

Outlook: Future research

This project contributes at least three things to television news research. First, it has presented a way of conceptualizing and measuring what viewers do with television news. It is based on current theories of how people deal with information, and as a consequence, which is not too far derived from what has been done before in communication studies and other disciplines. Second, the project's main findings gave indications as to why television news often does not seem to have as straightforward 'effects' as were expected. However, we are far indeed from any definitive answers to television news effects questions. Perhaps the main contribution of the project may be to initiate new research questions, questions that include the viewer's reconstructive processes as a decisive step between exposure to news and ultimate effects. In this final section, we briefly outline a limited number of potential research fields that this project's method and empirical results may generate. Again, we draw upon Renckstorf's (1977) assessment of research field. Basically, he argued that both the 'objective' message and the 'subjective' message as constructed by the viewer and both their consequences should be studied. Thus, our proposition for future research addresses the analysis of news content in terms of 'objective' complexity (measuring complexity by means of content analysis), and 'subjective' complexity of audience interpretations (measuring interpretive complexity). Furthermore, future research may concentrate on the relation between both the 'objective' and 'subjective' message and audience mental and social behavior, as well as the relation between audience characteristics and the 'objective' and 'subjective' message and subsequent behavior (cf. Renckstorf, 1977, p. 47–48). Together research on these areas may provide new insights into the whole process of news communication, from content to effects.

News content and form

In terms of the above, this research area addresses the 'objective' message. One main finding of the current project was that different news topics are interpreted at different levels of complexity. Thus, future research should take

into consideration differences between subject matter when researching news reception. In other words, it is important not to aggregate several different topics when analyzing their consequences as much information may get lost. Other than topical differences, the project devoted relatively little attention to the news message. One potential research object that the project may spawn is that of analysis of news content complexity. Criticism of the news frequently concentrates on its perceived simplicity. Especially news on television is seen as oversimplified, containing little real information, and providing no context (such as treating events as loose events, instead as part of a process, providing no causes and consequences of events, etc., cf. Cohen, Adoni & Bantz, 1990; Findahl & Höijer, 1985). The measurement strategy for interpretive complexity, can easily be adapted to measure the complexity of media 'texts' (cf. Chapter 5). Adapting the complexity measurement to news content may enable systematic comparison of complexity of varying news content (e. g., is news on topic A less complex than news on other topics? Is newspaper A less complex than newspaper B? Are news media in country A less complex than in country B?), news media types (e. g., is television news less complex than print or on-line news?), and study of trends in news complexity (e. g., has news on topic A become less complex over time?).

Consequences of news form and content

A second line of research questions tackles traditional 'effects' questions on how news media form and content affect news users' perceptions, world views, and factual knowledge. In terms of complexity we can ask in what ways aspects of a news item affect content and complexity of interpretations. Of course, television news research on how news form and content affect recall, understanding, and affective responses has been extensive. However, some specific research questions may be added that may increase understanding of the role of interpretive actions in this process. For instance, what are the effects of differences in news content complexity on recall and understanding? Can media content prime the use of particular elements and connections, or influence the degree of their use (e. g., does personified news reporting result in interpretations containing more references to actors and their feelings and motives)? Analyzing the relation between levels of differentiation and integration in news content and viewers' interpretative complexity may for instance help make clear what levels of news complexity are most productive for generating complex responses, and best for information transferal and understanding. A second research focus can be to further investigate how different topics generate different levels of interpretive complexity; for instance, are there types of topics that typically trigger certain types of interpretations? Do some topics lend themselves more to differentiated and integrated interpretation than oth-

ers? Potentially, if newspaper reports on the same topic published in different newspapers differ in complexity, readers of one newspaper may generate a comparatively simple image of an issue. Similar questions can be raised about other features of news form and content.

Research in this area would be most useful when integrating studies of the 'objective' message as described above with research on how the media user addresses it, the subjective message' (cf. also Livingstone, 1990). Through its focus on the structure (i. e., elements and connections) of 'texts', be it produced by a viewer while watching or by a journalist while making the news, complexity research can contribute to this.

Interpretive complexity and further consequences of news use

As the main assumption of this project was that 'subjective messages', interpretations of news content cause further actions, be it mental or physical, an important line of research that may originate from this project is on the relation between interpretive complexity and further consequences of news use. The assumption is that viewers who construct more complex interpretations of the news at the moment it is being watched, are better able to gain knowledge and achieve understanding of a public issue because this initial 'reconstruction' contains more detailed, wide-ranging and interconnected information. Furthermore, they develop more sophisticated opinions, which allow for better weighing the pros and cons of issues. Thus, research should focus on how the degree to which an interpretation is differentiated and integrated affects how and to what degree people acquire knowledge, how the initial complexity of their interpretation affects their immediate and subsequent understanding (in terms of 'correctness' according to the producer). Furthermore, what is the influence of interpretive complexity on complexity and direction of opinions, or perceived salience of public issues for individual news viewers? For instance, are people with more complex interpretations more inclined to think about a news issue at a later time? Likewise, it can be hypothesized that more differentiated and integrated interpretations are more likely to invoke further 'external' actions such as interpersonal communication about an issue, seeking of further information from other sources, etc. In fact, all of the assumptions made above about the relation between interpretive complexity and traditional measures of news effects should be tested.

The audience

A final research focus using the concept of interpretive complexity may be the study of the role played by the audience and its characteristics in the process of news effects. In terms of Renckstorff (1977), this research area addresses

the relation between the audience and the (subjective) message. As argued above, news reception is not an entirely individual, but socio-cultural process, as meaning giving is embedded in a social context, and shared knowledge is important in processing the news. Therefore, it is important to study the existence of types of culturally shared modes of interpretation, based in shared knowledge, interests, motives, etc. Likewise, more or less fixed interpretation strategies may exist within different social groups for certain topics, situation or social contexts. Certain groups for instance may be inclined to highly complex interpretation of some topics but not of others.

As we may presume there are large differences in the way different social groups interpret news topics, it is important not to limit analyses to aggregate levels. It appears from our investigation that different audiences construct different meanings on identical topics. Therefore, aggregate-level results are useful, but only up to a certain degree. Instead, de-aggregation may result in typologies of different news audiences, based on their social-structural characteristics, cognitive and affective differences (i.e., knowledge type and level, and relevance and motivations), and interpretation types and levels. Measurements should be issue-specific, as audiences may form not only around shared structural characteristics, but also around shared definitions of topics. One interesting question for example may be whether social groups are likely to use some domains more than other social groups. Such typologies are one way in which more understanding can be gained on the relation between effects on a societal level and those on individual levels.

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Appendices to Chapter 7

Appendix A

Transcripts of stimulus news items

[Each news item was divided into segments. After each segment, the participant would verbalize thought. In the table below, each box represents a segment. Transcripts of news items are translated from their originals in Dutch. All data in the text corresponding to the news items, such as the number of words, relate to the original Dutch transcripts]

Table 1. Transcript news item 'Child abuse'

Text (audio)	Image (visual)
[anchor] In Nederland worden jaarlijks 80.000 kinderen mishandeld, van wie er 80 overlijden aan de gevolgen van die mishandeling. Dat zegt een groep prominente psychiaters, pedagogen en juristen, gespecialiseerd in hulpverlening aan kinderen.	<i>Studio:</i> globe: anchor
[anchor] De hulpverleners hebben zich verenigd in de actiegroep RAAK. Omdat de actiegroep vindt dat de overheid te weinig doet tegen kindermishandeling werd vanmiddag een actieplan aangeboden aan leden van de Tweede kamer.	<i>Icon:</i> hall + text 'child abuse'
[reporter] Het blijft een beetje een taboeonderwerp in Nederland: kindermishandeling. Toch gebeurt het vaker dan veel mensen zich kunnen voorstellen. De overheid gaat uit van 50.000 gevallen per jaar, maar dat is een te voorzichtige schatting, zegt onderzoeker Willems, die een proefschrift heeft geschreven over kindermishandeling.	<i>Title:</i> Wouter Kurper- shoek reporting Children in the streets with ball and bike
[Willems] Als je uitgaat van vrij verouderde definities en onderzoeken dan kom je uit op minimaal 50.000 per jaar. Maar leg je er wat nieuwe gegevens bij, dan kan het haast niet anders dat we minimaal over 80.000 gevallen van kindermishandeling per jaar praten. Dat is het aantal waar ik als bodemcijfer in mijn proefschrift op uitkwam.	<i>Title:</i> J. Willems: researcher child abuse Man, close
[reporter] Een groep prominente kinderpsychiaters, hulpverleners en juristen, verenigd binnen de actiegroep RAAK, zijn geschrokken van de nieuwe cijfers en presenteerden vanmiddag een actieplan aan leden van de Tweede Kamer.	Group of people, one holding a poster and another flyers on child abuse
[Meuwese] Dit is geweld dat in de privé-sector plaatsvindt, waar niemand last van heeft. Het geweld dat in de publieke sector plaatsvindt, daar hebben we heel veel problemen, dat noemen we zinloos geweld, daar zijn marsen voor. En	<i>Title:</i> S. Meuwese: action group RAAK Bearded man, close

Text (audio)	Image (visual)
hier zijn geen marsen voor, want deze kinderen die hier het slachtoffer van zijn, kunnen hun stem niet laten horen en daarom hebben wij dit manifest opgesteld.	
[reporter] De actiegroep RAAK verwijt de overheid te weinig aandacht te besteden aan de bestrijding van kindermishandeling.	Same group of people as above
[Meuwese] Aandacht voor kindermishandeling leidt ertoe dat er dus inderdaad meer boven water komt als dat je gedacht had. En dat wordt als een probleem gezien.	<i>Title:</i> S. Meuwese: action group RAAK
[reporter] Waarom dan?	Bearded man, close
[Meuwese] Omdat de capaciteit voor de behandeling, voor de opvang, de wachtlijsten in de kindertehuizen, die maakt het heel erg moeilijk. En dan zie je dus dat kinderen moeten blijven in gezinnen waar ze mishandeld worden en daar is dan geen oplossing voor.	
[reporter] Behalve meer meldpunten voor kindermishandeling pleit de actiegroep RAAK ook voor een aparte minister van jeugdzaken, die de bestrijding van kindermishandeling voortvarend moet aanpakken.	Door with pamphlet

Table 2. Transcript news item ‘Teacher shortage’

Text (audio)	Image (visual)
[anchor] De oplossing voor het lerarentekort in het onderwijs, de massale inzet van zogenoemde zij-instromers en herintreders, dreigt op een fiasco uit te lopen.	Talking head, <i>studio</i> : globe <i>Icon:</i> school blackboard with text: ‘shortage’
[anchor] De Algemene Vereniging van Schooldirecteuren, de AVS, stelt dat al die enthousiaste nieuwe leerkrachten, juist vanwege dat lerarentekort, slecht begeleid worden. En de angst bestaat dat veel van die leerkrachten nu afhaken.	Same
[reporter] Arantes Biekman staat sinds 6 weken voor de klas op een school voor speciaal onderwijs: de Bombardon in Almere. Helemaal alleen, want ervaren collega’s om Arantes te begeleiden zijn er niet. Zelf komt hij uit het welzijnswerk.	<i>Title:</i> Eva Wiessing reporting
[Biekman] Ik ben dus begonnen, ik heb 1 dag heb ik meegedraaid met een juf. Het weekend daarna ben ik alleen begonnen. Dat doe ik nog steeds. Zo af en toe, op bepaalde momenten, steekproefsgewijs, komt de directeur, die mij begeleid, komt even in een hoekje zitten en gaat naar mij kijken. Dat vind ik wel prettig.	<i>Title:</i> A. Biekman: zij-instromer Man in schoolbank

Text (audio)	Image (visual)
[Pet] Ik vind zelf dat we onvoldoende begeleiding geven. Ik hoop dat de zij-instromers mee uit de voeten kunnen met wat we doen op dit moment, maar als ik heel eerlijk ben, vind ik het niet helemaal verantwoord wat er gebeurt.	<i>Title</i> : R. Pet: warden The Bombardon; Man with moustache in classroom
[reporter] De Bombardon is niet de enige school met problemen. Er staan inmiddels zo'n 3.500 mensen voor de klas die jarenlang iets anders hebben gedaan. Of zelfs helemaal geen ervaring hebben en uit het bedrijfsleven komen. Die zogenaamde herintreders en zij-instromers zijn een belangrijke troef om het lerarentekort op te lossen. Volgens de Algemene vereniging van Schooldirecteuren dreigen, juist vanwege dat lerarentekort, veel van die mensen af te haken.	<i>Title</i> : T. Duif: Society of school wardens Man, close
[Duif] Ja, en we lopen het risico dat deze mensen na verloop van tijd er mee stoppen, teleurgesteld ja, en als je eenmaal gestopt bent, dan kom je nooit meer terug. En we hebben ze heel, heel hard nodig.	Same man
[reporter] Heeft u nou een oplossing voor dit probleem?	Class room with children and teacher
[Duif] Wij denken wel. Er gaan een heleboel mensen met pensioen de komende tijd. Die mensen zouden we weer moeten kunnen vragen: wil je niet die jonge mensen die nu gaan instromen te gaan begeleiden? Ze hebben een heleboel ervaring. Zo kunnen we die ervaring weer overdragen en ja, dan hebben we eigenlijk een win-win situatie voor iedereen.	Man, close
[reporter] Minister Hermans vindt het een goed plan, maar wil er nog geen geld voor uittrekken. Dus voorlopig zal Arantes Biekman zijn klas zelf draaiende moeten houden. Onder begeleiding. Sterker nog, zonder vervanging.	Class room with children
[Pet] De zij-instromer moet studeren. Dat is de zij-instromer niet kwalijk te nemen, dat zit gewoon in zijn contract. Die heeft dus een dag in de week vrij. Wij kunnen dat meestal niet oplossen. En aanstaande vrijdag is de zij-instromer er bijvoorbeeld niet en de kinderen zijn dan een dag thuis.	R. Pet in classroom

Table 3. Transcript news item 'Agriculture'.

Text (audio)	Image (visual)
[anchor] Het waren maatregelen die hun weerga in Europa niet zouden kennen, de Duitse landbouwhervormingen. Vorig jaar werden ze aangekondigd door de toen kersverse landbouwminister Gunast. Na de BSE-crisis wilde Duitsland voorgoed af van de onbegrensde massaproductie in de landbouw- en veesector. Milieuvriendelijkheid, consu-	News anchor, in news studio <i>Icon</i> : cows + German flag

Text (audio)	Image (visual)
<p>mentenbescherming, dat moesten de nieuwe speerpunten worden. Nu, een jaar later, worden de gevolgen voor het eerst goed zichtbaar. De Duitse consument voelt de landbouwhervormingen vooral in de portemonnee.</p>	
<p>[reporter] Bij deze slager weet je wat er in de worst gaat. Hier kan de klant controleren waar het gehakt van gemaakt wordt of waar de karbonades vandaan komen, het is bekend welke boer de lamsbout levert en van welke boerderij het rundvlees komt.</p>	<p><i>Title:</i> Bert Tigchelaar reporting sausage, butcher, meats</p>
<p>[reporter] Ruim een jaar geleden stond Duitsland op zijn kop toen de eerste BSE-gevallen bekend werden. Consumenten kochten bijna geen vlees meer, en als ze al vlees kochten dan bij voorkeur in dit soort slagerijen. Ook al zijn die wel een stukje duurder</p>	<p>Exterior butcher's 'Fleischerei', statue of cow in front</p>
<p>[Muskulus] Na het laatste schandaal zei de consument: nu is het genoeg, nu kopen we alleen dit voedsel nog. Geen goedkope aanbiedingen meer waar dan later weer wat mee aan de hand blijkt.</p>	<p><i>Title:</i> F. Muskulus (butcher) Man in chair (subtitled)</p>
<p>[reporter] Diervriendelijke veeteelt en bio-landbouw zijn niet nieuw, maar door de schok van de BSE-crisis is nu zelfs het Duitse conservatieve landbouwbeleid compleet omgedraaid, tot grote vreugde van de pioniers. Op den duur moet in Duitsland 20% van de bedrijven diervriendelijk of biologisch produceren.</p>	<p>Exterior farm, interior stable, cows being fed</p>
<p>[reporter] Nicole Albs is geen typische boerin; ze heeft economie gestudeerd. Sinds 1993, toen de vervallen boerderij uit DDR staatsbezit werd teruggegeven, verzorgt ze een kudde van gemiddeld 120 Franse hooglandkoeien die vrij buiten lopen, het hele jaar door. Deze manier van landbouw en veeteelt is natuurlijk duurder dan massaproductie.</p>	<p>Pasture, cows</p>
<p>[Albs] De consument moet anders gaan denken en beslissen wat hij eigenlijk wil. Als je een duurdere productie hebt, moet die naar verhouding gehonoreerd worden. De diervriendelijke methode is de meest natuurlijke, maar drukt ook enorm op de prijs.</p>	<p><i>Title:</i> N. Albs (bio-farmer) Woman in front of fence(subtitled), cows</p>
<p>[reporter] Vroeger werden dit soort idealisten als idioten betiteld, maar die tijden zijn voorbij. De Duitse landbouw heeft een nieuwe minister en een nieuw beleid, maar de consument moet uiteindelijk beslissen of het een succes wordt.</p>	<p>Same as above with dog on farm</p>
<p>[reporter] De alternatieve landbouw en veeteelt zal nooit voor de volle 100% in de voedselbehoefte kunnen voorzien. Na de BSE-crisis is in Duitsland in ieder geval een nieuwe weg ingeslagen. Maar voor een echte ommekeer, voor een Agrarwende is meer nodig dan alleen goede wil bij een paar boeren, bij politici, maar vooral ook bij de consument. Want die zal meer over moeten hebben voor goed voedsel.</p>	<p><i>Title:</i> Bert Tigchelaar in Ludwigslust Reporter in farmland</p>

Appendix B

Instruction Thought-Listing

[This instruction was given to the participant prior to the Thought-Listing task. Translated from Dutch]

We are interested in *everything that goes through your mind* when you watch the news. To find out what goes through your mind, I ask you to *say out loud all your thoughts*. I ask you to list all thoughts you have while watching the news.

The news program you are about to watch has been divided into several small segments. After each segment, the program will stop. When this happens, you will be provided all the necessary time to say aloud all thoughts you had when you were watching the segment. The program will restart when you have finished talking.

So, you remember what you think while you watch the news and say these thoughts aloud when the program stops.

It is important that you say *all* thoughts you have. It doesn't matter whether your thoughts are about the news, about yourself, your feelings, things you noticed, or something altogether different. It doesn't matter whether they are positive, negative, or neutral. *Every single thought matters*.

It is important you be *as complete as possible*. Even thoughts you may find 'irrelevant' may be spoken freely.

Don't try to formulate your thoughts as best you can. You don't need to explain what you say or why you say something. It may help if you act as if you are alone in the room, speaking to yourself.

Finally, this is *not a test*; you cannot pass or fail it.

Appendix C Questionnaires I and II

Vragenlijst I

Interviewer: _____

Respondentnummer: _____

Datum: ____ - ____ - ____ 2004

Voordat we met het eigenlijke onderzoek beginnen, willen we u een paar vragen stellen. Deze vragen hebben betrekking op met name uw persoonlijke situatie en uw mediagebruik. Verder stellen we een aantal vragen over uw mening. Hierbij gaat het uitdrukkelijk om uw *persoonlijke mening*. U moet dus niet denken dat uw antwoorden goed of fout kunnen zijn. We beginnen met een aantal persoonlijke gegevens.

1. Wat is uw geslacht?

- vrouw
 man

2. In welk jaar bent u geboren?

19.....

3. Wat is de hoogste opleiding die u voltooid heeft?

- onvoltooide lagere school, basisschool
 Lagere school, basisschool
 LBO, LHNO, LTS, nijverheidsonderwijs, huishoudschool, leerlingwezen, VMBO basis beroepsgerichte leerweg, VMBO kader beroepsgerichte leerweg
 MAVO, MULO, ULO, VMBO theoretische leerweg, VMBO gemengde leerweg
 MBO
 HAVO, MMS
 VWO, Gymnasium, Athenaeum, HBS
 HBO, kweekschool, conservatorium, MO-acten
 WO, universiteit, technische en economische hogeschool oude stijl
 WO+

4. Hoe vaak kijkt u gemiddeld per week naar een nieuwsuitzending op televisie?

.....keer per week

5. Hoe vaak kijkt u gemiddeld per week naar een actualiteitenprogramma?

.....keer per week

Mensen kunnen allerlei redenen hebben om naar het *nieuws* op televisie te kijken. Hieronder staat een aantal uitspraken over het nieuws op televisie, hier journaal genoemd. Wilt u aangeven in hoeverre u het met die uitspraken eens of oneens bent?

6. In hoeverre kloppen de volgende uitspraken voor u?

		Klopt helmaal niet		klopt gedeeltelijk wel, gedeeltelijk niet		Klopt wel		Klopt helmaal
1	Ik kijk naar het journaal om op de hoogte te blijven van actuele zaken en gebeurtenissen	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
2	Ik vind het belangrijk om het journaal van het begin tot einde te zien	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
3	Ik kijk naar het journaal om interessante dingen te hebben om over te kunnen praten	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
4	Ik plan mijn avond zo, dat ik het journaal niet mis	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
5	Ik kijk naar het journaal omdat het gezellig is	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
6	Ik kijk naar het journaal om goed geïnformeerd te zijn over prijsstijgingen en dat soort dingen	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
7	Ik kijk naar het journaal om te kijken of de politici een goed beleid voeren	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
8	Na het journaal denk ik na over de dingen die ik gezien en gehoord heb	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

9	Ik kijk naar het journaal om er achter te komen wat de belangrijkste onderwerpen van de dag zijn	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Ik kijk naar het journaal om iets te weten te komen over onderwerpen die mensen zoals ik aangaan	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Ik kijk naar het journaal omdat het spannend is	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Ik kijk naar het journaal om ondersteuning te vinden voor mijn eigen standpunten tegenover die van anderen	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Ik praat vaak met anderen over wat ik gezien en gehoord heb op het journaal	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Ik kijk naar het journaal omdat ik een mening wil vormen over de dingen die gebeuren in de wereld	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Ik hou de tijd in de gaten om het journaal niet te missen	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Ik kijk naar het journaal zodat ik informatie aan andere mensen kan overdragen	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Ik lees wat ik gezien en gehoord heb in het journaal nog een keer in de krant na	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Ik kijk vaak om een andere reden naar het journaal, namelijk:					

In programma's zoals het televisienieuws wordt men iedere dag geconfronteerd met informatie over tal van onderwerpen, of men daar nu in geïnteresseerd is of niet. Zou u willen aangeven in welke mate u wel of niet *geïnteresseerd* bent in informatie over de volgende soorten onderwerpen?

7. In hoeverre bent u geïnteresseerd in informatie over de volgende onderwerpen?

		<i>niet geïnteresseerd</i>	<i>wenig geïnteresseerd</i>	<i>tamelijk geïnteresseerd</i>	<i>zeer geïnteresseerd</i>
1	gezondheid en ziekte, gezondheidszorg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Opvoeding, onderwijs en beroepsopleiding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Technische en wetenschappelijke ontdekkingen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	maatschappelijke hulpverlening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	relaties met partner, gezin, familie en vrienden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	werkgelegenheid, arbeidsomstandigheden, CAO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	regeerakkoord, kamerdebatten, regeringsbeleid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	volkshuisvesting, woningrenovatie, huurdersvragen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Milieuvervuiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	gemeenteraad, gemeentepolitiek, plaatselijke politieke partijen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	rechtsbijstand, consumentenbond, ombudsman	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	theater, concerten, musea, tentoonstellingen, literatuur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	handwerken, zelf schilderen, tekenen, muziek maken, knutselen, fotograferen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	sportuitslagen, sportwedstrijden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	plaatselijke werkgelegenheid, lokale bedrijven, plaatselijke middenstand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	streekromans, dialect, folklore, streektaal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	economie, handel, bedrijfsleven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	financiën, belastingvraagstukken, miljoenennota	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	opvattingen, discussies en besluitvorming van politieke partijen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	gemeentelijke nieuwbouwplannen, huisvesting, wegenaanleg, milieu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	situatie van pers, radio en televisie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	justitie, gevangeniswezen, veiligheid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	vrije tijd, plaatselijke sport, verenigingsleven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	stads- en verkeersplanning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	leger, politie, douane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26	landbouw en visserij	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	scholen, bejaardenzorg, kruisvereniging, huisartsen, parochie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	leven en problemen van filmsterren, politici, sporters, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	rampen, ongelukken, overstromingen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	misdaad, politieberichten, rechtszaken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	ontwikkelingen buiten Nederland	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	inbraken en vernieling in de gemeente, plaatselijk bekende personen, ongelukken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	vakantie, toerisme, op reis gaan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	religie, levensbeschouwing, kerkelijke aangelegenheden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	reclame en advertenties voor producten en diensten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	zelfkennis, persoonlijkheidsvorming en zelfontplooiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37	Problemen van minderheden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	beursberichten en dollarkoers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	het weer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Vragenlijst II

Tot slot van dit onderzoek willen we u nog een klein aantal vragen stellen. Deze vragen hebben betrekking op de uitzending die u zojuist hebt bekeken, wat u ervan vond en hoe u dit onderzoek ervaren hebt.

Allereerst willen we graag weten hoe u het vond om hardop te denken tijdens het kijken naar het nieuws. Wilt u telkens aangeven welk antwoord op u van toepassing is?

1. Was u tijdens het kijken naar het nieuws meer geconcentreerd of minder geconcentreerd dan wanneer u normaal naar het nieuws kijkt?

- meer geconcentreerd
 maakt geen verschil
 minder geconcentreerd

2. Denkt u dat u alle gedachten die u had tijdens het kijken heeft uitgesproken?

- ja, ik heb alle gedachten die ik had, uitgesproken
 ik heb een klein aantal gedachten dat ik had, *niet* uitgesproken
 nee, ik heb een groot aantal gedachten dat ik had, *niet* uitgesproken
 ik kan daar geen uitspraak over doen

Tenslotte willen we graag weten hoe *belangrijk* of *onbelangrijk* een aantal thema's voor U *persoonlijk* zijn die in deze uitzending zijn behandeld. Daarom willen we graag dat u hieronder aangeeft hoe belangrijk of onbelangrijk deze thema's voor U *persoonlijk* zijn. Geeft u voor elke uitspraak een apart en onafhankelijk oordeel. Ga relatief snel langs de verschillende termen en denk niet te lang na over elke afzonderlijke uitspraak. Het gaat om uw eerste indruk.

Als uw mening *zeer sterk overeenkomt* met een van beide uitspraken dan geeft u dat aan door het bijbehorende vakje zwart te maken:

Zijn relevant voor mij zijn irrelevant voor mij, of

Zijn relevant voor mij zijn irrelevant voor mij, of

Als uw mening *een beetje* overeenkomt met een van beide uitspraken, dan geeft u dat zo aan:

Zijn relevant voor mij zijn irrelevant voor mij, of

Zijn relevant voor mij zijn irrelevant voor mij, of

Als *beide* uitspraken *evenveel* of *even weinig* met uw mening overeenkomen, geeft u dat zo aan:

Zijn relevant voor mij zijn irrelevant voor mij

3. Berichten rond het thema **kindermishandeling**...

zijn belangrijk voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn onbelangrijk voor mij
gaan mij niet aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	gaan mij zeer aan
zijn irrelevant voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn relevant voor mij
betekenen veel voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	betekenen niets voor mij
vind ik oninteressant	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik interessant
vind ik essentieel	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik overbodig
spreken mij aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	spreken mij niet aan
vind ik noodzakelijk	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik niet noodzakelijk

4. Berichten rond het thema **lerarentekort**...

zijn belangrijk voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn onbelangrijk voor mij
gaan mij niet aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	gaan mij zeer aan
zijn irrelevant voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn relevant voor mij
betekenen veel voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	betekenen niets voor mij
vind ik oninteressant	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik interessant
vind ik essentieel	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik overbodig
spreken mij aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	spreken mij niet aan
vind ik noodzakelijk	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik niet noodzakelijk

5. Berichten rond het thema **landbouw in Duitsland**...

zijn belangrijk voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn onbelangrijk voor mij
gaan mij niet aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	gaan mij zeer aan
zijn irrelevant voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	zijn relevant voor mij
betekenen veel voor mij	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	betekenen niets voor mij
vind ik oninteressant	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik interessant
vind ik essentieel	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik overbodig
spreken mij aan	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	spreken mij niet aan
vind ik noodzakelijk	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	vind ik niet noodzakelijk

6. Hoe goed bent u op de hoogte van de situatie op het gebied van kindermishandeling?

ik weet er heel weinig van ik weet er heel veel van

7. Hoe goed bent u op de hoogte van de situatie op het gebied van het lerarentekort?

ik weet er heel weinig van ik weet er heel veel van

8. Hoe goed bent u op de hoogte van de situatie op het gebied van landbouw in Duitsland?

ik weet er heel weinig van ik weet er heel veel van

Dit is het einde van de vragenlijst
Hartelijk bedankt voor uw medewerking!

Appendix D

Coding instrument (abridged version)

The full version of the instrument is available from the author

Instructie

De nummers voor de verschillende categorieën komen overeen met de nummers in het codeboek, en dus met de uiteindelijke codes. Bij elke categorie staan een aantal typen genoemd van zaken die je in zo'n categorie kunt tegenkomen. Deze typen staan ook in het codeboek; ze fungeren louter als voorbeeld om het coderen wat makkelijker te maken. Ze geven aan waar je zoal aan kunt denken, welke typen je waarschijnlijk zult tegenkomen in een subcategorie. Het is niet zo belangrijk dat je ook precies van elk element weet bij welk type het hoort. Er is 1 uitzondering: bij 'gevoelens' dien je dat wel te weten en te coderen.

I soorten (x is een soort y):

Een element kan een *soort* van iets zijn: een *soort* actor (premier Balkenende, ik/hij/zij), een *soort* object (hamer, spijker, de griep), een *soort* gebeurtenis (oorlog, de bse-crisis), etc. Oftewel x (het element) is een soort y (valt in categorie y).

De vraag die je in feite stelt als je denkt een element gevonden te hebben is bij deze categorie: 'is dit een soort van iets?' (is dit een soort actor? Is dit een soort handeling? etc.). Ook als de respondent de vraag min of meer zelf stelt: 'wat is een ...?' 'Wanneer spreek je van een ...?'

Er zijn soorten van 7 verschillende zaken:

1. actoren

Actoren zijn *mensen*, of *groepen* mensen, (ook groepen mensen in abstracte/'professionele' zin: bijv. bedrijven, organisaties), die bepaalde handelingen kunnen verrichten en/of gevoelens kunnen hebben: mensen/zaken die een rol spelen in de wereld.

Denk hierbij aan 2 typen actoren: zowel a) individuele personen (die man, een minister, een boerin), als b) groepen actoren (boeren, politici, maar ook: het kabinet, de media, de organisatie van onderwijzers)

Vaak worden ze alleen bij naam genoemd, of zelfs alleen met 'hij' of 'zij' aangeduid. Jij moet er dan achter komen wie bedoeld wordt, en wat voor soort actor deze persoon of groep dan is.

2. handelingen

Handelingen zijn dingen die actoren doen; LET OP: ook **mentale handelingen** (nadenken) horen hierbij! (combinaties van) **Werkwoorden** wijzen

meestal op handelingen. LET: ‘ik lees dat’ en de variant: ‘dat kan ik *niet* lezen’; of ‘ik ga dat lezen’ worden allemaal op dezelfde manier gecodeerd!

Je kunt denken aan 2 typen handelingen per categorie: een handeling die bijv. strikt politiek is, die perfect past bij het gebied van politiek (wetten maken, stemmen, interrumpen) en handelingen die ook horen bij het ‘vak’ van politicus maar die niet strikt politiek hoeven te zijn, zoals: vergaderen, een verklaring afleggen, etc. LET OP: ook handelingen van de respondent die op een van de categorieën van toepassing zijn horen bij zo’n subcategorie: bijv. ik ga stemmen, is een politieke handeling!

Vaak zijn respondenten vaag: “ze ‘doen dat’ goed”. Jij moet dan inschatten op welke handeling de respondent op doelt. Bijv. ook: verstand op nul, blik op oneindig (zetten)

3. activiteiten/ gebeurtenissen

Activiteiten zijn stelsels van handelingen, dus niet 1 handeling, maar een aantal handelingen bij elkaar, iets dat niet meer als 1 geïsoleerde handeling beschouwd kan worden. Vaak, maar lang niet altijd zijn het woorden eindigend op -ing een vergadering, verslaggeving, een bezoek, etc. *Gebeurtenissen* zijn gebeurtenissen zoals dat in het dagelijks taalgebruik wordt bedoeld: iets dat gebeurt (en dat je niet als handeling van een persoon kunt opvatten): oorlog, een sterfgeval. Hieronder valt ook bijvoorbeeld het weer

De typen zijn hetzelfde als bij ‘handelingen’.

4. objecten

Objecten zijn ‘dingen’, voorwerpen die een plaats innemen, waar je wellicht handelingen mee kunt verrichten, maar ook dingen die je niet per se kunt zien of aanraken, zoals ziektes, wetten etc.: alles dat je als een ‘ding’ zou kunnen beschouwen. Hiermee worden ook ‘abstracte’ dingen bedoeld in de zin van ‘begrippen’ als: ‘de politiek’, ‘de economie’, de gezondheid’, ‘cultuur’, etc. Het zijn doorgaans **zelfstandige naamwoorden**: dingen. NB: dieren rekenen we ook tot objecten.

Denk dus aan 2 typen: fysieke en niet-fysieke objecten. Fysieke objecten zijn objecten die je in principe kunt waarnemen. Bijv. politieke fysieke objecten: spreekgestoelte bank in de tweede kamer, niet fysiek: wet, beleid.

LET OP: ook: *dit onderwerp* interesseert me niet. Je codeert het ‘onderwerp’ dan in de categorie waar het onderwerp over gaat (bijv. ‘landbouw’). Ook: ongedefinieerde objecten: bijv. ‘alles’

5. plaatsen

Plaatsen zijn plaatsen in de letterlijke zin van het woord: plekken waar iemand of iets zich kan bevinden, waar handelingen en gebeurtenissen zich

kunnen afspelen. Dus: steden, dorpen, landen, maar ook gebouwen en andere ruimtes

2 typen: a) gebouwen (bijv. ook de tweede kamer als daar niet de groep mensen mee bedoeld wordt maar het gebouw) en b) andere ruimtelijke plekken (geografische plekken) zoals landen, steden, maar ook een straat, bos en hei, etc.

6. tijd

Tijd staat voor tijd in de letterlijke zin van het woord: alle tijdseenheden als uren, dagen, jaren, en ook vagere tijdsaanduidingen als toen, vroeger, morgen, etc. NB: tijd kan ook een kenmerk zijn: lang vergaderd!

2 typen: tijdseenheden: uren, dagen, maanden jaren; en verleden/toekomst: vroeger, toen, nu, etc.

7. gevoelens, houdingen en meningen

Alles wat een actor kan voelen, de dingen die hij wil, wat hij vindt, denkt, etc.: LET OP: als de respondent over zichzelf zegt: 'ik denk dat...' of 'ik vind...' dan CODEER JE DAT NIET ALS GEVOEL!

1. *gevoelens*: ik voel me.... Boos, blij, sip, geïrriteerd

2. *mening*: ik ben het ermee eens/oneens,

3. *evaluaties*: dat klopt, daar heeft ze gelijk in, inderdaad, dat is niet waar, ik geloof dat niet, belachelijk, dat is heel dubbel, dit gaat nergens over!
Dat is koffiedik kijken

4. *doelen*: hij wil..., ik wil

2 typen, die je hier ook echt moet coderen!:

gevoelens en meningen van een **actor** (bijv. van iemand in het nieuws: 'Zalm vindt dat hij gelijk heeft'),

gevoelens en meningen van de **respondent** zelf.; (bijv. politiek: 'ik ben het niet met die politicus eens':

Ook: **interesse** in het item of een bepaald onderwerp hoort hier bij ('ik ben hier eigenlijk niet in geïnteresseerd').

Let op: een goede politicus=kenmerk van politicus! idem: ik denk dat hij een goede politicus is

Bijv. ik wil gaan stemmen: dubbel coderen

II kenmerken van... (x is een kenmerk van y):

Een element kan een *kenmerk* van iets zijn: Kenmerken zijn karakteristieken van een actor, handeling, gebeurtenis, object, etc. Vaak is het een **bijvoeglijk**

naamwoord: leuk/stom, goed/slecht, oud/jong, mooi/lelijk, raar, links/rechts, objectief, onzinnig, etc. maar dit hoeft niet altijd het geval te zijn.

Het gaat om wat een actor kan, weet (bijv. ook: weten wat je te wachten staat), de situatie waarin hij zich bevindt (hij staat er alleen voor), hoe hij is, eruit ziet, wat hij heeft (mijn broer heeft een boerderij). Handelingen hebben dezelfde soort kenmerken: het zijn goede/slechte handelingen, rare handelingen, etc. Voor alle andere categorieën geldt hetzelfde. Kortom, het heeft te maken met de *aard* van actoren handelingen, objecten, etc, hun *kwaliteit*: het is een puntje puntje actor, een puntje puntje gebeurtenis, etc. Ook: hij is/was/zal zijn/wordt ... (bijv. alles wordt *duurder*)

Standaardvraag: 'is dit een kenmerk van iets?' Oftewel x (het element) is een kenmerk van y (een ander element)

Kenmerken horen dus altijd bij iets (het is een kenmerk *van* iets)! Dit wil echter niet zeggen dat dat 'iets' ook expliciet door de respondent genoemd wordt! Een respondent reageert op iets in het nieuwsitem, en kan dus bijv. een kenmerk noemen van iets dat in het nieuws was, zonder daarbij dat 'iets' te noemen. Bijv. 'dat is weer wat nieuws', of: 'best grappig', wat leuk, wat erg.

Voorbeelden: kenmerken van politieke actoren (Balkenende's uiterlijk, karakter) boeren of leraren of van objecten (het nieuws gaat altijd zo snel), kenmerken van handelingen op het gebied van landbouw (er wordt veel/weinig bemest), kenmerken van objecten op het gebied van gezondheid (een spuit doet zeer), etc., vergaderen is saai. Een gebeurtenis is al oud (=lang geleden).

Ook: dit onderwerp ken ik al/heb ik al vaker gehoord

NB: ook **aantallen** rekenen we hier onder kenmerken: 100.000 koeien: 100.000 is een kenmerk van koeien!

NB: ook: dat is **hetzelfde als.../anders dan...**

Verder: dit is nu **typisch...**: geldt ook als kenmerk!

NB: bijvoeglijke naamwoorden die alleen als versterking fungeren van iets dat beweerd wordt worden **niet gecodeerd**: ik ben *heel erg* boos, dat is *best wel* raar, wat staat daar *precies*, etc.

III gevolgen van...(x is een gevolg van y):

Een element kan een *gevolg* zijn van alle bovengenoemde zaken, dus zowel van soorten dingen als van hun kenmerken: gevolgen van (kenmerken van) actoren (Balkenende is een slechte premier en daardoor gaat dit land naar de knoppen); gevolgen van (kenmerken van) handelingen (als ze dat doen is dat slecht voor de economie, hij praat raar en daarom moet ik lachen), gevolgen van (kenmerken van) objecten (er zit rotzooi in het vlees en daar worden we dik van). Anders gezegd: het gaat hier om '**waardoor.../daardoor**', vaak ook **als...dan redeneringen**.

Oftewel: x (het element) is een gevolg van y (een ander element). Standaardvraag: Is dit een gevolg van iets? Let op: de oorzaak van iets hoeft niet expliciet door de respondent genoemd te worden! Dus: ook als de respondent de vraag zelf stelt: ‘waardoor komt dat?’ moet je het als gevolg coderen!

NB: Net als een kenmerk is een gevolg altijd een gevolg *van* iets. Een gevolg bestaat daarom altijd uit minstens 2 *componenten*: zowel waarvan iets een gevolg is als het gevolg zelf. Beide componenten van gevolgen worden apart gecodeerd – als ze tenminste allebei door de respondent genoemd worden! Het gevolg zelf wordt hier gecodeerd, bij gevolgen van, het andere element (bijv. een handeling) wordt gecodeerd op de daartoe geëigende plek (bijv. bij soorten politieke handelingen). Verder kan een gevolg zelf ook een ander element zijn: bijv. een gebeurtenis: door de onrust komt er *staking*: staking is behalve een gevolg ook een gebeurtenis). Zo’n element moet je dus 2 keer coderen.

Voorbeelden: gevolgen van politieke handelingen: onrust in het land, gevolgen van gebeurtenissen (die staking zorgt voor onrust in het land).

LET OP: ook als de respondent zegt dat iets *geen* gevolgen zal hebben! Bijv. Dat lost niets op (=dat heeft geen oplossing tot gevolg) dien je het in de categorie gevolgen van te coderen!

Ook: het maakt niet uit (= het heeft geen gevolg), daardoor wordt het niet beter, het hangt af van...

IV redenen voor/functies van...(x is een reden voor/functie van y):

Een element kan een *reden* zijn of een *functie* van zowel soorten dingen als kenmerken van die dingen: handelingen, objecten, gebeurtenissen *en hun kenmerken* kunnen redenen hebben en bepaalde functies hebben. NB: het gaat dus *niet* om functie in de betekenis van ‘beroep’!

Standaardvraag: ‘is dit een reden voor iets?’ en ‘is dit een functie van iets?’ De structuur van dit element is meestal *x is een reden of functie van y*. Anders gezegd: het gaat hierom om ‘*waarom.../daarom?*’ en ‘*waarvoor...?*’ Ook als de respondent de vraag letterlijk stelt: ‘waarom doen ze dat? Wat is de functie daarvan?’ moet je het element als reden/functie coderen! Ook: als je x wilt zul je y moeten doen.

NB: een reden is niet hetzelfde als een oorzaak: een reden is datgene waarmee iemand zijn daden of overtuiging motiveert (Van Dale), dus waarom iemand iets wil, of doet, terwijl een oorzaak iets is dat een gevolg heeft

NB: net als een gevolg bestaat een reden altijd uit tenminste 2 *componenten*; zowel de reden als datgene waar het een reden voor is. Beide moeten gecodeerd worden, op dezelfde manier als dat bij gevolgen moet (d. w. z. als beide componenten door de respondent genoemd worden)!

NB: in het codeboek staat in de kolommen steeds alleen het woord ‘reden’. Dat is alleen gedaan uit ruimtegebrek: het gaat hier steeds om zowel redenen als functies van iets! Bij sommige zaken zal er eigenlijk geen sprake zijn van een

reden of een functie. Bij ‘plaatsen’ bijvoorbeeld zal het waarschijnlijk voornamelijk om functies van plaatsen gaan, terwijl het bij gevoelens waarschijnlijk meestal om redenen zal gaan.

Voorbeelden: Redenen voor (kenmerken van) handelingen (ze sproeien de aardappels om de kwaliteit te verbeteren; redenen voor (kenmerken van) objecten (het vlees wordt behandeld zodat het vet wordt), functies van objecten (de functie van deze wet is het verkeer in te dammen), etc.

NB: Ook: ‘Waar baseert hij dat op?’ Dit kun je zien als: ‘waarom zegt hij dat?’(wat is de reden waarom hij dat zegt?)

V stappen/fases in...(x is een stap/fase in y):

De respondent kan één of meer verschillende fases van iets aanduiden; eerst was er dit en toen dat. Stappen in (kenmerken van) actoren: hij was toen nog president; stappen in (kenmerken van) handelingen (eerst testen ze en daarna maken ze de koeien af), stappen in (kenmerken van) gebeurtenissen (eerst heb je presidentsverkiezingen en daarna parlementsverkiezingen) of objecten: dit deel (van het nieuwsitem) is hetzelfde als net.

Standaardvraag: ‘is dit een stap of fase in iets?’. Oftewel: x is een stap of fase in y.

NB: net als bij gevolgen en redenen bestaat dit soort elementen vaak uit 2 (of meer) delen: stap 1 is ..., stap 2 is. (eerst was er dit en toen was er dat). Let op: een respondent kan slechts 1 stap aanduiden in een proces (‘eerst was er dit’)! Als er slechts 1 stap genoemd wordt, 1 stap coderen, als 2, 2 stappen! Het geheel van de stappen codeer je bij ‘stappen in’, de losse onderdelen codeer je net als bij gevolgen en redenen bij het bijbehorende element (bijvoorbeeld *kenmerken*: eerst was hij links, nu is hij rechts).

De subcategorieën:

Als je besloten hebt dat het gaat om bijv. een soort actor, moet je beslissen om welke subcategorie oftewel *welke specifieke soort actor* het gaat. Je moet je afvragen op welk gebied deze actor en handeling etc betrekking heeft. Is het een politieke actor of een agrarische actor, een milieu-object of een media-object, een culturele gebeurtenis of een juridische, etc.

Politiek’ bijvoorbeeld, gaat over alle elementen **op het gebied van** politiek, dus: actoren **op het gebied van** politiek, handelingen **op het gebied van** politiek, gevoelens over politiek, en hun kenmerken, gevolgen, redenen etc.

Je codeert een actor, handeling, object, kenmerk, reden dus als ‘politiek’ als het op dat specifieke gebied betrekking heeft. Voor specifieke voorbeelden kun je kijken in de laatste kolom bij elke categorie. Let op: een persoon die genoemd wordt door de respondent, van wie je weet dat het een politicus is, wordt **ALTIJD** als politicus gecodeerd! Een handeling van de politicus, een object dat met hem verband houdt (zijn stropdas) hoeft **NIET** altijd bij ‘politiek’

gecodeerd te worden. Dit is afhankelijk van of de handeling, object etc. er een is op het terrein van de politiek of op een ander terrein. Bijv. ‘Rob Oudkerk gaat vreemd’, of ‘mijn broer heeft een boerderij’

Hieronder volgen beschrijvingen van de domeinen/gebieden waarin een element ingedeeld kan worden.

1. politiek:

Alles dat samenhangt met het gebied *politiek* in brede zin: actoren uit de politiek, als politici, andere mensen die politiek beoefenen: mensen als politici (Zalm, de premier), staatshoofden (de koningin), diplomaten en ambtenaren), de overheid, partijen (het CDA), ministeries (min. van milieu), de EU, de Tweede Kamer, etc. Hun politieke handelingen, objecten, gevoelens; kenmerken van deze actoren, gevolgen redenen en fasen.

2. media, nieuws, communicatie, ITS:

Alles dat samenhangt met het gebied *media*, of *nieuws*: (dus ook de nieuwsuitzending zelf!) mensen of groepen mensen die in professioneel opzicht tot de media (radio, tv, krant, film) behoren: journalisten, presentatoren, crew, acteurs, regisseurs, etc. de media zelf, hun handelingen als professionals, kenmerken, etc. En mensen, objecten, handelingen, gebeurtenissen die samenhangen met het gebied communicatie en ITS: telefoneren, internet, providers, etc.

3. landbouw en veeteelt:

Alles dat samenhangt met het gebied landbouw/veeteelt, etc in brede zin. Mensen of groepen mensen uit de landbouw: boeren, maar ook slagers, veeartsen etc. Let op: dieren vallen onder objecten! Hun handelingen, kenmerken, etc.

4. milieu, ruimtelijke ordening, huisvesting, verkeer:

1. milieuzaken, de ‘groene sector’ (ecologie)
2. de ‘grijze sector’ (ruimtelijke ordening; (infrastructuur): d. w. z.

milieubeleidsmakers, milieu‘vrienden’ en – ‘vijanden’. Alles dat te maken heeft met de inrichting van de openbare ruimte. Daaraan gerelateerde handelingen, de kenmerken van actoren, etc. projectontwikkelaars, automobilisten, wegenbouwers, luchtvaartmaatschappijen, etc.

5. economie, financiën, werkgelegenheid, welvaart, sociale zaken:

Alles op het gebied van

1. handel, industrie geld/financiën, produceren en consumeren, financiën en belasting.
2. Welvaart, werkgelegenheid, vakbonden, cao’s. Vrijtijdsbesteding voor zover daarmee consumptie is gemoeid/bedoeld: recreatie, toerisme, etc. Consumentenzaken en productinformatie.

Banken, producenten, consumenten, de beurs, geld, sparen, verzekeraars, etc.

6. justitie, criminaliteit, orde:

Verstoring van de openbare orde en de handhaving ervan, misdaad, rechts-handhaving, geweld voor zover niet gerelateerd aan oorlog, criminelen, politie en justitie, criminele handelingen, kenmerken van actoren op dit gebied, etc.

Beveiligers, witteboordencriminelen, oplichters, fraudeurs

7. gezondheid, (sociale) zorg, welzijn:

Alles wat met medische zaken te maken heeft en met de gezondheid/welzijn van mensen. Gezondheidszorg: lichamelijke en geestelijke ziekten/welzijn, verslaving, behandeling ervan, hulpverlening voor zover niet gerelateerd aan rampen en ongelukken. Patiënten, artsen, psychiaters, cliënten, en hun handelingen gerelateerd aan dit gebied.

8. onderwijs:

Onderwijs: Overdragen van kennis, beleid op dat gebied en instellingen. Scholen, opleidingen, cursussen, onderwijzers, leerlingen, studenten, etc.

9. wetenschap:

Alles dat refereert aan onderzoeken, het wetenschappelijk bedrijf, uitkomsten van peilingen, etc. wetenschappers, respondenten, opiniepeilers en hun wetenschappelijke handelingen, hun kenmerken, rapporten, analyses, gegevens, conclusies, etc.

10. gezin, opvoeding en relaties:

Alles dat te maken heeft met het gezin, het huishouden en de opvoeding in niet-professionele zin. Gezinsrelaties, familie, ouders, kinderen, opvoeding, huiselijke problemen, relatie tussen seksen, huwelijk, het huishouden en bijbehorende handelingen, kenmerken, etc.

11. kunst:

Alles dat te maken heeft met kunst, hogere cultuur, artistieke activiteiten met uitzondering van zaken die bij de massamedia horen (film en TV) maar inclusief muziek, dans, schilderkunst, etc. Artiesten, schrijvers, kunstenaars, en hun handelingen, hun kenmerken, boeken, liedjes, etc.

12. cultuur/ etniciteit/ nationaliteit, religie en filosofie:

Alles dat te maken heeft met

1. culturele diversiteit, etniciteit. Landen en hun bevolking, het handelen van landen, staten, kenmerken van andere landen/culturen, taal, etc. Immigratie, culturele gebruiken.

2. Religie en filosofie/levensopvatting. Kapitalisme, materialisme, boeddhisme, atheïsten, etc.

Leden van culturen, etnische groeperingen, inwoners van landen (als ze als inwoners van die landen bedoeld worden en niet gewoon als ‘de mensen’), hun handelingen die met cultuur en religie te maken hebben, hun kenmerken, kenmerken van de landen, culturen etc.

13. sport/recreatie:

Alles op het gebied van sport en spel. Sporten, teams, sporters, stadions, begeleiders, officials, hun handelingen en kenmerken. Voetbal, clubs, sporters, supporters, bestuursleden.

14. oorlog, rampen, ongelukken:

1. Oorlog en gewapende conflicten tussen landen en/of bevolkingsgroepen, terrorisme, ook vredesonderhandelingen, interventies.
2. Rampen: instortende gebouwen, treinongevallen, ongelukken. Natuurverschijnselen die niet onder milieu vallen: stormen, overstromingen, ongelukken, etc., slachtoffers, hulpverleners, terroristen, hun handelingen, kenmerken, etc.

15. respondent (privé):

Gaat over de persoonlijke levenssfeer van de respondent zelf, die over zichzelf praat wanneer het niet direct op het onderwerp in het nieuws betrekking heeft; familie en vrienden van de kijker (ik eet ook geen vlees, mijn man heeft ook zo’n auto), etc.

Handelingen van de respondent in zijn/haar dagelijks leven, kenmerken, etc. Niet: handelingen tijdens en gevoelens over het onderzoek.

16. onderzoek

Alles dat te maken heeft met de onderzoekssituatie: handelingen van de onderzoeker, de dingen die de respondent moet doen (het experiment, het hardop denken, de vragenlijst), kritiek op de samenstelling van de stimulus, etc. Alles dat refereert aan het onderzoek en de onderzoekssituatie. De onderzoeker, de respondent in het onderzoek (zijn gevoelens hierover, zenuwen, verveling, etc.), hun handelingen, kenmerken, etc.

17. anders:

Alles dat niet in de andere gebieden thuis te brengen is. Vaak gaat het om ongedefinieerde zaken: ‘men’ ‘de mensen’ als niet duidelijk is aan welk gebied ze te relateren zijn. Daarnaast: bijv. handelingen en kenmerken die niet te verbinden zijn met een van de gebieden, eten, slapen, etc. LET OP: vaak zijn niet nader gedefinieerde mensen wel degelijk aan een bepaalde categorie te relateren, bijv. ‘men’ is het oneens met die politiek. Alleen als dit niet het geval is mag je een woord in de categorie ‘anders’ coderen

Samenvatting:

Een element is een woord of combinatie van woorden die betrekking hebben op soorten politieke actoren, handelingen, objecten, etc. of media actoren, handelingen, objecten etc., of landbouw actoren, handelingen, objecten etc. en hun kenmerken, gevolgen, redenen en functies en stappen.

De codering stap voor stap

Nu je weet wat we als elementen beschouwen, beschrijf ik hier hoe je het coderen in verschillende stappen, van het lezen van de tekst die je moet coderen, tot het uiteindelijke toekennen van de code, in zijn werk gaat. Je wijst codes toe aan tekstsegmenten; kleine stukjes uit de tekst die een respondent geproduceerd heeft. Je codeert steeds elk segment in zijn geheel, voordat je overgaat naar een volgend segment

standaardzinnen en de tekst

Je codeert de standaardzinnen die onder de tekst staan, dus *niet* de tekst zelf. De standaardzinnen zijn de oorspronkelijke tekst die is opgedeeld in kleine geherformuleerde stukjes.

Elke standaardzin bevat een beperkt aantal elementen, maar minstens 2. Het kan zijn dat je dezelfde zinsdelen op 2 verschillende manieren codeert! Bijvoorbeeld: 'hij praat raar', het gedeelte 'praat raar' wordt zowel gecodeerd bij 'Handelingen' (praten) als bij 'kenmerken van handelingen (RAAR praten). Een ander veel voorkomende constructie is: 'oorlog is een gevolg van haat'. Bij dergelijke constructies codeer je 3 zaken: in eerste instantie het gevolg: oorlog, daarnaast een kenmerk: haat (is een gevoel), en vervolgens de gebeurtenis: oorlog. Oorlog is hier dus zowel een gevolg van iets, als een gebeurtenis!

Soms kan het verhelderend werken als je de oorspronkelijke uitspraak van de respondent raadpleegt, om te zien in welke context een bepaalde uitspraak gedaan is (waar gaat dat woord in de standaardzin eigenlijk over? Heeft de respondent het over een politicus of een ander persoon, als hij zegt '*hij* is gestoord'?). Daarnaast is het in sommige gevallen nodig dat je het fragment in het nieuwsitem even bekijkt om te bepalen waar een respondent het over heeft.

Samengevat codeer je van alle woorden in een tekst van een respondent alleen de woorden die passen bij de beschrijvingen die we hierboven hebben gedaan.

Niet coderen:

Alle woorden die niet in bovenstaande omschrijvingen passen.

- woorden en zinnen waarin de respondent zijn gedachteproces aangeeft. Zaken als: 'ik dacht...'; even denken..., 'ik zag/zie, het viel me op, ik keek naar (dus niet bij handelen coderen). dat stukje van het item'. Sommige respondenten zijn geneigd te zeggen: dat dacht ik, of: ga maar weer verder of soortgelijke aanwijzingen aan de onderzoeker. Deze uitspraken codeer je niet.

- hij zei...
- stopwoorden/zinsdelen of woorden die als inleiding op de eigenlijke uitspraak functioneren: weet je wel, of zo, denk ik, volgens mij...?
- best wel/eigenlijk/een beetje, heel erg, enorm, etc.
- ‘je’ als het gezien kan worden als onderdeel van het werkwoord: je hebt dat nodig = nodig hebben: er wordt geen persoon mee bedoeld

Bij het coderen ga je als volgt te werk:

1. Je leest een standaardzin

2. zoek de juiste ‘supercategorie’ (‘soorten’ etc.)

a. is dit woord een element?

Eerst moet je beslissen of een woord in een standaardzin een element is. Zulke woorden moet je coderen, andere niet.

b. in welke supercategorie hoort het element?

Als je vermoedt dat een woord in een standaardzin een element is, neem je het codeboek erbij. Eerst werk je in het codeboek van boven naar beneden: je bepaalt of iets een ‘soort’ van iets is, of een ‘kenmerk’ van iets, of een ‘gevolg’, etc. Bij elke categorie hoort een standaardvraag, die je kunt stellen als je een element gevonden denkt te hebben: als het antwoord op deze vraag ‘ja’ is hoort het woord/de zin in deze categorie thuis. Is dit een soort van iets (is dit een soort actor)? Is dit een kenmerk van iets? Is dit een gevolg van iets? Is dit een reden of functie van iets? Is dit een stap in iets?

3. zoek de juiste categorie binnen de supercategorie

Als je bepaald hebt of iets een soort, kenmerk, etc. is, werk je binnen deze grote categorie de categorieën af: *is het een soort actor of een soort handeling, of object, etc.?*

4. zoek de juiste cel binnen de categorie

Is het een soort actor op het gebied van politiek of op het gebied van milieu, of het gezin?

Als je besloten hebt dat een element bijv. een actor is, moet je bepalen op welk gebied het element een actor is. Helemaal rechts in het codeboek staan voorbeelden van de zaken die bij de code passen. Deze voorbeelden zijn bedoeld om je een idee te geven aan wat voor soort elementen we denken bij een categorie, ze zijn niet volledig! Soms geven ze precies een woord aan dat je tegen kunt komen, soms zijn het meer abstracte omschrijvingen. De ‘typen’ (middelste kolom) zijn slechts bedoeld om je een houvast te geven, ze behoren dus niet tot de eigenlijke code! Het is dus ook niet erg als je niet zeker weet of een wet nu een fysiek, of een niet-fysiek object is, als je maar een idee krijgt in welke cel hij thuishoort

NB: Als je uit de standaardzin niet op kunt maken met wat voor soort element je te maken hebt, omdat je de context nodig hebt, lees dan het oorspronkelijke fragment, of neem het transcript of het fragment van het journaal erbij (bijv. iemand zegt ‘zij’ en je wilt weten of het om een politicus of een ander soort actor gaat).

5. ken de code toe

Als je een cel gevonden hebt in het codeboek waar het woord/de woorden in passen, ken je de code toe: deze code vind je in de codelijst in *Kwalitan*, links in beeld. Door dubbelklikken wordt hij aan het segment toegevoegd. Je hebt nu een element gecodeerd! De code is het nummer van de categorie (Romeinse cijfers I–V: soorten, kenmerken, gevolgen, redenen, etc.) gevolgd door het cijfer van de subcategorie in de kolom waarin de exacte term thuishoort. In *Kwalitan* staat ook de naam van de code erachter, naar de verschillende subcategorieën. Bijvoorbeeld: Premier Balkenende: is een SOORT ‘politieke’ actor. De bijbehorende code in *Kwalitan* ziet er zo uit: **i11 actoren/politiek**

Je codeert steeds alle subcategorieën die nog CIJFERS hebben in het codeboek (maximaal 4); in het codeboek is dat: je codeert dus tot aan de dikke zwarte streep (NB: bij gevoelens staat in *Kwalitan* i. p. v. de laatste cijfers een a of b)

NB: Bij elk segment moet eenzelfde element dat vaker genoemd wordt (bijvoorbeeld ‘de premier’ ‘Balkenende’ en ‘Jan-Peter’) **maar 1 keer gecodeerd worden!**

Tot slot: GEBRUIK DE RUIMTE ONDER DE TABELLEN OM OPMERKINGEN TE NOTEREN! Zie ook het venster ‘annotaties’ in *Kwalitan*!

I soorten

Omschrijving:

x is een soort y

Codenummer en naam	Typen voorkomende elementen	Voorbeelden
1. Actoren		
1. politiek	a. personen b. groepen	minister, ambtenaar, partijlid de overheid, de staat, tweede kamer, ministerie, partijen, EU
2. media / nieuws / communicatie	a. personen b. groepen	professional uit de media: journalist, presentator (ook van het nieuws zelf), tv- of filmacteur, regisseur, etc. b. de media, omroep, crew, cabaretgroep

3. landbouw	a. personen b. groepen	a. boer, slager b. de boeren
4. milieu / ruimt. ordening	a. personen b. groepen	a. milieuvactivist, ingenieur b. milieugroeperingen
5. economie / welvaart	a. personen b. groepen	a. consument, klant, producent, werkge- ver b. vakbond, bank, bedrijf
6. justitie / criminaliteit	a. personen b. groepen	a. juristen, rechter, crimineel, dader, slachtoffer b. politie, rechtbank, criminele organisa- tie, mafia
7. gezondheid / welzijn	a. personen b. groepen	a. arts, psychiater, patiënt, zieke, zwakke, hulpverlener, probleemjongere b. vereniging van hulpverleners, arts- patiëntverenigingen
8. onderwijs	a. personen b. groepen	a. onderwijzer, leerling, student, herintre- der, zijinstromer b. school, onderwijzersbond
9. wetenschap	a. personen b. groepen	a. onderzoeker, onderzochte, uitvinder b. universiteit, onderzoeksbureau, labo- ratorium
10. gezin / opvoeding	a. personen b. groepen	a. vader, moeder, kind, rest familie, opvoeder b. het gezin, de familie
11. kunst	a. personen b. groepen	a. kunstenaar, schilder, schrijver, beeld- houwers, fotograaf b. kunstinstelling, organisatie, dansgroep
12. cultuur/ nationaliteit / etni- citeit	a. personen b. groepen	a. persoon aangeduid als etnisch/cultu- reel: nederlander, marokkaan, allochtoon, buitenlander, tukker, b. etnische, culturele groep, nationale bevolking, subcultuur
13. sport	a. personen b. groepen	a. sporter, coach, sportbestuurder, official b. sportclub, organisatie, recreanten, surfers, wandelaars
14. oorlog / rampen / ongelukken	a. personen b. groepen	a. soldaat, terrorist, slachtoffer, hulpver- lener, agressor b. leger, hulpinstantie, bevolking (als slachtoffer/dader)
15. respondent	a. personen b. groepen	'ik' (de kijker zelf, als privépersoon: NB: alleen als de kijker zichzelf noemt als iemand, niet als hij zegt: ik dacht, etc) NB: niet als men zichzelf als respondent bedoelt familie, vrienden, etc. van de kijker
16. onderzoek	a. de respondent 'als respondent' b. de onderzoeker/interviewer zelf	

17. anders	a. personen b. groepen	actoren die niet passen in bovenstaande categorieën familie van actoren (bijv. van politici), die asielzoeker, b. vaak ongedefinieerde personen: 'men', 'je', het volk, de mensen, leeftijdsgroepen, vrouwen, de gemiddelde man/vrouw, ook: vegetariër
Codenummer en naam	Typen	Voorbeelden
2. Handelingen		
1. politiek	a. politieke handelingen b. andere handelingen*	a. beleid maken/steunen, wetgeving maken, onderhandelen, stemmen, discussiëren, vergaderen, besluiten, betrekkingen onderhouden, b. verklaringen afgeven, toespraken houden, politieke praat uitslaan, 'er mee bezig zijn', 'er iets aan doen', schippen, partij verlaten, probleem onderschatten, er omheen praten
2. media / nieuws	a. journalistieke handelingen b. andere handelingen*	a. presenteren, interviewen, vormgeven van nieuws/programma, acteren, filmen b. in de camera kijken, verspreken
3. landbouw	a. agrarische handelingen b. andere handelingen*	a. voeren, zaaïen, oogsten, sproeien, slachten, fokken, dieren verzorgen b. inenten, afmaken, experimenteren, administratie bijhouden, vee vervoeren
4. milieu / ruimt. ordening	a. milieuhandelingen b. anders*	a. vervuilen, verzuren, b. aan milieunormen houden
5. economie / welvaart	a. economisch b. anders*	a. produceren, consumeren, kopen, import, export b. prijzen beoordelen, solliciteren
6. justitie / criminaliteit	a. justitieel, crimineel b. anders*	a. wettelijke overtredingen (stelen, oplichten), arresteren, rechtspreken, mishandelen b. sjoemelen, bedriegen
7. gezondheid	a. zorghandelingen b. anders*	a. ziek zijn, overlijden, genezen, behandelen, hulpverlening, therapie volgen/geven, probleemgedrag b. op je gezondheid letten
8. onderwijs	a. onderwijshandelingen b. anders*	a. lesgeven, begeleiden, voor de klas staan, nakijken, nablijven, studeren b. tekenen, vinger opsteken
9. wetenschap	a. wetenschappelijk b. anders*	a. onderzoeken, testen, toetsen, b. proefschrift schrijven, nadenken, rekenen

10. gezin	a. opvoeding/relaties b. anders*	a. opvoeden, straf geven, trouwen, relatie hebben b. communiceren, slaan
11. kunst	a. kunstzinnig b. anders*	a. schilderen, schrijven, musiceren b. boek uitgeven
12. cultuur etc.	a. cultureel/etnisch b. anders*	a. taal spreken, religie uitoefenen b.
13. sport	a. sport b. anders*	a. sport beoefenen, wandelen, recreëren b. supportershandelingen, ontspannen
14. oorlog	a. oorlogs-/ramp b. anders*	a. oorlog voeren, aanvallen, vluchten, vermoord worden, ongeluk krijgen, hulpverlening b. in paniek raken, huilen,
15. respondent	Alle handelingen die de kijker verricht als privépersoon (het er met iemand over hebben, koffie gaan drinken, het er met iemand over hebben etc.). Ook: alle handelingen van de respondent als kijker: ik zag het niet goed, ik lette niet op, ik kon het niet volgen, etc. NB: <i>niet</i> handelingen van de respondent 'als respondent', tijdens onderzoek:	
16. onderzoek	a. onderzoeker b. respondent	alle handelingen van de onderzoeker/ interviewer in de onderzoekssetting of daarbuiten: aantekeningen maken (bijv. ook video aanzetten) alle handelingen van de respondent 'als respondent': meedoen aan proef, vragenlijst invullen, etc.
17. anders	Handelingen die niet passen in bovenstaande categorieën: staan, praten, lachen, bewegen, enthousiast doen, ruzie maken, boos kijken, etc.	
Codenummer en naam	Typen	Voorbeelden
3. Activiteiten/Gebeurtenissen		
1. politiek	a. politiek b. anders	a. onderhandelingen, beleid, verkiezingen, vergadering, staatsbezoek, politieke crisis b. betrekkingen, het vertrek van..., het bezoek van..., bondgenoten kwijtraken, ceremonie, controle, bemoeienissen
2. media	a. media b. anders	a. presentatie, verslaggeving b. het nieuws, persconferentie
3. landbouw	a. landbouw b. anders	a. fokprogramma, oogst, teelt, beleid m. b. t. koeien houden b. landbouwhervorming, bse-crisis, de kwaliteit van het vlees gaat omlaag
4. milieu	a. milieu b. anders	a. veranderingen in het milieu, huisvesting b. vervuiling, opwarming, verzuring, milieurampen

5. economie	a. economie b. anders	a. consumentenbescherming, investering, kostenbesparing, faillissement, consumptiepatroon b. inflatie, economische crisis, de prijzen stijgen
6. justitie	a. justitie b. anders	a. handhaving, oplichting, mishandeling b. overval, arrestatie, rechtszaak,
7. gezondheid	a. gezondh. b. anders	a. ziek zijn, verzorging, behandeling, euthanasie, therapie, welzijnswerk b. ziekte, gezondheidsprobleem, geboorte, bevolkingsgroei
8. onderwijs	a. onderwijs b. anders	a. vervanging leerkracht, begeleiding, beoordeling b. les, cursus
9. wetenschap	a. wetensch. b. anders	a. berekening, analyse b. opiniepeilingen, onderzoek, analyse
10. gezin	a. gezin b. anders	a. opvoeding, huwelijk, relatie b. interactie in gezin, tik (bijv. corrigerende tik)
11. kunst	a. kunst b. anders	a. pennestreek, b. tentoonstelling
12. cultuur/ nationaliteit	a. cultuur b. anders	a. besnijdenis, b. feesten, rituelen
13. sport	a. sport b. anders	a. sliding, sprong, schot, wandeling b. wedstrijd, prijsuitreiking, ontspanning
14. oorlog	a. oorlog b. anders	a. aanval, aanslag, hulpverlening, strijd, orkaan b. Wereldoorlog 2, ongeluk, ramp, geweld
15. respondent	Alle gebeurtenissen uit het privé-leven van de respondent	
16. onderzoek	Alle gebeurtenissen tijdens het experiment of ervoor-/na die daaraan gerelateerd zijn	
17. anders	Activiteiten/gebeurtenissen die niet passen in een van bovenstaande categorieën: discussie, ruzie, het weer	
Codenummer en naam	Typen	Voorbeelden
4. Objecten		
1. politiek	a. fysiek b. niet-fysiek	a. kathedr, stoel, papier b. de politiek (als geen actor), wet, maatregelen, politieke kwesties
2. media / nieuws	a. fysiek b. niet-fysiek	a. decor, camera, foto, microfoon, de televisie (als niet het object in de kamer wordt bedoeld) b. item, de uitzending, film, video, krant, reclame, vormgeving van item: beeld, geluid, tekst
3. landbouw	a. fysiek	a. dier (landbouw), vlees, melk, ei, werktuigen, tractor, hek, veestapel, voedsel, gewassen

3. landbouw	b. niet-fysiek	b. de landbouw, dierziekte, hormonen, kwaliteitseisen
4. milieu	a. fysiek b. niet-fysiek	a. schadelijke stoffen, dier (niet landbouw), plant, boom, auto, het verkeer b. het milieu, milieunormen, de voedselketen, ruimtelijke ordening, huisvesting
5. economie	a. fysiek b. niet-fysiek	a. geld, de portemonnee, productiemiddelen, kosten, verzekeringspapieren b. de economie, de prijzen, welvaart, werkgelegenheid, de vrije markt, verzekeringen, uitkeringen, de beurs
6. justitie	a. fysiek b. niet-fysiek	a. wetboek, toga, etc. b. de rechtstaat, recht, justitie criminaliteit, misdadaad, artikel uit wetboek
7. gezondheid	a. fysiek b. niet-fysiek	a. virus, bacterie, spuit, codicil, wilsverklaring, kindertelefoon b. de (volks-)gezondheid, ziekte, welzijn
8. onderwijs	a. fysiek b. niet-fysiek	a. schoolbord, stoel, bank, pen, schrift, tekening b. het onderwijs, lerarentekort, het curriculum, cijfer (als in beoordeling), sommen
9. wetenschap	a. fysiek b. niet-fysiek	a. proefschrift, vragenlijst, computer, grafiek, bureau b. 'dat onderzoek', de wetenschap, significantie, statistieken
10. gezin	a. fysiek b. niet-fysiek	a. ontbijttafel b. huisregels, familieband, het huishouden
11. kunst	a. fysiek b. niet-fysiek	a. schilderij, boek b. de kunst, literatuur
12. cultuur/ nationaliteit	a. fysiek b. niet-fysiek	a. vlag, klomp, hoofddoek, lederhose, etc. b. de cultuur, nationaliteit, taal, cult. normen, religie
13. sport	a. fysiek b. niet-fysiek	a. bal, trofee, sportkleding, etc. b. de sport, kampioenschap
14. oorlog	a. fysiek b. niet-fysiek	a. wapens, ladders, voertuigen, voedselpakket b. bestand,
15. respondent	a. fysiek b. niet-fysiek	alle objecten van de respondent of uit zijn privé-leven (eigen kleding, voorwerpen, vervoersmiddelen, huisdieren, etc.)
16. onderzoek	a. fysiek b. niet-fysiek	a. tv, videorecorder, tafel stoel, bomen uit het raam, etc. b. dit onderzoek, experiment, enquête
17. anders	a. fysiek	Objecten die niet in bovenstaande categorieën passen a. haar, snor, kleding, bril, vervoersmiddel, kopje koffie

17. anders	b. niet-fysiek	b. ook: 'alles' 'de persoon', huisdieren, een oplossing
Codenummer en naam	Typen	Voorbeelden
5. Plaatsen		
1. politiek	a. gebouwen b. andere plaatsen	a. Tweede-Kamergebouw, vergaderzaal, ministeriegebouwen b. Den Haag, Brussel, Washington
2. media	a. gebouwen b. andere plaatsen	a. studio b. Hilversum (als niet actor)
3. landbouw	a. gebouwen b. andere plaatsen	a. boerderij, slagerswinkel, slachterij, stal b. weiland
4. milieu	a. gebouwen b. andere plaatsen	a. fabrieken, woningen, etc. (als onderdeel van het milieu/ ruimt. ordening) b. het landschap, rivieren, wegen, etc.
5. economie	a. gebouwen b. andere plaatsen	a. fabrieken, bedrijven, bankgebouw, belastingkantoor, kantoor sociale instelling/ verzekeringsmaatschappij b. balie, beursvloer
6. justitie	a. gebouwen b. andere plaatsen	a. rechtszaal, gevangenis, advocatenkantoor b. waar overtredingen plaats vinden ('plaats delict')
7. gezondheid	a. gebouwen b. andere plaatsen	a. ziekenhuis, gebouw zorginstelling (bejaardenhuis, etc), spreekkamer, operatiezaal, jeugdhonk, etc. b. bed, sofa, achterstandswijk
8. onderwijs	a. gebouwen b. andere plaatsen	a. school, klaslokaal, collegezaal b. schoolplein, campus
9. wetenschap	a. gebouwen b. andere plaatsen	a. universiteit, laboratorium, studeerkamer b. achter een bureau
10. gezin	a. gebouwen b. andere plaatsen	a. huis, huiskamer b. aan tafel, binnenshuis
11. kunst	a. gebouwen b. andere plaatsen	a. museum, schouwburg, concertzaal b. kunstmarkt, beurs
12. cultuur/ nationaliteit	a. gebouwen b. andere plaatsen	a. kerk, moskee, tempel b. land, stad of regio
13. sport	a. gebouwen b. andere plaatsen	a. stadion, sportzaal b. veld
14. oorlog	a. gebouwen b. andere plaatsen	a. kazerne, vliegveld, flatgebouw, etc. b. land, streek, stad, straat
15. respondent	a. gebouwen b. andere plaatsen	a. huis, kamer b. stad, straat
16. onderzoek	a. gebouwen b. andere plaatsen	a. kamer waar experiment gehouden wordt b. universiteit
17. anders	Plaatsen die niet passen in bovenstaande categorieën: Ook ongedefinieerde plaatsen als: 'ergens', voor, achter, in een hoekje, dichtbij, veraf, daar (alleen als ze niet te relateren zijn aan een categorie!)	

Codenummer en naam	Typen	Voorbeelden	
6. Tijd			
1. politiek	a. tijdseenheid/-bepaling b. verleden-toekomst	<p><i>Voor alle subcategorieën geldt:</i></p> <p>a.= 8 uur, vanmorgen, de hele dag, nu, al heel lang, jaarlijks, een week, etc.</p> <p>b. = vroeger, oertijd, later, in de toekomst, in 1977, laatst, onlangs, binnenkort, etc.</p> <p>Tijdseenheden etc. zijn gerelateerd aan een bepaalde categorie (bijv. a. politiek: ze hebben vanmorgen om 8 uur vergaderd, b. politiek: vroeger vergaderden ze alleen 's middags)</p>	
2. media	a. tijdseenheid/-bepaling b. verleden-toekomst		
3. landbouw	a. tijdseenheid/-bepaling b. verleden-toekomst		
4. milieu	a. tijdseenheid/-bepaling b. verleden-toekomst		
5. economie	a. tijdseenheid/-bepaling b. verleden-toekomst		
6. justitie	a. tijdseenheid/-bepaling b. verleden-toekomst		
7. gezondheid	a. tijdseenheid/-bepaling b. verleden-toekomst		
8. onderwijs	a. tijdseenheid/-bepaling b. verleden-toekomst		
9. wetenschap	a. tijdseenheid/-bepaling b. verleden-toekomst		
10. gezin	a. tijdseenheid/-bepaling b. verleden-toekomst		
11. kunst	a. tijdseenheid/-bepaling b. verleden-toekomst		
12. cultuur/nationaliteit	a. tijdseenheid/-bepaling b. verleden-toekomst		
13. sport	a. tijdseenheid/-bepaling b. verleden-toekomst		
14. oorlog	a. tijdseenheid/-bepaling b. verleden-toekomst		
15. respondent	a. tijdseenheid/-bepaling b. verleden-toekomst		<p>a. ik heb het hier <i>onlangs</i> nog over gehad</p> <p>b. ik heb dat ook een <i>jaar</i> gedaan</p>

16. onderzoek	a. tijdseenheid/-bepaling b. verleden-toekomst	a. dit onderzoek duurt al <i>lang</i> , ik ben hier pas <i>een uur</i> b. <i>straks</i> is het voorbij
17. anders	a. tijdseenheid/-bepaling b. verleden-toekomst	als niet passend in een van bovenstaande categorieën
Codenummer en naam	Typen	Voorbeelden
7. Gevoelens / doelen / meningen / evaluaties		
1. politiek	1. van een actor 2. van de respondent	Voor alle subcategorieën geldt dat het gaat om:
2. media	1. van een actor 2. van de respondent	gevoelens/doelen meningen/houdingen/evaluaties
3. landbouw	1. van een actor 2. van de respondent	in 2 types: 1. gevoelens, doelen meningen, evaluaties van een actor ; 2. gevoelens, meningen, evaluaties van de respondent zelf 1. hij/zij... <i>gevoelens/doelen</i> : hij voelt zich..., denkt dat..., hij wil... <i>politiek</i> : balkenende wil niets doen, <i>media</i> : de interviewer is zenuwachtig, <i>landbouw</i> : die boer is kwaad. <i>meningen/houdingen/evaluaties</i> : hij vindt dat, hij is het er mee eens, de burger vindt dat niet, <i>Economie</i> : de houding van de consument, de producent vindt dat niet leuk, hij gelooft er niks van 2. ik... <i>gevoelens/doelen</i> : ik voel dat..., wil...: <i>media</i> : ik ben boos op die interviewer <i>meningen/houdingen/evaluaties</i> : <i>politiek</i> : ik ben het niet met balkenende eens, <i>landbouw</i> : die boer heeft ongelijk ook: ik geloof er niks van, dat klopt, dat is niet waar, dit vind ik een moeilijk onderwerp, dit gaat helemaal nergens over! ik ben hier niet in geïnteresseerd, dit is belangrijk om te weten, ik verkeer in tweestrijd, ik heb een dilemma, ik ben benieuwd coderen in subcategorie waar mening/ gevoel over gaat!
4. milieu	1. van een actor 2. van de respondent	
5. economie	1. van een actor 2. van de respondent	
6. justitie	1. van een actor 2. van de respondent	
7. gezondheid	1. van een actor 2. van de respondent	
8. onderwijs	1. van een actor 2. van de respondent	
9. wetenschap	1. van een actor 2. van de respondent	
10. gezin	1. van een actor 2. van de respondent	
11. kunst	1. van een actor 2. van de respondent	
12. cultuur/ nationaliteit	1. van een actor 2. van de respondent	
13. sport	1. van een actor 2. van de respondent	
14. oorlog	1. van een actor 2. van de respondent	

		NB: termen als een goede beslissing, een slecht interview, een rare stem, een stom antwoord horen bij <i>kenmerken van...</i> en: ik vind die man stom, wat erg, wat leuk, etc ook!
15. respondent	1. gevoelens 2. onbegrip	gevoelens en meningen van de respondent over zichzelf: 'ik ben boos op mezelf', blij, 'dat vind ik raar van mezelf', ik heb honger, ik lust wel een kopje koffie, ik voel me niet lekker, ik ben moe ik snap het niet, dit ontgaat me
16. onderzoek	1. van de onderzoeker 2. van de respondent	a. de gevoelens en meningen van de onderzoeker: hij vindt het vast saai b. gevoelens van respondent over de onderzoeker of het onderzoek: ik vind het saai, moeilijk, ik heb er genoeg van
17. anders	1. van een actor 2. van de respondent	a. de mensen zijn boos, ook: dat gelooft toch niemand b. ik ben het met de mensen eens

II kenmerken

Omschrijving:
x is een kenmerk van y

Codenummer en naam	Typen	Voorbeelden
1. van Actoren		
1. politiek	a. personen b. groepen	hij is <i>van het cda</i> , hij is <i>lelijk</i> het cda is <i>rechts</i>
2. media	a. personen b. groepen	a. een goede presentator, wat een <i>raar hoofd</i> b. de media zijn <i>subjectief</i>
3. landbouw	a. personen b. groepen	a. <i>biologische</i> slager b. <i>Duitse</i> boeren, boeren hebben het moeilijk
4. milieu	a. personen b. groepen	a. hij <i>staat er alleen voor</i> b. <i>agressieve</i> milieubeweging
5. economie	a. personen b. groepen	a. b. fabrikanten <i>zijn aasgieren</i> , de consument is <i>gierig</i>
6. justitie	a. personen b. groepen	a. een <i>streng</i> rechter b.
7. gezondheid	a. personen b. groepen	a. een <i>bekende</i> psycholoog, <i>prominente</i> psychiaters b. vereniging van hulpverleners, actiegroep

8. onderwijs	a. personen b. groepen	a. <i>overspannen</i> leraar b. <i>bijzondere</i> school, zo'n school <i>weet dat best</i>
9. wetenschap	a. personen b. groepen	a. b.
10. gezin	a. personen b. groepen	a. <i>80.000</i> kinderen b. een <i>asociaal</i> gezin
11. kunst	a. personen b. groepen	a. b.
12. cultuur/ nationaliteit	a. personen b. groepen	a. dat is nou <i>typisch</i> een Duitser b. Duitsers <i>zijn allemaal zo</i>
13. sport	a. personen b. groepen	a. b.
14. oorlog	a. personen b. groepen	a. b.
15. respondent	a. personen b. groepen	a. ik ben <i>dom</i> , ik <i>ben daar te jong voor</i> , ik <i>heb dat ook meegemaakt</i> , etc. Ook: Ik <i>wist niet</i> dat... ik heb daar nog <i>nooit van gehoord</i> , nu <i>weet ik het wel</i> , etc. b. mijn familie <i>is precies hetzelfde</i> , etc.
16. onderzoek	a. respondent 'als respondent' b. onderzoeker	a. ik <i>ben hier niet goed in</i> b. hij <i>is de baas</i>
17. anders	kenmerken van personen die niet in bovenstaande categorieën zijn onder te brengen (soorten actoren): bijv. je <i>weet niet eens wat je eet</i> ,	

Codenummer en naam	Typen	Voorbeelden
2. van Handelingen		
1. politiek	a. politieke handelingen b. andere handelingen	a. sterk discussiëren, hij heeft de wet <i>snel</i> doorgevoerd b. hij zal <i>nooit</i> aftreden,
2. media	a. journalistieke handelingen b. andere handelingen	a. zij presenteert <i>goed</i> , zij doen heel <i>subjectief</i> verslag b. hij zegt <i>hetzelfde als</i> die ander net
3. landbouw	a. agrarische handelingen b. andere handelingen	a. <i>biologisch</i> veehouden, ze sproeien veel, b. boeren werken hard
4. milieu	a. milieuhandelingen b. anders	Bemesten is <i>vreselijk vervuilend</i>
5. economie	a. economisch b. anders	De consument geeft <i>weinig</i> uit,
6. justitie	a. justitieel, crimineel b. anders	
7. gezondheid	a. zorghandelingen b. anders	

8. onderwijs	a. onderwijshandelingen b. anders	a. b.
9. wetenschap	a. wetenschappelijk b. anders	
10. gezin	a. opvoeding b. anders	a. b. mishandelen <i>gebeurt vaker dan je denkt, gebeurt ook dichtbij</i>
11. kunst	a. kunstzinnig b. anders	
12. cultuur/ nationaliteit	a. cultureel/etnisch b. anders	<i>Ze gaan twee keer per week naar de kerk</i>
13. sport	a. sport b. anders	
14. oorlog	a. oorlogs-/ramp b. anders	
15. respondent	kenmerken van handelingen de respondent zelf, als privépersoon: ik vergeet <i>veel</i> , ik kijk <i>vaak</i> , etc.	
16. onderzoek	a. onderzoeker b. respondent	a. hij maakt veel aantekeningen b. ik zeg weinig
17. anders	kenmerken van handelingen die niet bij andere categorieën ondergebracht kunnen worden (zie soorten): hij zegt <i>hetzelfde als wat ik dacht</i> , hij praat raar, hij lacht vreemd, hij is al lang getrouwd, hij spreekt dat woord raar uit	

Continued for events/activities, objects, places, times, feelings

III gevolgen

**Omschrijving:
x is een gevolg van y**

Codenummer en naam	Typen	Voorbeelden
1. van (kenmerken van) Actoren		
1. politiek	a. personen b. groepen	<i>Voor alle subcategorieën geldt:</i> Gevolgen van: actoren, of kenmerken van actoren op een gebied (zie soorten en kenmerken) Voorbeelden: a. door die neus <i>word ik afgeleid</i> b. vanwege hen <i>gaat het zo slecht in dit land</i>
2. media	a. personen b. groepen	
3. landbouw	a. personen b. groepen	
4. milieu	a. personen b. groepen	
5. economie	a. personen b. groepen	

6. justitie	a. personen b. groepen	de media veroorzaken een hype
7. gezondheid	a. personen b. groepen	boeren zijn saai, dus die trouwen nooit door de vakbonden is er nu een akkoord zo'n inbreker weet niet wat hij veroorzaakt door teveel patiënten wordt de arts overbelast waardoor word je zo'n vader?
8. onderwijs	a. personen b. groepen	
9. wetenschap	a. personen b. groepen	
10. gezin	a. personen b. groepen	
11. kunst	a. personen b. groepen	
12. cultuur/ nationaliteit	a. personen b. groepen	
13. sport	a. personen b. groepen	
14. oorlog	a. personen b. groepen	
15. respondent	a. personen b. groepen	a. ik ben dom daardoor snap ik het niet b. mijn familie is dom dus die weten niet beter
16. onderzoek	a. de respondent 'als respondent' b. de onderzoeker	a. ik ben hier niet goed in dus ik zeg weinig b. hij/zij leidt me af
17. anders	gevolgen van alle (kenmerken van) actoren die niet in bovenstaande categorieën passen (zie soorten en kenmerken)	
Codenummer en naam	Typen	Voorbeelden
2. van (kenmerken van) Handelingen		
1. politiek	a. politiek b. anders	a. als hij het debat verliest <i>moet hij aftreden</i> b. als hij niet toegeeft <i>moet hij aftreden</i>
2. media	a. media b. anders	a. door zijn slechte presentatie <i>heb ik het niet meegekregen</i> b. door zijn slechte uitspraak <i>heb ik het niet meegekregen</i>
3. landbouw	a. landbouw b. anders	a. sproeien veroorzaakt slecht voedsel b. experimenteren veroorzaakt slecht voedsel

4. milieu	a. milieu b. anders	a. waterzuivering zorgt voor schone rivieren b.
5. economie	a. economie b. anders	a. meer productie leidt tot meer welvaart b.
6. justitie	a. justitie b. anders	a. b.
7. gezondheid	a. gezondh. b. anders	a. b.
8. onderwijs	a. onderwijs b. anders	a. als je niet begeleid wordt gaat het fout b.
9. wetenschap	a. wetensch. b. anders	a. b.
10. gezin	a. gezin b. anders	a. als je ze goed opvoedt worden ze later.. b. als je ze slaat worden ze later ook agressief
11. kunst	a. kunst b. anders	a. als ze Duits praten wordt ik al chagrijnig b.
12. cultuur/ nationaliteit	a. cultuur b. anders	a. b.
13. sport	a. sport b. anders	a. b.
14. oorlog	a. oorlog b. anders	a. b.
15. respondent	handelingen en kenmerken v. hand. in het privéleven van de respondent: bijv. ik heb een auto gekocht dus ik ben mobiel	
16. onderzoek	a. respondent b. onderzoeker	a. ik praat te weinig daardoor voel ik me dom b. hij schrijft het op en dat leidt me af
17. anders	gevolgen van alle (kenmerken van) handelingen die niet in bovenstaande categorieën passen: gevolgen van raar praten, trouwen, etc. (zie soorten en kenmerken)	

Continued for events/activities, objects, places, times, feelings

IV redenen voor & functies van

Omschrijving:
x is een reden voor y
x is een functie van y

Codenummer en naam	Typen	Voorbeelden
1. (kenmerken van) Actoren		
1. politiek	a. personen b. groepen	a. hij is van de sgp omdat hij gelovig is b. de sgp is tegen omdat ze gelovig zijn
2. media	a. personen b. groepen	a. waarom is hij zo'n slechte presentator? b.
3. landbouw	a. personen b. groepen	a. waarom is zij boerin? b.
4. milieu	a. personen b. groepen	a. b.
5. economie	a. personen b. groepen	a. b.
6. justitie	a. personen b. groepen	a. b.
7. gezondheid	a. personen b. groepen	a. b.
8. onderwijs	a. personen b. groepen	a. b. vanwaar die rare snor?
9. wetenschap	a. personen b. groepen	a. b.
10. gezin	a. personen b. groepen	a. b.
11. kunst	a. personen b. groepen	a. b.
12. cultuur/ nationaliteit	a. personen b. groepen	a. b.
13. sport	a. personen b. groepen	a. b.
14. oorlog	a. personen b. groepen	a. b.
15. respondent	a. personen b. groepen	a. dat geldt ook voor mij, dus ik heb dat ook b. mijn familie heeft dat ook dus die zijn de klos
16. onderzoek	a. respondent 'als respondent' b. onderzoeker	a. waarom weet ik dat niet? b. waarom is hij erbij?
17. anders	a. personen b. groepen	redenen voor/functies van alle (kenmerken van) actoren die niet in bovenstaande categorieën passen (zie soorten en kenmerken)

Codenummer en naam	Typen	Voorbeelden
2. (kenmerken van) Handelingen		
1. politiek	a. politiek b. anders	a. hij steunt het kabinet <i>omdat hij van een coalitiepartij is</i> b. hij stapt op omdat <i>hij van een coalitiepartij is</i>
2. media	a. media b. anders	a. b. waarom kijk hij niet in de camera?
3. landbouw	a. landbouw b. anders	a. ze is vast geen boer geworden omdat ze geen baan kon krijgen b.
4. milieu	a. milieu b. anders	a. dat doet hij wel/niet omdat b.
5. economie	a. economie b. anders	a. meer produceren om meer geld te verdienen de mensen vinden het te duur dus ze kopen het niet b.
6. justitie	a. justitie b. anders	a. b.
7. gezondheid	a. gezondh. b. anders	a. b.
8. onderwijs	a. onderwijs b. anders	a. ze begeleiden ze niet omdat ze leraren tekort komen b.
9. wetenschap	a. wetensch. b. anders	a. b.
10. gezin	a. gezin b. anders	a. b.
11. kunst	a. kunst b. anders	a. b.
12. cultuur/ nationaliteit	a. cultuur b. anders	a. b.
13. sport	a. sport b. anders	a. b.
14. oorlog	a. oorlog b. anders	a. b.
15. respondent	Redenen voor alle (kenmerken van) handelingen uit het privéleven van de respondent: ik lap de ramen omdat het mooi weer is	
16. onderzoek	onderzoeker respondent	a. waarom stopt hij de video steeds zo snel? b. waarom kan ik me niet concentreren?
17. anders	redenen voor/functies van alle (kenmerken van) handelingen die niet in bovenstaande categorieën passen (zie soorten en kenmerken): waarom praat hij zo raar?	

Continued for events/activities, objects, places, times, feelings

V Stappen/fasen in

Omschrijving:
x is een stap in y
x is een fase in y

Codenummer en naam	Typen	Voorbeelden
1. (kenmerken van) Actoren		
1. politiek	a. personen b. groepen	a. eerst was hij links nu is hij rechts, hij was vroeger knapper b. het cda was vroeger socialer
2. media	a. personen b. groepen	a. hij was eerst reporter nu is hij presentator b. hij was eerst getrouwd met ... nu is hij gescheiden
3. landbouw	a. personen b. groepen	a. ze heeft was eerst econome en is nu boerin
4. milieu	a. personen b. groepen	a. b.
5. economie	a. personen b. groepen	a. b.
6. justitie	a. personen b. groepen	a. b. tegenwoordig zijn rechters strenger
7. gezondheid	a. personen b. groepen	a. b.
8. onderwijs	a. personen b. groepen	a. vroeger was een leraar echt iemand b.
9. wetenschap	a. personen b. groepen	a. b.
10. gezin	a. personen b. groepen	a. b.
11. kunst	a. personen b. groepen	a. b.
12. cultuur/ nationaliteit	a. personen b. groepen	a. b.
13. sport	a. personen b. groepen	a. b.
14. oorlog	a. personen b. groepen	a. b.
15. personen	a. personen b. groepen	a. b.
16. respondent	a. personen b. groepen	a. toen ben ik vegetariër geworden, eerst wist ik dat niet, maar nu wel b. toen is mijn familie vegetariër geworden
17. onderzoek	a. 'respondent als respondent' b. onderzoeker	a. b.

18. anders	a. personen b. groepen	stappen in alle (kenmerken van) actoren die niet in bovenstaande categorieën passen
Codenummer en naam	Typen	Voorbeelden
2. (kenmerken van) Handelingen		
1. politiek	a. politiek b. anders	a. hij heeft eerst voor gestemd en toen tegen b. hij zegt eerst a en dan weer b
2. media	a. media b. anders	a. hij begint met een inleiding en eindigt met een bruggetje b. hij gaat steeds harder praten, hij herhaalt wat zij net al zei
3. landbouw	a. landbouw b. anders	Vroeger deden ze dat (veehouden), anders eerder bespotten ze alles nu niet meer
4. milieu	a. milieu b. anders	a. b.
5. economie	a. economie b. anders	a. ze kijken eerst naar de prijs en dan pas naar de kwaliteit b.
6. justitie	a. justitie b. anders	a. b.
7. gezondheid	a. gezondh. b. anders	a. b.
8. onderwijs	a. onderwijs b. anders	a. vroeger was lesgeven leuk b.
9. wetenschap	a. wetensch. b. anders	a. b.
10. gezin	a. gezin b. anders	a. b.
11. kunst	a. kunst b. anders	a. b.
12. cultuur/ nationaliteit	a. cultuur b. anders	a. eerst vasten, dan bidden b.
13. sport	a. sport b. anders	a. b.
14. oorlog	a. oorlog b. anders	a. b.
15. personen	a. pers b. anders	a. b.
16. respondent	Stappen in (kenmerken) van alle handelingen uit het privéleven van de respondent: eerst dacht ik dat het zo zat nu denk ik iets anders, daarvoor at ik vlees daarna niet meer, straks ga ik een kopje koffie drinken	
17. onderzoek	a. onderzoeker b. respondent	a. hij start nu sneller dan net met de band b. ik moest eerst goed kijken, toen kon ik het pas lezen
18. anders	stappen in alle (kenmerken van) handelingen die niet passen in bovenstaande categorieën	

Continued for events/activities, objects, places, times, feelings

Appendix E
Relations between 4 aspects of interpretive complexity:
Entire news program (Pearson's r)

Table 5. Relations between 4 aspects of interpretive complexity: Entire news program (Pearson's r)

	Specificity	Heterogeneity	Micro-integration	Macro-integration
Specificity	–	.812**	.928**	.724**
Heterogeneity		–	.810**	.685**
Micro-integration			–	.635**
Macro-integration				–

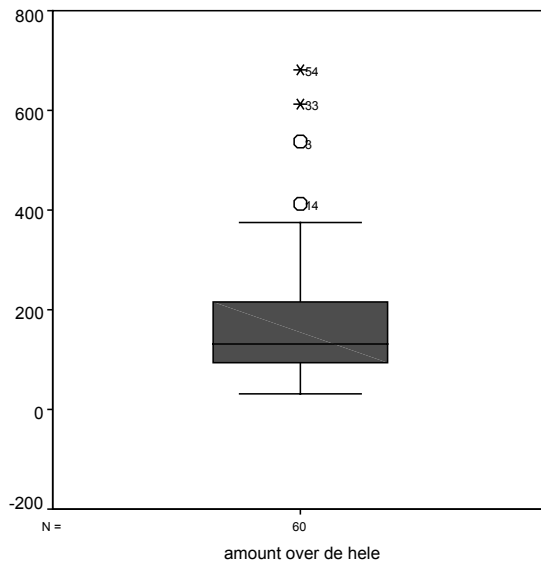
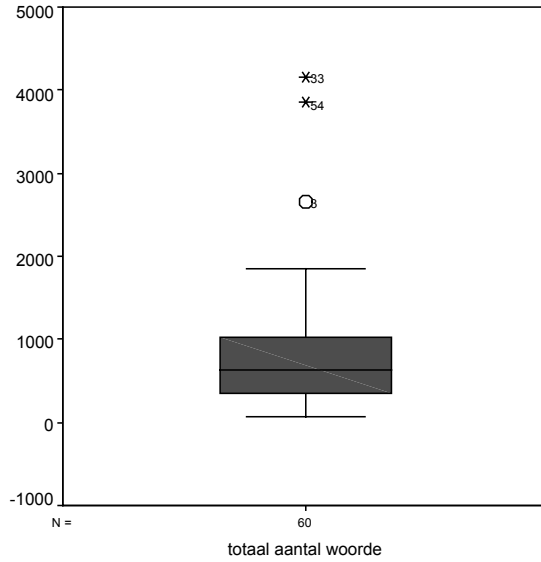
N = 60

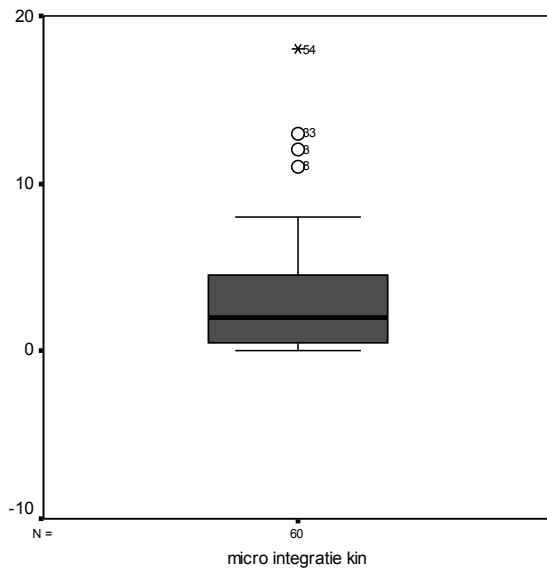
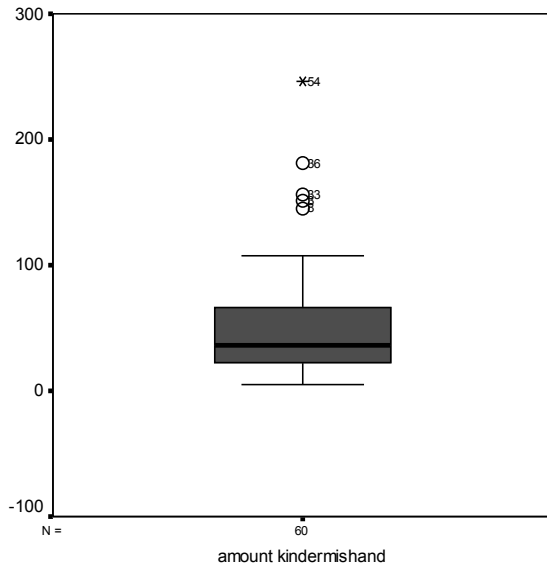
** Correlation is significant at $\alpha = .01$ (2-tailed).

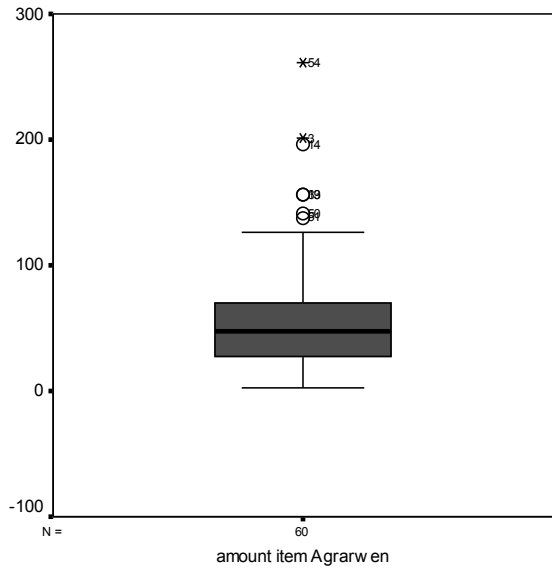
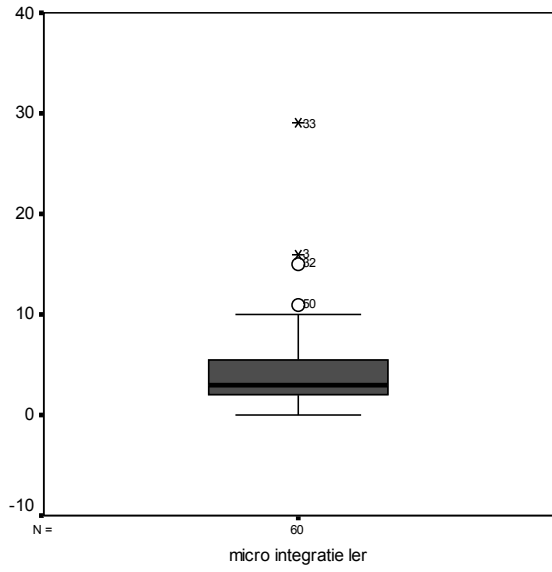
Appendix F

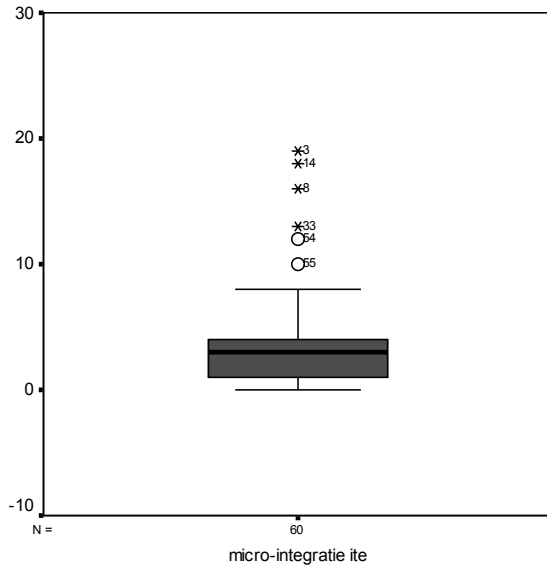
Outliers: Words and complexity – Boxplots

[boxplots of specificity and micro-integration of entire program, and three news items separately. Other variables did not have outlying scores]









Appendix G**Types of elements & Domains in interpretations: Full tables***Table 6.* Types of elements: Entire program (N = 60)

	N (=sum)	M	SD
Inclusion (<i>Kinds of...</i>)	8,725	145.42	132.89
Actors	1,513	25.21	20.22
Acts	1,999	33.32	31.35
Events	884	14.73	16.30
Objects	2,463	36.84	32.20
Places	331	5.51	7.64
Time	425	7.08	8.10
Feelings	1,110	18.5	17.08
Attribution (<i>Attributes of...</i>)	3,180	53.0	61.0
Actors	932	15.53	16.66
Acts	592	9.86	11.36
Events	386	6.43	8.80
Objects	1,137	18.95	19.09
Places	87	1.34	2.77
Time	33	.56	1.52
Feelings	13	.22	.80
Cause-effect (<i>Causes/effects of...</i>)	402	6.72	13.44
Actors	56	.94	2.24
Acts	118	1.97	3.21
Events	96	1.61	2.92
Objects	100	1.67	3.26
Places	6	.10	.51
Time	1	.02	.13
Feelings	25	.41	1.17
Rationale/Function (<i>Reasons /functions for/of...</i>)	263	4.38	7.99
Actors	15	.25	.76
Acts	128	2.13	2.10
Events	23	.38	1.19
Objects	26	.43	1.32
Places	3	.05	.39
Time	1	.02	.13
Feelings	67	1.12	2.10
Sequence (<i>Steps in...</i>)	60	1.0	4.58
Actors	6	.10	.62
Acts	30	.50	1.80
Events	14	.23	1.08
Objects	8	.13	.82
Places	–	–	–
Time	2	.04	.26
Feelings	–	–	–
Total	12,630	210.52	219.79

Table 7. Types of elements: Item Child abuse

	N (=sum)	M	SD	Min	Max
Kinds of...	2,501	42.42	39.58		
Actors	474	7.90	6.63	0	30
Acts	636	10.60	9.35	0	48
Events	317	5.28	5.39	0	26
Objects	549	9.90	8.83	0	38
Places	95	1.58	2.41	0	9
Time	107	1.78	2.0	0	7
Feelings	323	5.38	4.97	0	23
Attributes of...	1,049	17.49	19.69		
Actors	265	4.42	4.37	0	19
Acts	246	4.10	5.0	0	23
Events	190	3.17	3.74	0	20
Objects	326	5.43	5.44	0	26
Places	17	.28	.76	0	5
Time	4	.07	.25	0	1
Feelings	1	.02	.13	0	1
Causes and effects of...	109	1.82	3.60		
Actors	16	.27	.63	0	3
Acts	36	.60	.96	0	4
Events	22	.37	.74	0	3
Objects	29	.48	.83	0	3
Places	3	.05	.22	0	1
Time	–	–	–	–	–
Feelings	3	.05	.22	0	1
Reasons for.../functions of...	86	1.43	2.92		
Actors	6	.10	.40	0	2
Acts	42	.70	1.06	0	5
Events	8	.13	.39	0	2
Objects	8	.13	.43	0	2
Places	–	–	–	–	–
Time	–	–	–	–	–
Feelings	22	.37	.64	0	2
Steps in...	21	.36	1.28		
Actors	1	.02	.13	0	1
Acts	15	.25	.77	0	4
Events	4	.07	.25	0	1
Objects	–	–	–	–	–
Places	–	–	–	–	–
Time	1	.02	.13	0	1
Feelings	–	–	–	–	–
Total	3,766	62.77	67.07		

Table 8. Types of elements: Item Teacher shortage

	N (=sum)	M	SD	Min	Max
Kinds of...	3,433	52.26	47.83		
Actors	668	11.13	7.81	3	37
Acts	742	12.37	12.34	0	83
Events	330	5.50	5.94	0	24
Objects	1,041	12.39	9.76	1	54
Places	72	1.20	2.32	0	14
Time	190	3.17	3.46	0	18
Feelings	390	6.50	6.20	0	37
Attributes of...	1,024	16.94	20.19		
Actors	422	7.03	7.79	0	41
Acts	167	2.78	3.09	0	18
Events	131	2.18	3.07	0	16
Objects	259	4.32	4.70	0	24
Places	22	.26	.70	0	4
Time	22	.37	.71	0	3
Feelings	1	.02	.13	0	1
Causes and effects of...	139	2.33	4.56		15
Actors	28	.47	1.03	0	6
Acts	34	.57	1.00	0	4
Events	46	.77	1.16	0	4
Objects	25	.42	.96	0	6
Places	—	—	—	—	—
Time	1	.02	.13	0	1
Feelings	5	.08	.28	0	1
Reasons for.../functions of...	116	1.94	2.43	0	13
Actors	9	.15	.36	0	1
Acts	53	.88	.17	0	10
Events	10	.17	.47	0	2
Objects	13	.22	.56	0	3
Places	—	—	—	—	—
Time	—	—	—	—	—
Feelings	31	.52	.87	0	3
Steps in...	24	.40	1.93	0	5
Actors	4	.07	.36	0	2
Acts	6	.10	.40	0	2
Events	8	.13	.57	0	3
Objects	5	.08	.53	0	4
Places	—	—	—	—	—
Time	1	.02	.13	0	1
Feelings	—	—	—	—	—
Total	4,736	73.77	76.89		

Table 9. Types of elements: Item Agriculture

	N (=sum)	M	SD	Min	Max
Kinds of...	2,791	46.51	45.48	0	
Actors	371	6.18	5.78	0	25
Acts	621	10.35	9.66	0	42
Events	237	3.95	4.97	0	29
Objects	873	14.55	13.61	0	73
Places	164	2.73	2.91	0	9
Time	128	2.13	2.64	0	12
Feelings	397	6.62	5.91	0	31
Attributes of...	1,107	18.44	21.12	0	
Actors	245	4.08	4.50	0	18
Acts	179	2.98	3.27	0	13
Events	65	1.08	1.99	0	10
Objects	552	9.20	8.95	0	57
Places	48	.80	1.31	0	5
Time	7	.12	.56	0	4
Feelings	11	.18	.54	0	3
Causes and effects of...	154	2.57	5.28	0	13
Actors	12	.20	.58	0	3
Acts	48	.80	1.25	0	5
Events	28	.47	1.02	0	6
Objects	46	.77	1.47	0	7
Places	3	.05	.29	0	2
Time	–	–	–	–	–
Feelings	17	.28	.67	0	3
Reasons for.../functions of...	61	1.01	2.64	0	6
Actors	–	–	–	–	–
Acts	33	.55	.87	0	3
Events	5	.08	.33	0	2
Objects	5	.08	.33	0	2
Places	3	.05	.39	0	3
Time	1	.02	.13	0	1
Feelings	14	.23	.59	0	3
Steps in...	15	.25	1.31	0	4
Actors	1	.02	.13	0	1
Acts	9	.15	.63	0	4
Events	2	.03	.26	0	2
Objects	3	.05	.29	0	2
Places	–	–	–	–	–
Time	–	–	–	–	–
Feelings	–	–	–	–	–
Total	4,128	68.96	75.83		

Table 10. Domains: Item Child abuse

	N	M	SD	Min	max
Politics & policy	460	7.67	6.99	0	39
Media	145	2.42	5.0	0	30
Agriculture	–	–	–	–	–
Environment & infrastructure	3	.05	.22	0	1
Economy & Finance	49	.82	1.98	0	10
Crime & Justice	44	.73	1.97	0	12
Health & care	535	8.92	9.85	0	43
Education	51	.85	3.40	0	25
Science	255	4.25	6.67	0	29
Family	886	14.77	14.59	0	66
Art	–	–	–	–	–
Culture, ethnicity & religion	62	1.03	2.39	0	12
Leisure & sports	4	.07	.25	0	1
War & disasters	1	.02	.13	0	1
Private world	127	2.12	3.17	0	13
Viewing context	29	.48	1.08	0	5
Other	861	14.35	15.79	0	78

Table 11. Domains: Item Teacher shortage

	N	M	SD	Min	max
Politics & policy	56	.93	2.54	0	18
Media	148	2.47	3.54	0	15
Agriculture	1	.02	.13	0	1
Environment & infrastructure	–	–	–	–	–
Economy & Finance	216	3.60	4.37	0	24
Crime & Justice	2	.03	.18	0	1
Health & care	23	.38	.80	0	4
Education	2,686	44.77	35.66	9	205
Science	7	.12	.90	0	7
Family	64	1.07	2.02	0	10
Art	1	.02	.13	0	1
Culture, ethnicity & religion	62	1.03	1.52	0	6
Leisure & sports	3	.05	.22	0	1
War & disasters	3	.05	.39	0	3
Private world	240	4.0	4.17	0	15
Viewing context	62	1.03	2.24	0	13
Other	874	14.57	19.48	0	130

Table 12. Domains: Item Agriculture

	N	M	SD	Min	max
Politics & policy	89	1.48	4.26	0	29
Media	258	4.30	5.05	0	21
Agriculture	1,465	24.27	19.41	1	94
Environment & infrastructure	51	.85	2.42	0	15
Economy & Finance	948	15.8	15.79	0	62
Crime & Justice	–	–	–	–	–
Health & care	55	.92	3.0	0	19
Education	21	.35	.88	0	4
Science	7	.12	.45	0	2
Family	5	.08	.38	0	2
Art	–	–	–	–	–
Culture, ethnicity & religion	186	3.1	3.37	0	13
Leisure & sports	2	.03	.18	0	1
War & disasters	1	.02	.13	0	1
Private world	234	3.9	4.23	0	15
Viewing context	46	.77	1.93	0	12
Other	761	12.68	18.91	0	101

Appendix H: Multiple regression – full tables (including knowledge)*Table 13.* Relation between specificity and viewer characteristics: Summary of regression analysis for entire news program

	B	SE B	β
Gender	–65.489	34.961	–.244
Age	–.719	1.381	–.075*
Education	7.914	9.736	.125
Occupational prestige	.165	.823	.030
Watching news/current affairs programs	–5.780	3.020	–.266*
Watching selectively and attentively	42.803	20.310	.327**
News watching motives: cognitive	77.773	31.363	.351**
News watching motives: amusement	–31.458	32.061	–.132
Knowledge	4.825	25.145	.027

Note. $R^2 = 30.5$ *Table 14.* Relation between heterogeneity and viewer characteristics: Summary of regression analysis for entire news program

	B	SE B	β
Gender	–.859	1.090	–.108
Age	–.01	.043	–.002
Education	.234	.304	.124
Occupational prestige	.020	.026	.123
Watching news/current affairs programs	–.154	.094	–.238
Watching selectively and attentively	1.012	.633	.261*
News watching motives: cognitive	1.960	.978	.298
News watching motives: amusement	–.382	1.000	–.054
Knowledge	–.043	.784	–.008

Note. $R^2 = 23.1$ *Table 15.* Relation between micro-integration and viewer characteristics: Summary of regression analysis for entire news program

	B	SE B	β
Gender	–4.226	3.020	–.189
Age	–.076	.119	–.094
Education	.669	.841	.127
Occupational prestige	–.001	.071	–.002
Watching news/current affairs programs	–.459	.261	–.253*
Watching selectively and attentively	3.101	1.755	.284
News watching motives: cognitive	5.601	2.709	.303**
News watching motives: amusement	–.783	2.770	–.040
Knowledge	.969	2.172	.065

Note. $R^2 = 25.4$

Table 16. Relation between macro-integration and viewer characteristics: Summary of regression analysis for entire news program

	B	SE B	β
Gender	-.432	.517	-.112
Age	-.010	.020	-.071
Education	.146	.144	.162
Occupational prestige	.001	.012	.017
Watching news/current affairs programs	-.122	.045	-.394***
Watching selectively and attentively	.357	.301	.192
News watching motives: cognitive	.835	.464	.265*
News watching motives: amusement	-.452	.474	-.134
Knowledge	.073	.372	.029

Note. $R^2 = 24.6$

Table 17. Relation between specificity and viewer characteristics: Summary of regression analysis for item child abuse

	B	SE B	β
Gender	-13.812	13.171	-.149
Age	-.146	.497	-.044
Education	2.334	3.348	.107
Occupational prestige	.123	.296	.064
Watching news/current affairs programs	-.867	1.125	-.115
Watching selectively and attentively	15.071	7.354	.333**
News watching motives: cognitive	21.827	11.177	.285*
News watching motives: amusement	-18.962	11.732	-.231
Knowledge	-4.117	6.074	-.097

Note. $R^2 = 23.0$

Table 18. Relation between heterogeneity and viewer characteristics: Summary of regression analysis for item child abuse

	B	SE B	β
Gender	-1.226	1.056	-.160
Age	.014	.040	.053
Education	.136	.268	.075
Occupational prestige	.009	.024	.056
Watching news/current affairs programs	-.104	.090	-.167
Watching selectively and attentively	1.270	.589	.339**
News watching motives: cognitive	2.170	.896	.343**
News watching motives: amusement	-1.499	.940	-.213
Knowledge	-.226	.487	-.065

Note. $R^2 = 27.4$

Table 19. Relation between micro-integration and viewer characteristics: Summary of regression analysis for item child abuse

	B	SE B	β
Gender	-.506	1.050	-.069
Age	.000	.040	.001
Education	.163	.267	.094
Occupational prestige	.007	.024	.044
Watching news/current affairs programs	-.115	.090	-.192
Watching selectively and attentively	1.018	.586	.282*
News watching motives: cognitive	2.204	.891	.362**
News watching motives: amusement	-1.134	.936	-.173
Knowledge	-.262	.484	-.078

Note. $R^2 = 22.6$

Table 20. Relation between macro-integration and viewer characteristics: Summary of regression analysis for item child abuse

	B	SE B	β
Gender	-.638	.606	-.154
Age	-.010	.023	-.069
Education	.156	.154	.159
Occupational prestige	-.007	.014	-.081
Watching news/current affairs programs	-.054	.052	-.161
Watching selectively and attentively	.558	.339	.275
News watching motives: cognitive	1.013	.55	.295**
News watching motives: amusement	-.733	.540	-.199
Knowledge	-.211	.280	-.111

Note. $R^2 = 18.7$

Table 21. Relation between specificity and viewer characteristics: Summary of regression analysis for item teacher shortage

	B	SE B	β
Gender	-15.796	13.036	-.163
Age	-.358	.500	-.103
Education	2.046	3.472	.089
Occupational prestige	.140	.296	.070
Watching news/current affairs programs	-2.035	1.101	-.259*
Watching selectively and attentively	17.459	7.287	.369**
News watching motives: cognitive	24.847	11.155	.310**
News watching motives: amusement	-10.969	11.684	-.128
Knowledge	3.896	6.385	.082

Note. $R^2 = 29.3$

Table 22. Relation between heterogeneity and viewer characteristics: Summary of regression analysis for item teacher shortage

	B	SE B	β
Gender	-2.37	.936	-.035
Age	-.019	.036	-.076
Education	.086	.249	.053
Occupational prestige	.028	.021	.199
Watching news/current affairs programs	-.135	.079	-.244*
Watching selectively and attentively	1.007	.523	.300*
News watching motives: cognitive	1.582	.801	.279*
News watching motives: amusement	.182	.839	.030
Knowledge	.161	.458	.048

Note. $R^2 = 27.3$

Table 23. Relation between micro-integration and viewer characteristics: Summary of regression analysis for item teacher shortage

	B	SE B	β
Gender	-.936	1.301	-.099
Age	-.044	.050	-.128
Education	.071	.347	.032
Occupational prestige	.029	.030	.145
Watching news/current affairs programs	-.176	.110	-.229
Watching selectively and attentively	1.569	.727	.338**
News watching motives: cognitive	1.521	1.114	.194
News watching motives: amusement	.355	1.166	.042
26.8Knowledge	.787	.637	.168

Note. $R^2 = 23.1$

Table 24. Relation between macro-integration and viewer characteristics: Summary of regression analysis for item teacher shortage

	B	SE B	β
Gender	-.068	.516	-.019
Age	-.004	.020	-.028
Education	.201	.137	.231
Occupational prestige	.000	.012	-.006
Watching news/current affairs programs	-.077	.044	-.259*
Watching selectively and attentively	.476	.288	.265
News watching motives: cognitive	.498	.442	.164
News watching motives: amusement	-.232	.462	-.071
Knowledge	.267	.253	.148

Note. $R^2 =$

Table 25. Relation between specificity and viewer characteristics: Summary of regression analysis for item Agriculture

	B	SE B	β
Gender	-24.554	13.636	-.242*
Age	-.627	.544	-.172
Education	1.730	3.440	.072
Occupational prestige	.003	.299	.001
Watching news/current affairs programs	-2.391	1.087	-.291**
Watching selectively and attentively	9.669	7.161	.195
News watching motives: cognitive	26.892	11.316	.320**
News watching motives: amusement	-4.850	11.506	-.054
Knowledge	11.275	5.856	.285*

Note. $R^2 = 38.3$

Table 26. Relation between heterogeneity and viewer characteristics: Summary of regression analysis for item Agriculture

	B	SE B	β
Gender	-.745	1.099	-.099
Age	-.036	.044	-.135
Education	.356	.277	.200
Occupational prestige	.009	.024	.058
Watching news/current affairs programs	-.128	.088	-.210
Watching selectively and attentively	.452	.577	.123
News watching motives: cognitive	1.174	.912	.188
News watching motives: amusement	.148	.927	.022
Knowledge	.742	.472	.252

Note. $R^2 = 27.3$

Table 27. Relation between micro-integration and viewer characteristics: Summary of regression analysis for item Agriculture

	B	SE B	β
Gender	-2.717	1.282	-.314**
Age	-.029	.051	-.092
Education	.412	.323	.202
Occupational prestige	-.039	.028	-.217
Watching news/current affairs programs	-.152	.102	-.217
Watching selectively and attentively	.596	.673	.141
News watching motives: cognitive	1.969	1.064	.276*
News watching motives: amusement	-.125	1.082	-.016
Knowledge	.259	.551	.077

Note. $R^2 = 24.8$

Table 28. Relation between macro-integration and viewer characteristics: Summary of regression analysis for item Agriculture

	B	SE B	β
Gender	-.528	.589	-.117
Age	-.035	.023	-.215
Education	.285	.149	.268*
Occupational prestige	-.005	.013	-.050
Watching news/current affairs programs	-.135	.047	-.371***
Watching selectively and attentively	.725	.309	.330**
News watching motives: cognitive	1.019	.489	.274**
News watching motives: amusement	.117	.497	.029
Knowledge	.197	.253	.112

Note. $R^2 = 41.3$

Summary

Television news is still a ‘main source’ of public affairs information for the majority of citizens in modern societies. Consequently, it is thought to play a large role in forming and maintaining such societies by providing information and by functioning as a democratic platform. The volume of television news research attests to this; television news is among the most extensively investigated topics in communication studies. Despite this extensive research a number of questions regarding the consequences of television news for the audience that watches it, are still unanswered. The current dissertation focuses on one of the more important of these questions; the issue of television news’ audience activity. It starts by reviewing the research literature from 1970–1998 to assess the foremost issues that have been investigated – and sometimes provided answers – and to point out potential omissions in this research. It concludes that the field is left wanting in terms of research on some forms of audience activity, most notably how to form their own interpretations of the information people encounter when they watch television news information. This finding provides the main focus of the rest of the dissertation. More specifically, the central question is whether and how news viewers who watch the same news program form similar or different interpretations of that news. In other words, is there little or much variation between viewers’ interpretations of the same program?

In subsequent chapters, a concept of interpretation and an instrument for measuring interpretation are developed. This is done by adopting social action theory as an overarching frame of reference. The social action perspective places the actions of viewers central to the process that may result in television news effects. It postulates that viewers use prior knowledge about not only events in the news, but also about the news in general, and themselves, including interests,

motives and goals to interpret the news. That is, television news is seen as merely offering 'objects' that require interpretation by their receivers, and not objectively observable, self-evident information. A news viewer may or may not decide to take notice of a news report. If so, each viewer, from their own vantage point of social and psychological specifics, must define the meaning of different aspects of a news report. This is a complex cognitive and affective process, in which previously acquired knowledge and new information are combined, sometimes requiring the reformulation of old accepted knowledge, and eventually resulting in a reconstruction of a news report and its context. This interpretation, and not some 'objective' message, is what determines the potential further actions a viewer may take, be it mental or physical. The main assumption is that different viewers, with different social and psychological background may attach different meanings to the same news reports, on which they found their further actions, which are consequently equally prone to diverge.

A first issue is how to conceptualize 'interpretation' that represents an audience point of view. Too often the audience's dealing with the news has been studied from the point of view of a supposedly 'objective' researcher. This researcher uses his conceptions of what the public should and should not remember and understand from the news as a benchmark for his analyses. From this research it often follows that, for various reasons, viewers remember and understand disappointingly little from what they have seen. Here it is argued that in order to understand the effect that news may have on its viewers, it is necessary to study the reception of the news from their own point of view as well. This means developing a concept that simultaneously reflects something of the subjectivity that defines interpretations, and also enables objective analyses.

Cognitive complexity research provides the basis for such a concept. It holds that knowledge as used by people to cope with the world is structured along two dimensions: Differentiation and integration. As social action theory maintains that interpretations are the resultants from this structured knowledge being confronted with new incoming knowledge from the news, interpretations themselves can be regarded as structures containing the same two dimensions. Thus, *interpretive complexity* is seen as a characteristic of interpretation; any given interpretation of a news program is to some extent differentiated and integrated, regardless of specific meanings contained within. In this context, differentiation refers to the most basic knowledge elements that an interpretation consists of. Integration refers to the different relations with which viewers may connect the different separate elements. In the strictest sense, interpretive complexity designates the degree to which news viewers use elements and the degree to which they interconnect them. Phrased differently, the complexity of an interpretation signifies the broadness and coherence of its content, without in fact being directly concerned with actual subjective 'meanings' of its content. Thus, any given interpretation may show signs of high or low differentiation (containing many elements or only

a few) and high or low integration (containing many or just some connections between elements). By its focus on structure instead of content of interpretations, this concept enables an objective measurement of interpretation differences.

Protocol analysis has been used in other disciplines to capture mental procedures and processes people use to make sense of problems and situations. In general, protocol analysis consists of having research participants verbalize their thoughts while performing a task of some sort. Two varieties of this approach were tested in a pilot study, in order to develop an instrument apt to capture viewer interpretation concurrent with watching the news. The Thought-Listing Technique, a procedure in which viewers verbalize their exact thoughts during short breaks between segments of a news program, proved more productive and practical than a procedure which required viewers to verbalize their thoughts while the program continued. In subsequent studies, an analysis procedure was developed. First tests provided indications that the data collection and analysis procedures enable discrimination between interpretations with varying levels of differentiation and integration.

The concept and operationalization of interpretive complexity were used in an exploratory study to demonstrate some characteristics of interpretations. This study aimed to do two things: First, describe differences and similarities in interpretive complexity, and second, analyze relations between interpretive complexity to viewer's knowledge and motivations, as well as other characteristics. We hypothesized that interpretations of the same news items, made by cognitively and motivationally different viewers, would be different in terms of both the nature of structural components and degree of complexity. More specifically, as it has been known that people make more intensive use of their previously acquired knowledge when highly motivated, we hypothesized that viewers to whom a news report is relevant, and whose cognitions related to this issue are more differentiated and integrated would consequently produce more complex interpretations than people who are less motivated and who possess less complex knowledge on the subject. The main results can be summarized in three points.

First, viewers take information from the news and run with it, shaping and reshaping parts of it, ignoring others so that what they construct from a news item may be quite different from (what was presumably intended in) the original news message. They do so by applying knowledge from their own relevance structure to what they see in the news.

Second, differences between the interpretations viewers create from the same news are occasionally vast, both in terms of components and level of complexity. Across topics, the same large differences between interpretations of different viewers remain stable. Thus news topics do not limit or extend the range of differences between interpretations. However, topics are related to the degree of complexity of each individual interpretation; for some topics both the simplest and the most complex interpretations are less complex than for other topics.

Third, differences between interpretations are related to differences in relevance structure (knowledge and motivation), both in a general form (e. g., general news watching motives) and more specifically related to the news topic (e. g., issue-related knowledge and involvement).

Furthermore, although audience activity focuses to a large extent on what was probably intended as the gist of a message, a large part is directed to 1. aspects related to but not belonging to the core of the 'objective' (intended) message; 2. non-message induced knowledge, such as knowledge from the personal life-world; and 3. the news message as something that is produced (in certain ways, for certain reasons, to certain effects). These strategies lead to news interpretations being dissimilar from the 'news message-as-sent'. Furthermore, it leads to differences in the elaborateness and cohesiveness of interpretations. This is because these processes are guided by knowledge and motivations; motivated and knowledgeable viewers are more inclined to use all of these strategies when interpreting a news item, instead of just including message-induced and message related aspects as less motivated and knowledgeable audience members would. This leads to their interpretations being more specific and heterogeneous, and more cohesive on both a micro and macro level. In comparison, non-motivated viewers' interpretations lack detail and connectedness.

Our main assumption was that audience interpretations of the news are a crucial factor in the effects of news on that audience. The main contribution of this project may be that the concept and method used in it enable systematic analysis of interpretation differences. Thus, the concept and measurement of interpretive complexity may be a useful alternative, to be used alongside more traditional recall and understanding measures of audience activity.

Curriculum Vitae

Gabi Schaap (1972) is lecturer and researcher at the Department of Communication and the Department of Research Methodologies of the Radboud University, Nijmegen, The Netherlands. He achieved his Master degree at the same university in 1997, and has been teaching and doing research there ever since. This volume is the result of a PhD project that ended with a PhD degree in 2008. His research interests concentrate around the psychological processes of producing and consuming news media messages. He has conducted research on sensationalism in newspaper photographs, recall and understanding of television news, and the complexity of cognitive responses to television news, and continues to publish on these themes. Gabi Schaap has co-edited a book on action theoretical research, and is book review editor of the international peer reviewed journal *Communications: The European Journal of Communication Research*.

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