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6 Interpreting television news

Complexity as a means of conceptualising audience activity

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For decades, researchers have maintained that news audiences consist of active viewers (McQuail, 2005). This audience perspective has been central to many news effect studies (Renckstorf, 1977; Renckstorf & Wester, 2001). The current chapter centres on one specific form of activity: audience interpretations of the news message. Interpretation is seen as a crucial intermediate step between exposure to and effects of the news. However, in the past conceptualising and operationalising interpretation has been problematic (Gunter, 2001). In this chapter interpretation is defined in terms of complexity. The practicability of such a conceptualisation for researching news effects is illustrated by a summary of a study which applied the complexity concept to news interpretation and its relation to audience characteristics. Finally, it discusses some potential fields of research on news audience activity using the concept.

6.1 News media and public affairs knowledge

In today's democracies, knowledge of politics and public issues is seen as central to the empowerment of citizens. Informed persons are more able, and likelier to discern their own interests, and to enforce these interests through political action. They are also more prone to participate actively in society (Delli Carpini & Keeter, 1996). Furthermore, the amount and kind of knowledge available to people can alter their opinion on issues as well as their voting behaviour (Althaus, 1998).

As most citizens find themselves outside the immediate political arena, most of their knowledge is second-hand, that is, acquired via the mass media. Therefore, the news media are seen as the most powerful means to elevate public and political knowledge. Unfortunately, one of the most pervasive results in political and public affairs knowledge research throughout the western world has been the stunning lack of knowledge displayed by citizens. People often do not know even the most central persons or issues in the political domain (Althaus, 1998; Delli Carpini & Keeter, 1996). Simultaneously, in communication research both large scale surveys and experimental research have consistently shown over decades that only a relatively small portion of news recipients are able to recall and comprehend news reports (Graber, 1984). Especially television news seems ill suited to inform citizens; most—if not virtually all (i.e., 70-90%)—information of individual news broadcasts has disappeared from audience memory almost

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immediately after recipients have seen it. The culprit is mostly sought in one or two camps. First, television news, through its content and formal characteristics is thought to impair easy comprehension and retention. Its focus on ‘soft news’, ‘bells and whistles’ of form, sound bite journalism and its fast pacing make it all but impossible for viewers to cope with information on a minimum intellectual level (cf. Cohen, 2001; Grabe, Zhou & Barnett, 2006). Conversely, because of a lack of motivation to be seriously informed, and an inability to process fast and complex information, the viewers are themselves held responsible for their failure (Lang, 2000). Generations of news viewers have lacked the proper motivation to acquire information from the news, and have been decreasingly so in the last couple of decades (cf. Mindich, 2005). Therefore, traditionally television (news) as well as its audience have been labelled as ‘passive’.

6.2 The active audience concept

In contrast, in recent years more and more research on the effects of news has engaged the idea of an active audience. Starting in mainstream communication research with seminal studies precursory to the Uses and Gratifications tradition (e.g., Herzog, 1944; Berelson, 1949), today the idea is most prominently represented by psychological approaches that apply information processing theory to the study of media effects. Such research approaches are currently among the most popular in communication research (Bryant & Miron, 2004; Kamhawi & Weaver, 2003; Perse, 2001). In addition, the sociology of knowledge, a tradition characteristic of Europe, fits similar attitudes towards the mass communication process (Berger & Luckmann, 1967; Bosman et al., 1989).

Although often quite different in their approach, these traditions have in common that they renounce the existence of one-on-one media effects. Instead of being a stimulus-response (S-R) process, they argue that the mass media process is best represented by an O-S-O-R model, in which the two O's designate audience orientations—and therefore audience power (McLeod, Kosicki & McLeod, 2002). Audience goals, motivations, knowledge, and processing of information mediate direct effects; some authors argue that one should not even speak of ‘effects’, but instead of (indirect) ‘consequences’ (Renckstorf, 1996).

Audience activity is thus placed on at least two different moments in the process: prior to (the first ‘O’) and during exposure (the second ‘O’). There has been a great deal of attention to pre-exposure selectivity; in this chapter we focus on the reconstructive activity during exposure. This activity consists of two basic processes: *Attention* and subsequently *integration* of information into the recipient's knowledge structure (cf. Lang, 2000; Eveland, 2002; Perse, 2001). According to their goals and motivations, recipients focus their attention on some (parts of) messages and not on others, and they mentally reconstruct these parts of the message into something that fits their previously acquired knowledge, beliefs, and attitudes.

Now, one of the big questions in news effects research has been how the degree of activity affects knowledge gain. Central in this quest is the idea that the greater the activity during exposure—that is, the more focused the attention and the greater the effort to integration of information—the better the information processing. Even attitudes are thought to be more resilient after this ‘deep processing’ (Beaudoin & Thorson, 2004; Dalrymple & Scheufele, 2007; Petty & Cacioppo, 1986; Shapiro & Lang, 1991; McLeod, Kosicki & McLeod, 2002; Shah et al., 2004; Eveland, Shah & Kwak, 2003).

The role of attention is the focus of much current research in media psychology (cf. Lang, 2000). This chapter centres on the subsequent part of the reconstructive effort by news viewers. Several different terms are current for this process (e.g., encoding, interpretation, elaboration, comprehension); in this chapter the term 'interpretation' is used to reflect the subjective nature of the reconstruction. In general terms, interpretation is defined as the reconstruction, or model of a news message made by viewers. During exposure, a recipient confronts selected information from the message with prior knowledge, resulting in a subjective interpretation of that message.

There is increasing evidence that interpretive processes indeed do mediate effects on knowledge, understanding, and a wide range of social judgments and participatory behaviours. The fact that audience interpretations play a crucial role in the effects of news messages has important consequences for news research, as pointed out by Renckstorf (1977). Traditionally, the mass communication process has been seen as consisting of a number of elements that each warrant communication research; first, an 'objective' message; second, the recipient; and third, audience behaviour. 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). If one is to understand the complex path between exposure to news and its effects, this subjective message should be an important focus of research.

6.2.1 Problem: Conceptualising and measuring interpretation

And therein is unfortunately the rub; audience interpretations are not easily investigated and conceptualisations are likewise manifold, diffuse, and often subjective (Gunter, 2001). Most researchers are interested in two questions regarding this subject: what type of activities does interpreting the news consist of, and at what level does the activity take place? One of the difficulties in answering these questions is that interpretation is at least partly internal and therefore covert mental behaviour (Hendriks Vettehen, Renckstorf & Wester, 1996). Furthermore, as we are dealing with subjective meanings people attach to their environment, analyses run the risk of becoming solipsistic. Because of this, researchers have often resorted to the only alternative; inferring audience activity from indirect but quantifiable measures. Predominantly this includes measuring recall of bits of selected information from the news, and, less often, psychophysiological measures of cognitive activity (e.g., Lang, 1994). Recently, survey studies have employed self-assessment methods to measure interpretation (cf. Eveland, Shah, & Kwak, 2003). Although these indirect measures can be very productive, the practice only circumvents, and does not tackle the most central aspect of audience activity (Gunter, 2001; Schaap, 2004). Thus, the challenge in news research lies in finding solutions to the problem of conceptualising and measuring interpretation. In the following, this chapter outlines one potential strategy for doing this. This strategy is built around the use of knowledge.

6.3 Integrated knowledge as a central component of audience interpretation

As said, news researchers are interested in the type and level of activity during news reception and how this influences gain in knowledge and comprehension. Thus, what is it that news recipients do when they interpret the news? Of course, many interrelated

things happen, some of them social (such as social and para-social interaction), others physical (such as slowing or accelerating heart rates and skin conductance), or affective (emotional reactions), but one of the most important things recipients do when constructing a 'subjective message' is mental. They use knowledge; incoming information from the news is tested against the recipient's body of knowledge regarding everything the viewer deems relevant at that time. First, the recipient tests for relevance; is this information worth devoting extra cognitive effort to? If deemed worthy of mental effort, the information is confronted with knowledge for discrepancy. Is this something that concurs with what I already know? Most of the time, the recipient is probably seeking to fit the new information into what he or she already knows, so as not having to go through the trouble of having to reconfigure existing knowledge and beliefs (Fiske & Taylor, 1991). The result of this process is the interpretation, a subjective (re-)construction of a message's meaning that consists of old knowledge and re-assessed new information. Knowledge use is thus central; audience activity to a large part equals knowledge usage (Bosman et al., 1989; Perse, 2001). Therefore, research on news interpretation should (and in fact does) focus on how and to what extent news recipients use knowledge during exposure.

In almost all instances in news research, knowledge use is conceptualised as factual knowledge, hence a focus on factual recollection. To infer how and to what extent people have actively reconstructed the news message, research participants are asked what factual elements they are able to remember after news exposure, either through free or cued recall items, or recognition. The kind of probe aside, a typical item in these studies, is of this type: 'Could you name the minister of foreign affairs you just saw in the news?' Recently however, this approach has received criticism (cf. Eveland, Marton & Seo, 2004; Dalrymple & Scheufele, 2007). Critics argue that retaining and reproducing loose facts is only a part of human thinking. Instead, one of the most important aspects of interpretation is the connecting of knowledge, and through this, the remodelling of the information from the news. Viewers do not just incorporate disconnected information elements into their knowledge systems; they connect these elements to one another and to elements from their own cognition. Research on how interpretation affects learning from the news should therefore incorporate this integrated or structural dimension of thinking (Graber, 2001; McLeod, Kosicki & McLeod, 2002). This chapter presents 'complexity' as a concept of 'interpretation' that represents both these aspects; the separate information elements that form its basic 'content' as well as the connections that are made between the separate elements (cf. Schaap, Renckstorf & Wester, 2005). Together, the degree to which news recipients use information elements and integrate them into a coherent whole represents the level of audience activity during reception.

6.3.1 Complexity of interpretation: Differentiation and integration

In research on cognitive information processing, *cognitive complexity* is a concept used to define the level, or 'depth' of cognitive activity. Having its background primarily in cognitive and social psychology and political sciences, it presents a way of conceptualising news interpretation and audience activity. In general terms, cognitive complexity represents the level of knowledge structures or knowledge use.

In complexity theory, knowledge and its use ('thinking') are defined along two dimensions: Differentiation and integration, or the amount and connectedness of know-

ledge in use (Burlison & Caplan, 1998; Luskin, 1990; Fiske & Taylor, 1991; Neuman, 1981; Schroder, Driver & Streufert, 1967; Zajonc, 1968; Suedfeld, Tetlock & Streufert, 1992). Basically, differentiation is the number of information elements used by an individual, such as persons, events, acts, and places.

Simple thinking is defined by low differentiation; restricted use of only the most salient elements. Simple thinking includes only a narrow range of interpretations; it uses a single idea to describe an event, issue, or problem. By contrast, more complex thinking is characterized by inclusion of multiple dimensions of a problem or issue, searching for alternative interpretations of the same problem.

Complex thinking is defined as not only the consideration of various aspects of a problem, but also the relating of various characteristics of a problem. Integration is the degree to which individual elements are organised. It reflects the ability and willingness to connect these loose bits and pieces into a coherent whole in which multiple aspects are causally, logically or otherwise connected. In a sense, factual recollection and recognition are merely by-products of the complexity of information processing (Fiske & Taylor, 1991). If during the encounter with a stimulus an individual uses knowledge to connect certain elements of the stimulus, this leaves traces behind in memory. This makes it easier to retrieve that information at a later time. Thus, a stimulus—a problem, task, or news broadcast—can be perceived as having many and interconnected characteristics by complex thinkers, or as being one-sided and non-related by more simple thinkers.

Whether a person employs simple or complex thinking determines the level of activity of information processing (Renckstorf, 1996; Smith & DeCoster, 2000; Bargh, 1988; Fiske & Taylor, 1991; Petty & Cacioppo, 1986; Chaiken, 1980; Craik & Lockhart, 1972). During active processing many physical and mental resources are allocated towards the goal of making sense of the incoming information. Attention levels are high, and individuals make avid use of prior knowledge during this process. From a complexity theory perspective, recipients retrieve more knowledge from memory to incorporate in their interpretations, and attempt to make more connections between all the elements to make ‘deeper’ sense of the information. Therefore, interpretations of news messages may be expected to include more, more diverse knowledge (i.e., highly differentiated) as well as more evidence of connective activities (are highly integrated). Experimental research as well as survey studies in psychology and communication science have provided ample evidence for the connection between this ‘deep processing’ and greater learning and understanding (cf. Fiske & Taylor, 1991; Eveland & Dunwoody, 2000). Passive ways of processing the information are less attentive and active in using prior knowledge. This results in lower levels of learning and understanding.

6.4 News interpretation research using the concept of complexity: An example

Above it was argued that research on the differentiation and integration of news interpretations can be useful in the study of audience effects. There are a number of different ways in which this concept may be applied to study news reception, some of which are discussed in the final section. To give one example of its application, below follows a brief description of a study on television news interpretation (Schaap, 2009). This study relates directly to the question how interpretation functions as an intermediate step

between exposure and effects. The study is not presented in full detail, as its function here is just to give a basic idea of how the abstract concept of complexity can be operationalised and used in analyses.

One of the advantages of the concept is that it has the potential to provide a more in-depth view on what audiences do with news, while it does not necessarily mean that we have to stick to the purely qualitative or anecdotal level. In the study below, it is illustrated how complexity can be operationalised to aid both qualitative and quantitative analyses, giving us 'deep' insight into how people interpret the news as well as the opportunity to make quantitative comparisons and to study relations with other variables.

6.4.1 Study design; television news interpretation

The study presented a videotape of the main news programme in The Netherlands, the *NOS 8 uur journaal* (National Broadcast Foundation 8 o'clock news) to 60 participants in a laboratory setting. To tap into interpretation during reception, Thought-Listing was used (cf. Cacioppo, Von Hippel & Ernst, 1997; Davison, Vogel & Coffman, 1997; Shapiro, 1994). Participants were instructed to 'say out loud' all and every thought they had during pauses inserted in the programme at small intervals while they were watching the news ($M = 18$ seconds).

The study centred on two general research questions regarding complexity of interpretations. First, what are the differences in interpretations between different viewers in terms of the elements and connections used? This research question was answered both in qualitative terms (*what* elements and connections are used?), and in quantitative terms (*how many* elements and connections are used?). Second, to what viewer characteristics are the quantitative differences in complexity related? To this end, we analysed viewers' interpretations of three news items on vastly different topics; child molesting, teacher shortage, and agricultural reforms. Research has shown that people only actively process the news if sufficiently motivated, that is if they feel involved, are interested or otherwise perceive that a news issue is relevant to them personally (cf. Perse, 2001; Knobloch et al., 2002; Huang & Price, 2001; Renckstorf & Wester, 2001). When this is the case, they retrieve more knowledge from memory, and attempt to make more connections between individual cognitions to make 'deeper' sense of the information. To explore relations between complexity and audience characteristics, participants were therefore selected for expected involvement with one of the news items, but not necessarily with the others.

6.4.2 Analysis

Thought listing produced 60 transcribed thought protocols that were analysed for complexity (cf. Ericsson & Simon, 1984). Complexity has two dimensions: differentiation and integration. Both were operationalised as having two sub dimensions, resulting in four indicators of complexity.

6.4.2.1 Differentiation

Differentiation has two aspects: Specificity and heterogeneity. First, the most basic and most concrete components of interpretations are specific individual information elements (actors, acts, events, objects, times, places, and goals / feelings), representative of

the specificity of interpretations. Second, the types of elements they represent signify the heterogeneity of interpretations: For instance, some interpretations may contain many elements, but only of a limited range of types (e.g., many actors, but only very few other elements such as acts, objects, places, etc.).

6.4.2.2 Integration

Relations among differential elements create cohesion, or integration in interpretations. As for differentiation, two aspects of integration were distinguished: Micro-integration and macro-integration. On a micro level, people make connections when 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 (Schaap, Renckstorf & Wester, 2005). That is, people may connect events or issues in a news item to only one domain (e.g., economy) or many more (e.g., politics, education, justice, science, etc.).

Thought protocols were coded for words or combinations of words referring to specific elements. Each specific element was then classified as belonging to a certain type, and to a domain. Average inter-coder reliability (two independent coders) score on Scott's ρ was .85.

6.4.3 Results

The rich data in the thought protocols allowed for both qualitative and quantitative comparison of interpretations. In the qualitative analysis, the focus was on *what* different elements, types, relations and domains news viewers use in interpreting the news. The quantitative analysis aimed at assessing the extent of differences in complexity, that is, *how many* different elements, etc. the viewers used.

6.4.4 Qualitative analysis

As viewers interpret the news from various social and psychological backgrounds, consequently in possession of varying kinds and amounts of knowledge, one might expect differences in the elements they use in interpreting the news. The qualitative data show that identical news messages can lead to a striking diversity in interpretations. Although much of the interpretation of any viewer is concentrated around a cluster of elements, types, relations, and domains that can be seen as belonging to the central message of the news item, interpretations also show many references to elements, etc., that are much less directly related to the content of the news. Viewers often 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 the original news message. They do so by applying knowledge from their own relevance structure to what they see in the news.

For instance, interpretations refer to many domains that seem to fall outside the scope of domains covered by a news item. So, for example interpretations of the item on teacher shortage contain, aside from the expected domain 'Education', other, more idiosyncratic domains 'Media', 'Economy', and 'Culture and ethnicity'. One of the most frequently used domains overall was 'Private world', containing references to the view-

er's own private life. This indicates that viewers often apply what they see in the news directly to details of their own life.

On occasion interpretations can be idiosyncratic to the point of having only the slightest relation to the message-as-intended. One example is the following excerpt from one viewer's thought protocol. In the segment, T. Duif, a representative of the School Principles Association is interviewed. His last name translates as 'Dove'.

"Hm, I thought about 'Pluk van de Petteflet', after seeing Mister Duif"

Dolly the Dove is a main character in Dutch children's book classic 'Pluk van de Petteflet' by Annie M. G. Schmidt. In other words, interpretations partly focus on matters that are related to the news item only by linguistic association. Relevant in the researcher's eye or not, such idiosyncrasies do form a large part of how people reconstruct the news.

Simultaneously, there is reason not to overestimate the viewer's power or inclination to be idiosyncratic; most of the time the core of audience interpretations represents the core of the message.

6.4.5 Quantitative analysis

The quantitative analysis focuses first on the question of the extent of differences in complexity between participants. Subsequently, the relation between complexity and audience characteristics is investigated.

Differences in complexity of interpretation were occasionally vast. In other words, some interpretations were much more differentiated and / or integrated than others. Table 6.1 represents the mean scores on the four aspects of complexity. While there is a large variety in complexity between individual interpretations, there seemed to be roughly two groups of interpretations: Very complex ones (the smaller group) and relatively simple interpretations. This was most clear for the use of simple cognitive elements (Specificity) and the use of relations (Micro-integration). For instance, although participants used on average 180 elements to interpret three news items, the variation between participants was very large, as seen from the standard deviation. Moreover, the distribution of score was skewed; the larger part of interpretations were below average in specificity and micro-integration. That is, most people's news interpretations were not very specific and did not contain many causal, logical or temporal connections. If this were generalisable to the general public, it would account for the disappointing levels of

Table 6.1 Distribution of interpretive complexity scores ($N = 60$ participants)

	Differentiation Specificity (no. of elements)	Differentiation Heterogeneity (no. of el. types)	Integration Micro-integration (no. of relations)	Integration Macro-integration (no. of domains)
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

Table 6.2 Relation between interpretive complexity and viewer characteristics (multiple regression)

	Differentiation specificity	Differentiation heterogeneity	Micro integration	Macro integration
Gender (0 = m, 1 = f)	-.230*	-.092	-.280*	-.136
Age	-.125	-.090	-.101	-.180
Education	.102	.229	.195	.291**
Occupational prestige	-.011	.045	-.206	-.066
Watching news	-.281**	-.203	-.201	-.377***
Watching selectively and attentively	.160	.094	.113	.330**
Prior knowledge	.285*	.252	.077	.112
News watching motives: information	.305**	.178	.249*	.285**
News watching motives: amusement	.050	.112	.032	.055
Issue-involvement and interest	.308**	.263*	.165	.060
R^2	40.0	28.3	26.3	40.8

* $p < .10$, ** $p < .05$, *** $p < .01$

news retention and comprehension. Interpretations were less diverse in terms of heterogeneity and macro-integration.

The second part of the analyses focused on the relation between complexity and viewer characteristics as presumed antecedents. From the various theoretical perspectives outlined above, it can be surmised that audience members with different knowledge and motivational features process the news at different levels of intensity. Motives to be informed, issue-involvement, and attentive viewing have been mentioned as prime affective predictors of active processing, whereas prior knowledge is the main cognitive predictor. Therefore, we expected to find correlations between these features and the aspects of differentiation and integration, along with a number of other factors.

For illustration purposes, Table 6.2 shows the multivariate analyses for the news item on Agricultural reforms. Univariate and multivariate analyses showed that differences between interpretations were related to differences in frequency of watching TV news, prior knowledge, and affective aspects issue-involvement, watching attentively, and watching the news to gain information. In addition, men produced significantly more specific and micro-integrated interpretations than women. However, complexity was also dependent on the topic discussed in the news; some topics initiated more complex interpretations than others. These findings corroborate with many theories and studies on how people process information. As such they also testify to the validity of the complexity measurement.

6.5 Discussion: The use of complexity in future research

This chapter has presented a way of conceptualising and measuring what viewers do with television news. It is based on current theories of how people deal with information from the media. Findings using this concept and method indicate why television news often does not seem to have as straightforward 'effects' as were expected. These findings demonstrate that it is possible to chart aspects of 'during-exposure' activity of tele-

vision news viewers in some detail. Qualitative and quantitative analyses of the elements and relations used in interpretations reveal how and to what extent viewers use their knowledge to interpret the news. Although there are other aspects of audience activity—most notably processes of attention—this chapter has attempted to demonstrate that looking at audience activity in terms of the level of their interpretations (i.e., complexity) may be a fruitful way to pursue clarifications of learning effects. Especially while findings indicate that the initial reception of a complex stimulus such as television news is not limited to lower-order automated physiological processes of attention, but also involves higher-order processes of sense making (cf. Shapiro & Lang, 1991).

In this final section, I briefly outline a number of potential research fields that such an approach may generate. For this, we return to Renckstorf's (1977) model of the mass communication process introduced in the beginning of this chapter. He argued that both the 'objective' and the 'subjective' messages as constructed by the viewer and their consequences should be studied. By this line of thought, the 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' messages and audience's mental and social behaviour, as well as on the relation between audience characteristics and the 'objective' and 'subjective' messages and subsequent behaviour (cf. Renckstorf, 1977, p. 47-48). Research on these areas may provide new insights into the whole process of news communication, from content to effects.

6.5.1 The 'subjective message': Complexity and further effects

One obvious potential line of research is the relation between interpretive complexity and further consequences of news use. The assumption is that viewers who construct more complex interpretations of the news are more able to gain knowledge and achieve understanding of a public issue because their 'reconstruction' contains more detailed, wide-ranging and interconnected information. Furthermore, they presumably develop more sophisticated opinions, which allows for better weighing the pros and cons of issues. Thus, research in this area should focus on how complexity of the 'subjective message' affects knowledge acquisition and understanding. Further areas of research may include other consequences of interpretation complexity, such as complexity-simplicity and direction of opinions, or perceived salience of public issues. One line of research that has already attracted some attention in recent years is the relation between complexity of news processing and extremity of attitudes (Sotirovic, 2001). Although the above study measured complexity of interpretations during exposure, recent studies have applied similar concepts in survey settings, measuring the complexity of knowledge gained from the news (cf. Shah, Kwak, Schmierbach & Zubric, 2004; Sotirovic, 2001).

6.5.2 The audience: Audience features and the 'subjective message'

A second research focus using the concept of interpretive complexity may be the role played by the audience and its characteristics in the process of news effects. In terms of Renckstorf (1977), this research area addresses the relation between the audience and

the (subjective) message. Most notably, research on the role of individual knowledge and motivations in complexity of interpretation should enhance our understanding of how differences in complexity affect subsequent attitudes and actions.

As news interpretation is for a large part a socio-cultural process, as opposed to strictly individual, 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 interpretations of some topics but not of others.

6.5.3 The 'objective message': News content and form

This research area addresses the 'objective' message. This means that the content of a media message is analysed in order to assess patterns and trends in news reporting. One potential research object using the above approach may be the 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 (treating events as loose events, instead of belonging to a process, providing no causes and consequences of events, etc., cf. Cohen, Adoni & Bantz, 1990; Iyengar, 1991). The measurement strategy for interpretive complexity may be adapted to measure the complexity of media 'texts'. This 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 online news?, cf. Eveland, Marton & Seo, 2004), and study of trends in news complexity (e.g., has news on topic A become less complex over time?).

6.5.4 Effects of news form and content

A final line of research questions tackles traditional 'effects' questions on how news media form and content affect news users' factual knowledge and perceptions. In terms of complexity we can ask in what ways aspects of a news item affect complexity of interpretations. Of course, television news research on how news form and content affect recall, understanding, and affective responses is extensive. However, some specific research questions may be added to increase understanding of the role of interpretive actions in this process. For instance, what are the effects of differences in news complexity on recall and understanding? Analysing the relation between levels of differentiation and integration in news content and viewers' interpretative complexity may help to clarify for instance which levels of news complexity are most productive for generating complex responses, for information conveyance and understanding. One recent example of such a study is on how the complexity of Internet websites (in terms of the degree of hyper linking) affects the complexity of users' knowledge (Dalrymple & Scheufele, 2007).

Research in this area would be most useful when integrating studies of the 'objective' message with research on how the media user addresses it.

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