
Research Note: The Effects of Live Television Reporting on Recall and Appreciation of Political News

■ *Roland Snoeijer, Claes H. de Vreese and Holli A. Semetko*

ABSTRACT

■ This study investigates the effects of live and non-live reporting on recall and appreciation of political television news. A sample of 161 randomly selected adults participated in an experiment testing the effects of format difference (a live cross-talk between reporters vs a canned field report). Using an authentic experimental news bulletin produced in cooperation with the national Dutch public broadcaster, NOS, the findings did not support the hypothesis that the live cross-talk format enhances recall or appreciation. In fact, the results showed that the non-live field report format resulted in greater recall. These findings challenge the common newsroom assumption about the attractiveness of live reporting and have practical policy implications for both news practitioners and actors in the political arena. ■

Key Words journalism, live reporting, news appreciation/understanding, recall, television news

Introduction

Journalists and news directors tend to consider live reporting attractive and exciting for the audience. In highly competitive news markets in the

Roland Snoeijer is programme manager in the Holland Media Group (HMG). Claes H. de Vreese is a PhD candidate and Holli A. Semetko is Professor of Audience and Public Opinion Research and Chair of the Board of the Amsterdam School of Communications Research *ASCoR*, University of Amsterdam, Kloveniersburgwal 48, 1012 CX Amsterdam, The Netherlands. [email: devreese@pscw.uva.nl]

European Journal of Communication Copyright © 2002 SAGE Publications (London, Thousand Oaks, CA and New Delhi), Vol 17(1): 85–101. [0267–3231(200203)17:1;85–101;021608]

US, going live is considered a strategic success factor (Tuggle and Huffman, 1999). An assumption about live reporting is that political news in a live cross-talk between journalists is more informative for viewers than a filmed report. The rationale is that complicated and abstract political and economic stories are better comprehended and remembered by viewers if a reporter tells the story in the live cross-talk format.

Given the powerful combination of sound and visuals, television is often believed to be a strong medium in terms of getting information across to viewers. Though people often believe that they learn a lot from television news programmes and that their knowledge of current affairs is enhanced by watching news, several studies have shown that retention and comprehension of information in television news is limited. Viewers either misunderstand or simply forget a lot of the information presented in news programmes (Gunter, 1987; Katz et al., 1977; Neuman, 1976; Robinson and Levy, 1986).

Previous research has shown that recall significantly increases when news stories are visualized, compared to a talking head format with an anchor in a studio reading the news (e.g. Brosius, 1991; Edwardson et al., 1981; Findahl and Höijer, 1976; Graber, 1990, 2001; Gunter, 1987). Visuals in news reports serve as extra retrieval pegs in human memory and thus enhance recall of the news, a phenomenon that is known as the dual coding theory (Robinson and Levy, 1986; van der Molen and van der Voort, 2000). However, there seems to be consensus that the audio channel contains the most important factual information and is therefore often superior to visual material (Gunter, 1987; Woodall et al., 1983). Additionally, studies have suggested that news recall only improves if the visual and audio channels are redundant and reinforce each other (Drew and Grimes, 1987; Reese, 1984; Son et al., 1987). In fact a text–picture divergence may have a negative impact on learning from the news compared to an audio-only version of the news (Brosius et al., 1996). This line of research has important implications for the reporting of political news since ‘politics’ can be abstract and difficult to visualize. Consequently, political news is characterized by a high degree of standardization of visuals. These routine or standard visuals often lack sufficient correspondence with the news text and therefore do not contribute to the recall of information. Brosius et al. (1996) specifically studied the effect of routine or standard pictures in political news and found that a version of a news story without pictures, in an audio-only version, was recalled as well as a news story containing standard pictures.

Live reporting may help overcome the challenges of visualizing political news. A reporter at the scene of the news telling the story to viewers without 'irrelevant' pictures may be remembered better and be perceived as attention grabbing, credible or emotionally involving, since the story is reported from the authentic scene of the news in real time. While previous research shows mixed results concerning the effects of specific visuals and their relation to the news text, the effects of a live cross-talk vs a traditional field report have not yet been investigated. The first goal of this study is to contribute to the literature on learning from news in the context of live reporting and to test the prevailing assumption in the newsroom concerning the positive effects of live coverage on recall of news.

Appreciation of the news

The second goal of this study is to investigate the effects of live coverage on audience appreciation of news. While studies of the effects of different degrees of visualization on recall of news provide mixed evidence, so too does the literature on the appreciation of news. Based on previous research we conceptualize the evaluative judgements that viewers make of television news as having several dimensions.

First, an important evaluative dimension associated with television news is *credibility*. Televised news is believed to be highly credible and authentic because 'people trust what they see more than what they hear. Seeing is believing' (Graber, 1988: 172–3). Audiences have the impression that they experience the news with their own eyes and in the age of live satellite reporting viewers are even able to watch the news as it actually happens. Credibility refers to one-sidedness, accuracy, reality, bias and trustworthiness (Burriss, 1987; Graber, 1988). Credibility may apply to both the credibility of the information in a news story and to the form in which the news is presented. A second evaluative dimension is *importance* of the news. The degree of perceived importance is affected by several factors. An opening story, for example, is evaluated as very important, just as a story that is covered extensively, taking a lot of airtime. The concept of importance refers to the implications or impact that a story is believed to have for society as a whole. It deals with viewers' perception of the importance of a story defined by newsmakers. Personal importance or relevance can be categorized in a third dimension, *involvement*. The degree of involvement is related to personal likes and dislikes, interests, and with geographic proximity (Galtung and Ruge, 1965; Graber, 1988).

A fourth evaluative dimension is *attractiveness*. Information is found to be attractive if it is vivid, lively and attention grabbing (Brosius et al., 1996; Burris, 1987; Crigler et al., 1994; Edwardson et al., 1992). Highly emotional, arousing or extraordinary information has a different impact on different groups of people, some finding it very attractive, others disturbing. Just as it is the case with credibility, attractiveness can apply to both the content and the presentation form of the news. Fifth, television news is often appreciated for its *immediacy*. Live reporting is believed to increase the perception of immediacy of the news (Tuggle and Huffman, 1999). Perceived immediacy is related to the ability of a news programme to get to the scene of a story very quickly and the coverage of late-breaking stories (Ksobiech et al., 1980).

A sixth dimension of evaluation is *comprehensibility*. It refers to the question whether viewers consider that they have received the information in a comprehensible way. Structure and complexity of a story are determinants of comprehensibility. Burris (1987) defines complexity as the number of different kinds of audio and video elements in a story, rather than the complexity of the content. He found that 'the audience responds more favourably toward a simple, straightforward news report, without a lot of razzle-dazzle, special effects and electronic wizardry' (Burris, 1987: 532).

Hypotheses

Our study investigates the effects of live reporting vs standard filmed news reports on learning from and appreciation of news. We investigate live reporting in the form of a live cross-talk between two reporters about routine political news. The effect on learning from the news is addressed by measuring what viewers remember or recall from the news.¹ The recall of a news story in live cross-talk format is compared to the recall of the same news story presented in a field report. Field reports of political news tend to contain standard pictures that either lack a direct correspondence to the text or visualize places and principals of a story, rather than causes and consequences (Findahl and Höijer, 1976). This non-redundant visualization of places and principals of the news is hypothesized to have a negative effect on recall compared to the cross-talk without irrelevant pictures. Based on this argument the first hypothesis is formulated:

Hypothesis 1: A live cross-talk about routine political news is recalled better than a field report.

Previous research has suggested that pictures influence appreciation of the news by making news more realistic, interesting, immediate and comprehensible (e.g. Graber, 1990, 2001). But standard pictures that are often used in political news do not have a positive effect on overall evaluation (e.g. Brosius et al., 1996). Live reporting, providing a real-time look at the scene of the news, supposedly increases the perception that news is realistic, immediate and important. Therefore the second hypothesis can be formulated as follows:

Hypothesis 2: A live cross-talk about routine political news is evaluated more positively than a field report.

Method

We used a 2 x 2 factor, post-test only, between-subjects experimental design with random assignment to condition to test the two hypotheses. A routine political news story was developed with two presentation formats: (1) a live cross-talk and (2) a field report.² The experimental manipulation was a simulated story about a report from the European Commission stating that Poland was to enter the European Union in 2002; one year ahead of schedule and ahead of five other countries that were scheduled to enter the Union in 2003. The experiment took place in May 2000, well before this 'fake' news story became a real topic of discussion in the press.

This topic was chosen for several reasons. First, most news about the EU can be classified as routine political news. The news is international, but often told with a clear domestic political angle (de Vreese, 2001). Second, it was relatively easy to simulate that the European Commission had produced a document that calls for an accelerated entrance of Poland. The entrance of new countries to the EU is an ongoing political process. By basing the story on a fake Commission report it was ensured that participants watched a story that had never been broadcast before. Though the immediate occasion of the story was a fake document, other facts in the story were real. Third, this topic was chosen because political and European news is often presented in a live cross-talk format. This resemblance to daily newsroom practices enhances the ability to generalize from the results of the experiment. Finally, it is worth noting that news may be an especially important source of information for forming opinions about European issues (Semetko et al., 2000), not only because these issues are far away from one's daily experience, but also because opinions on these issues tend to be more easily swayed (Saris, 1997).

The study was conducted in cooperation with the News Department of the Dutch national public broadcaster, NOS, which produces the most widely watched daily main evening news programme. Various authors have stressed the crucial importance of using realistic material in experimental studies (Brosius et al., 1996; Crigler et al., 1994; Graber, 1990; Reese, 1984; Zillmann et al., 1994). *NOS Journaal* provided news material from their archives, facilitated the video editing of the experimental bulletin and appointed editors and a correspondent to assist in the production process. The cooperation with *NOS Journaal* created the unique opportunity to produce a 'simulated, but realistic news program' (Findahl and Höijer, 1985: 381). The cooperation also ensured that the participants saw a news bulletin that was made with the same professional and journalistic standards as the daily *NOS Journaal* bulletins.

The news story about Poland was made in four versions: two formats (live cross-talk vs a field report) x two angles/frames (a party politics frame vs an economic consequences frame).³ Following common news practice, the experimental story was composed as follows. The anchor read the introduction to the news story, accompanied by a still graphic in the upper right side of the screen. The core part that followed contained background information about the EU and the planned enlargement with six European countries. The anchor then returned on screen with a brief introduction to the second part of the package, which contained the experimental manipulation.

The field report version contained short interview quotes and utilized both illustrating pictures and some standard political pictures. The voiceover text of the field report was read by the *NOS Journaal* EU correspondent. The news text of the field report was rewritten into a script for the live cross-talk. The text was divided into three (short) questions for the anchor and three answers for the EU correspondent. The interview quotes from the field report version were also included in the script for the cross-talk version where the correspondent paraphrased the interviewees. By using this method it was ensured that the texts in the field report and the live cross-talk were identical and differed only in presentation form. In contrast to common practice in, for example, BBC and CNN news programmes, the *NOS Journaal* does not use captions such as 'live' or 'live from Brussels'. Only caption titles of the two locations in the split screen (Hilversum [NOS headquarters] and Brussels) were used, see Figure 1.

To ensure the most realistic conditions, participants were not just shown one or two news stories. The manipulated news story was embedded in a complete bulletin consisting of the manipulated story and



Figure 1 Split-screen *NOS Journal* for live cross-talk between studio headquarters and correspondent on location

eight other stories that were especially produced for the experiment. Two of the non-manipulated stories were simulated stories and the remaining six were revised and updated versions of stories that had been broadcast some six to 18 months prior to the experiment. The bulletin was recorded in the *NOS Journaal* studio and was hosted by the well-known anchorwoman who regularly presented the main evening flagship eight o'clock news. The experimental story was the second story of the bulletin and was a headline at the beginning of the programme.

Sample

A random sample of 161 participants, demographically representative of the adult viewing population in the Netherlands, was drawn from the database of the Dutch national Television Audience and Research Department. The sample consisted of 52 percent men and 48 percent women. The age of the participants ranged from 16 to 65 years (M age = 39.9, SD 12.5). Their education level varied from elementary school to university graduates. The participants were reimbursed for travel expenses and received a gift voucher valued at 35 Dutch guilders, approximately US\$15.

Procedure

Participants were invited to the headquarters of the Audience and Research Department. As they arrived, they were randomly assigned to one of the four experimental conditions. A pre-test questionnaire dealt with demographics, interest in news, media use, income, political preferences and an eight-item general political knowledge measure. After watching the news bulletin,⁴ three questionnaires were distributed to the participants. Questionnaire 1 contained an open thought-listing exercise and free recall questions about the story topics in the bulletin and about the information in the EU story. Questionnaire 2 contained multiple-choice recall questions about the manipulated story and questionnaire 3 contained 13 appreciation scales on which participants' perception of the EU news story was measured. Participants were asked to fill out each questionnaire, put the completed version in an envelope and proceed with the next. Upon completion of the three questionnaires, the experimental leaders debriefed them.

Measures

Recall Recall was measured with both an unaided, open-ended question and with multiple-choice questions⁵ (also used by, for example, Graber, 1990). The open-ended answers were treated as follows. The news text of the two stories was divided into several information units/main points.⁶ Participants received a score of one point for naming all the elements of the information units, half a point if they named half of the elements or no points if they did not mention any or misreported the elements in a particular information unit. This method has been used for scoring on free recall questions in earlier studies (Brosius et al., 1996; Heuvelman et al., 1995; Reese, 1984; Son et al., 1987). The scores for each respondent were divided by the maximum number of points so that the scores would range between 0 and 1.00.

A total of 22 multiple-choice questions were designed to measure recall of the first three items in the bulletin: 12 of these pertained to two other stories in the bulletin while 10 pertained specifically to the manipulated story – six concerned the core part of the expansion story, four questions dealt with the manipulated part of the story. Correct answers were coded as 1 and false answers as 0 and a total score was calculated by dividing the number of correct answers by the number of questions, so that the scores could range from 0 to 1.00.

Appreciation Appreciation of the story was determined by measuring the perceived importance, objectivity, attractiveness, understandability and immediacy. Respondents expressed their perceptions on seven-point appreciation scales, 13 in total. Six of these questions contained statements about the EU story and respondents had to indicate whether they agreed with it on a scale, ranging from 'I fully agree' to 'I fully disagree'.⁷ The other seven questions were open ended, using a scale with unipolar adjectives such as 'very one-sided' vs 'not at all one-sided' and 'very import news' vs 'very unimportant news'. These adjectives have been used for measuring appreciation in earlier studies (Brosius et al., 1996; Crigler et al., 1994; Heuvelman et al., 1995; Ksobiech et al., 1980). The scores of the respondents ranged from 0 to 7 for each scale.

Five dimensions of appreciation were investigated: importance, objectivity, attractiveness, understandability and immediacy. Importance of the issue was measured using a single item indicator, whereas all other dimensions of appreciation were investigated using multiple item indicators: Cronbach's alpha for the four remaining scales were: objectivity ('one-sided', 'opinion forming', 'biased') = .82; understandability ('clear', 'comprehensible') = .65; attractiveness ('attention grabbing', 'lively', 'slow paced') = .60; immediacy ('delivers news quickly', 'up to date with the news') = .69.⁸

Results

Effect of presentation form on recall

The results of the free recall in Table 1 suggest that participants who saw the field report better remembered the main points of the story than those who saw the live report. For the party politics story, the difference in recall between participants in the field report condition ($M = .27$) and participants in the live cross-talk condition was significant ($M = .17$). The recall of the main points of the economic story was also better in the field report condition ($M = .25$) than in the live cross-talk condition ($M = .19$), though this difference did not attain significance.

The results of the aided recall (multiple-choice questions) also showed that presentation format had a significant effect in the case of the party politics story. As Table 2 shows, participants who saw the field report of this story remembered the story significantly better ($M = .66$) than the participants who watched the correspondent in a live cross-talk ($M = .51$). For the economic effects story, the field report of the story was

Table 1 Mean score free recall of news story

		<i>Format</i>	
		<i>Field report</i>	<i>Live cross-talk</i>
Party politics story	<i>M</i>	.27 _a	.17 _b
	<i>SD</i>	(.09) (<i>N</i> = 40)	(.13) (<i>N</i> = 42)
Economic effects story	<i>M</i>	.25 _a	.19 _a
	<i>SD</i>	(.15) (<i>N</i> = 39)	(.18) (<i>N</i> = 40)

Note: Row values with different subscript differ significantly from each other at $p < .05$.

Table 2 Mean scores aided recall (multiple-choice)

		<i>Format</i>	
		<i>Field report</i>	<i>Live cross-talk</i>
Party politics story	<i>M</i>	.66 _a	.51 _b
	<i>SD</i>	(.26) (<i>N</i> = 40)	(.28) (<i>N</i> = 42)
Economic effects story	<i>M</i>	.71 _a	.66 _a
	<i>SD</i>	(.21) (<i>N</i> = 39)	(.27) (<i>N</i> = 40)

Note: Row values with different subscript differ significantly from each other at $p < .05$.

also remembered better ($M = .71$) than the live cross-talk ($M = .66$), but this difference was not significant.

In sum, presentation form had a significant effect on remembering the news for one of the two versions of the story. In the party politics story, this effect was observed in both the free recall of main points and through the aided recall (multiple-choice) measure. A similar tendency was observed for the recall of the economic effects story, although these differences between recall of the field report and the live cross-talk did not attain significance.⁹

Effect of presentation form on appreciation

The scores of each participant on the five appreciation scales suggested that only one dimension of appreciation was significantly influenced by format condition. All other dimensions of appreciation were not affected

by presentation format, either for the party politics or for the economic effects story. Because of this homogeneous pattern across conditions, we do not present these findings in a table, but only mention that for the party politics story, participants considered the news more immediate if they had seen the field report than if the news was presented to them in a live cross-talk. In the economic effects story, however, the live cross-talk version was perceived as more immediate than the field report version. Generally, the field reports were evaluated slightly more positively, but these differences in scores between the two format groups were not significant. Overall then, the audience appreciation of the story was not significantly influenced by whether the story was delivered in a live cross-talk or in a field report.

Discussion

The effects of live reporting on both recall and appreciation of routine political news were investigated in this study. Based on previous research and common assumptions made about the effects of live reporting in newsrooms across the world, it was hypothesized that a live format would improve both *appreciation* and *recall* of the news. The study found no support for the hypothesis that the live cross-talk format enhances recall or appreciation compared to the field report format. With respect to the first hypothesis on recall, the results suggested that the field report, that included standard pictures of government buildings and politicians speaking, resulted in significantly better recall than the live cross-talk format, in the case of the party politics story.

This study also found no support for the hypothesis that live news is better appreciated. Only one of the five dimensions of appreciation was influenced by the format of the report. Live cross-talk did not enhance perceived importance, objectivity, attractiveness or understandability. A significant difference was observed on perceptions of immediacy but this ran contrary to what was expected. The field report format was perceived as more immediate than the live cross-talk, in the case of the party politics story. We conclude therefore that there is no support for the hypothesis that the live cross-talk enhances learning and is more appreciated by audiences than canned filmed reports.

The findings of the present study challenge common newsroom assumptions about the value of live reporting for audiences and have direct implications for newsroom and editorial policy. Considering the social responsibility of the media (McQuail, 1992), based on our findings, journalists should take into account that live cross-talk may not be the

best way to inform viewers about political news. Editorial decisions on presentation form are a result of numerous factors and the degree of success in conveying information may not always be a decisive argument in daily news production. Journalists should, however, consider it a challenge to produce field reports that have a stronger informational impact than live reports. This applies in particular when the news deals with issues that are regarded as highly important for the functioning of a democratic society. The key story in this study about the enlargement of the EU is an example of such an issue.

Our results are in part at odds with the findings of previous studies on the effect of standard pictures in political news. Although Brosius et al. (1996) were not concerned with live formats, a comparison was made of the value of 'no pictures' vs 'convergent', 'divergent' and 'standard pictures' for improving recall. It was found that standard pictures did not enhance news recall. The manipulated stories in our study were not visualized with standard pictures only, but also had a 'regular' balance of sound-bites from politicians, with illustrating and standard pictures. Our findings run contrary to the suggestion by Brosius et al. (1996) that journalists should refrain from using visuals if no illustrative pictures are available. Our findings lead us to concur with an earlier recommendation by Graber (1990) that standard pictures in political reporting can be useful for enhancing recall by the virtue of their low information content and their regular appearance. It was further argued that the television age demands the considerations of both the verbal and visual elements of news presentation (Graber, 1990). An explanation for both Graber's findings and those of this study can be that viewers are accustomed to the 'language' of television news, including standard pictures. Although routine pictures do not convey much information, they possibly serve as a familiar backdrop for the retention of verbal information in news stories.

In our study, presentation format did not have the same impact in the economic effect story as in the party politics story. The economic effects story with a quite clear gist ('the accelerated entrance of Poland is going to cost extra money') was recalled equally well in the two format conditions. The party politics story, on the other hand, which emphasized the more abstract issue of political conflict in both the EU and in Dutch national politics on the accelerated entrance of Poland, was recalled better in the field report format. Thus, the story that had the highest level of abstraction was remembered better in a field report, a format that has been known to present difficulties for journalists who want to visualize abstract issues.

Future research would benefit from investigating the effects of live reporting on other news categories than routine political news. It seems plausible to assume that live cross-talk has a different impact on recall and appreciation when it deals with breaking news. Perhaps a breaking political story about an unexpected development in peace talks, or breaking news about a plane crash or earthquake would be better recalled and appreciated in the live cross-talk format than in a field report. Further investigation would offer a more complete understanding of the informative and evaluative virtues of live reporting. Our study offers initial insight into the effects of live reporting on the recall and appreciation of routine political news. Although journalists may be visually challenged when presenting political news stories, our study suggests that canned filmed reports with sound-bites from important news sources do have a large informational impact despite the use of routine (uninteresting) pictures that are inherent to political news.

Notes

The authors wish to thank the Dutch Broadcasting Association (NOS) and the Audience Research Department (KLO) for their cooperation and the Dutch Science Foundation (NWO) for supporting the study. An earlier and more elaborate version of this article was presented to the Annual Meetings of the International Communication Association, ICA, Washington, DC, May 2001.

1. Audience comprehension research has investigated *how much* and *what* information from the news can be retrieved or recalled. When looking at retrieval of information from television news, a distinction can be made between what people *remember* from the news and what they *understand* of the news. Both Gunter (1987) and Woodall et al. (1983) relate the concepts of remembering and understanding to the distinction between the episodic and semantic part of long-term memory suggested by Tulving (1974; Tulving and Watkins, 1975). Remembering is related to the episodic memory that primarily concerns events. It 'stores episodes as unique historical traces that consist of target information or to-be-remembered information and the context in which the target information was presented or encountered' (Woodall et al., 1983: 6). In contrast to remembering, understanding deals with the interaction between the input information and the knowledge already stored in memory. The stored knowledge is utilized to go beyond the input information and to make a set of inferences about it. Understanding is believed to take place in the semantic part of long-term memory, that can be viewed as 'a complex network of "nodes" (words, concepts, properties and their interrelationships) that are linked together by types of relations' (Robinson and Levy, 1986: 146). While the concepts of remembering and understanding news may be distinct in theory, they overlap in practice. The

measurement is often problematic, and we therefore did not pursue this further in the study, but only dealt with remembering news.

2. The second factor in the experimental design concerned the framing of news. Two versions of a news story, each framed differently, were produced. For the purpose of this study, however, we concentrate only on the testing of format effects. In the analysis of the data we of course investigated any potential interaction effects between the framing and format conditions.
3. The party politics story dealt with the question of desirability of the accelerated entrance of Poland. Two members of parliament from the two largest governing political parties in the Netherlands (PvdA and VVD) were interviewed and voiced their opposing views regarding the fast entrance of Poland. Their views resembled the general standpoint of their parties, but they stated a text that was scripted for the experiment. The other story discussed the economic consequences of the fast entrance of Poland. The possible effects for Dutch taxpayers were emphasized. Nout Wellink, president of the Dutch Central Bank, was interviewed in this story, and he spoke from a scripted text as well. The scripted text for both the politicians and the president of the Central Bank served as a guideline for their statements. They spoke the text in a natural way; the text was not read from a piece of paper. The complete outline in English of the four manipulated stories can be obtained from the authors.
4. Participants were informed that the version of the eight o'clock news was a preliminary version recorded at 5 p.m. that day and would be broadcast the same evening, updated with the latest news.
5. The open-ended question read: 'We are interested in what you can remember from the story about the expansion of the European Union. Please write below how you would tell this story to a friend that has not seen the story. For instance, you can think of persons and countries that were mentioned, what exactly happened, why it happened and what the consequences are. Please write everything down that you can remember.'
6. Note that four information units of the core part of the story were left out since these were identical in all the experimental conditions.
7. An example of such a statement is '*NOS Journaal* has succeeded in delivering the news about the EU report on expansion very quickly to its viewers.'
8. To distinguish the different dimensions of appreciation, a factor analysis explaining 69 percent of the total variance resulted in three factors with one construct consisting of one item. One factor consisted of five items: 'attention grabbing', 'lively', 'slow paced', 'delivers news quickly' and 'is up to date with news'. Theoretically speaking these five items do not measure one single construct, but two separate constructs: 'attractiveness' and 'immediacy'. Based on a theoretical argument it was decided to treat these constructs as two distinct dimensions of appreciation under the condition that the scales were homogeneous.

9. While the experimental design meets all requirements for a valid experiment – the stimulus material was carefully produced, only one independent measure was manipulated, and participants were randomly assigned to conditions (Reeves and Geiger, 1994) – two extra tests were performed to check the success of the randomization process. We compared the recall scores of the participants on the core part of the manipulated news story, which was held constant across all conditions. We also compared the recall scores of two other stories in the experimental bulletin that were identical in all conditions. If randomization was successful in eliminating the influence of other variables, we would expect no significant differences in the recall score between the different conditions. The analyses of these recall measures confirmed this by showing no significant differences between the groups. We additionally performed a regression analysis to check for the impact of individual characteristics on the dependent measures. Both education level and prior knowledge proved to be good predictors of news recall. Other viewer characteristics such as gender, age, reported use of various media and interest in different kinds of news did not show any consistent relationships with the recall or appreciation variables. The effect of *format* on recall of the party politics story was significant when also controlling for political knowledge and education.

References

- Brosius, Hans-Bernd (1991) 'Format Effects on Comprehension of Television News', *Journalism Quarterly* 68: 396–401.
- Brosius, Hans-Bernd, Wolfgang Donsbach and Matthias Birk (1996) 'How do Text–Picture Relations Affect the Informational Effectiveness of Television Newscasts?', *Journal of Broadcasting and Electronic Media* 40: 180–95.
- Burris, Larry L. (1987) 'How Anchors, Reporters and Newsmakers Affect Recall and Evaluation of Stories', *Journalism Quarterly* 64: 514–19.
- Crigler, Ann, Marion Just and Russell W. Neuman (1994) 'Interpreting Visual Versus Audio Messages in Television News', *Journal of Communication* 44: 132–49.
- De Vreese, Claes H. (2001) '“Europe” in the News: A Cross-National Comparative Study of the News Coverage of Key EU Events', *European Union Politics* 2(3): 283–307.
- Drew, Dan G. and Thomas Grimes (1987) 'Audio-Visual Redundancy and TV News Recall', *Communication Research* 14: 452–61.
- Edwardson, Mickie, Donald Grooms and Susanne Proudlove (1981) 'Television News Information Gain from Interesting Video vs. Talking Heads', *Journal of Broadcasting* 25: 15–24.
- Edwardson, Mickie, Kurt Kent, Erika Engstrom and Richard Hofmann (1992) 'Audio Recall Immediately Following Video Change in Television News', *Journal of Broadcasting and Electronic Media* 36: 395–410.

- Findahl, Olle and Birgitta Höijer (1976) *Fragments of Reality: An Experiment with News and TV Visuals*. Stockholm: Swedish Broadcasting Corporation, Audience and Program Research Department.
- Findahl, Olle and Birgitta Höijer (1985) 'Some Characteristics of News Memory and Comprehension', *Journal of Broadcasting and Electronic Media* 29: 379–96.
- Galtung, Johan and Marie H. Ruge (1965) 'The Structure of Foreign News: The Presentation of the Congo, Cuban and Cyprus Crises in Four Foreign Newspapers', *Journal of Peace Research* 2: 64–91.
- Graber, Doris A. (1988) *Processing the News. How People Tame the Information Tide* (2nd edn). New York: Longman.
- Graber, Doris A. (1990) 'Seeing is Remembering: How Visuals Contribute to Learning from Television News', *Journal of Communication* 40: 134–55.
- Graber, Doris A. (2001) *Processing Politics: Learning from Television in the Internet Age*. Studies in Communication, Media and Public Opinion. Chicago: University of Chicago Press.
- Gunter, Barrie (1987) *Poor Reception: Misunderstanding and Forgetting Broadcast News*. Hillsdale, NJ: Lawrence Erlbaum.
- Heuvelman, Aad, Allerd Peeters and Chris Krüs (1995) *Presentation Format Features of The Journaal: Story Structure and Role of Reporters. An Experiment*, R 95–082. Hilversum: NOS Audience Research Department.
- Katz, Elihu, Hanna Adoni and Prina Parness (1977) 'Remembering the News: What the Picture Adds to Recall', *Journalism Quarterly* 54: 231–9.
- Ksobiech, Kenneth, James Tiedge and Aaron Mark Bor (1980) 'Visualization Mode, Perceived Immediacy and Audience Evaluation of TV News', *Journalism Quarterly* 57: 55–60.
- McQuail, Denis (1992) *Media Performance*. London: Sage.
- Neuman, Russell W. (1976) 'Patterns of Recall among Television News Viewers', *Public Opinion Quarterly* 40: 115–23.
- Reese, Stephen D. (1984) 'Visual-Verbal Redundancy Effects on Television News Learning', *Journal of Broadcasting* 28: 79–87.
- Reeves, Byron and Seth Geiger (1994) 'Designing Experiments that Assess Psychological Responses to Media Messages', pp. 165–80 in Annie Lang (ed.) *Measuring Psychological Responses to Media*. Hillsdale, NJ: Lawrence Erlbaum.
- Robinson, John P. and Mark R. Levy (1986) *The Main Source. Learning from Television News*. Beverly Hills, CA: Sage.
- Saris, Willem E. (1997) 'The Public Opinion about the EU Can Easily Be Swayed in Different Directions', *Acta Politica: International Journal of Political Science* 32: 406–35.
- Semerko, Holli A., Claes H. de Vreese and Jochen Peter (2000) 'Europeanised Politics – Europeanised Media? European Integration and Political Communication', *West European Politics* 23(4): 121–41.

- Son, Jinok, Stephen D. Reese and William R. Davie (1987) 'Effects of Visual-Verbal Redundancy and Recaps on Television News Learning', *Journal of Broadcasting and Electronic Media* 31: 207–16.
- Tuggle, Chris A. and Susanne Huffman (1999) 'Live News Reporting: Professional Judgement or Technological Pressure? A National Survey of Television News Directors and Senior Reporters', *Journal of Broadcasting and Electronic Media* 43: 492–505.
- Tulving, Endel (1974) 'Recall and Recognition on Semantically Encoded Words', *Journal of Experimental Psychology* 102: 778–87.
- Tulving, Endel and Mark J. Watkins (1975) 'Structure of Memory Traces', *Psychological Review* 82: 261–75.
- Van der Molen, Juliette H. and Tom H.A. van der Voort (2000) 'The Impact of Television, Print and Audio on Children's Recall of the News', *Human Communication Research* 26: 3–26.
- Woodall, W. Gill, Dennis K. Davis and Halul Sahin (1983) 'From the Boob Tube to the Black Box: Television News Comprehension from an Information Processing Approach', *Journal of Broadcasting* 27: 1–23.
- Zillmann, Dolf, Rhonda Gibson, Virginia L. Ordman and Charles F. Aust (1994) 'Effect of Upbeat Stories in Broadcast News', *Journal of Broadcasting and Electronic Media* 38: 65–78.