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# An Effect of the Medium in News Stories: “The Pictures in Our Heads”

Stephen D. Cooper<sup>1</sup>

*This study used an experimental design to test for a channel effect in news stories. Four television news stories were recorded off-air, then the narrations were transcribed to form a print news story containing the same words; the broadcast video and the print story were the two treatment levels. Subjects received the stories in one of the treatment levels, and were asked to judge the blameworthiness or praiseworthiness of the actors named in the story. Logistic regressions could predict with substantial accuracy the medium in which subjects had received the story from these judgments, indicating a channel effect on their making of meaning. There is some evidence that viewers of television news are inclined to judge actors in the stories as members of categories or groups, while readers of print news tend to be more specific.*

Conventional wisdom holds that the visuals are what sets television news apart from other news media. The visuals in television news are thought to be powerful in two distinct but related ways: that they have a strong impact on the viewers' construction of meaning, and that news-workers are drawn to stories which offer powerful images.

Thinking of examples of visuals which have aroused public opinion is an easy task. It is likewise an easy task to think of stories that remain more obscure than they might deserve, and speculate this is because they lack cogent visuals. While it might be conventional wisdom that there are stories that get too much attention and stories that deserve more than they get, reasonable people will obviously disagree on the particular stories belonging in those two categories!

But not every image in television news is arresting; not every picture has some obvious force or power, or even a clear journalistic rationale. Still, the nature of the television medium compels a continual stream of moving images. Perhaps the mundane images have influence, too, on the construction of meaning. Perhaps there is a more subtle but pervasive influence of the medium itself on our sense of the meaning.

This paper's subtitle is borrowed from Walter Lippmann's (1922) classic, *Public Opinion*. At the time the book was written, the audience put together its own mental images from the printed words supplied by the press. Now television news is ubiquitous; the press gives us both words and pictures in a seamless and highly attractive package. This change, the addition of moving images to the words, has immensely complicated the nuances of meaning. Graber (1989, p. 144) hints at the complexities:

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Television news stories are incomplete messages about people and events. They carry manifest meanings that are based on the dictionary. But they also carry latent meanings derived from the setting in which the message was expressed, the symbols and connotations embedded in the message, and the experiences of message senders and receivers.

If it is true that the visuality of television news contains such encoded meaning, one might expect print news to evoke different meanings than video. This project looks for such a channel effect. What might be the difference in the audience members' sense of a news story, if they receive the information as printed text, or as sound and moving pictures?

### **Research Literature on Television News**

It is useful to identify a few major threads in the research on television news. A good deal of work has been done on viewers' learning from television news, and the impact of television news on public opinion. Another fruitful area has been study of the effects of particular features of the visuals, or the formatting of television news. The literature most relevant to this study, however, concerns the ways in which the television medium itself may in some way influence the meanings constructed by the viewer. In more direct language, are there effects of the communication channel on the recipients' decoding of the message? While more to the point of this inquiry, much of this work has also tended to be theoretical or speculative, rather than empirical. In any case, the issue has not been settled despite many years of scholarly attention.

#### *Learning, Recall, and Public Opinion*

One of the roots of research on effects of the communication channel is the first Kennedy-Nixon presidential debate in 1960. Contemporaneous newspaper reports of a telephone survey following the debate claimed that television viewers tended to consider Kennedy the winner of the debate while radio listeners thought Nixon won or at least tied the debate. This debate has since been taken as a demonstration of a channel effect. The scholarly argument has lasted far longer than either of the debaters. Some now consider this finding to be disciplinary mythology (e.g., Schudson, 1996, pp. 116-117; Vancil & Pendell, 1987), while others still see merit in this event as a case study (e.g., Kraus, 1996). Perhaps at this point the Kennedy-Nixon debate is best seen as a tantalizing, if not definitive, indicator that there are still important insights to be gained pertaining to the relationship of mediated communication and human information behaviors.

Much of the research on television news has concerned the viewers' learning or recall of information. Although a number of studies maintain that viewers learn less from television (see Robinson & Davis, 1990), Neuman, Just and Crigler (1992) found, in a study which compared audio (narration track), print (transcribed narration), and video (sound and pictures), that television could be as effective as print media in producing knowledge gain. The authors argued that apparent differences in effect between print and broadcast are largely due to the differing journalistic conventions (i.e., format) associated with the media (p. 83).

Brosius (1989) found "presentation features," including relationship of visuals to story content, to be significant in the viewers' knowledge gain from television news. A later

experiment found that emotionality did not increase overall recall, but did draw attention to particular aspects of the story (Brosius, 1993, p. 119). The relationship does not seem to be straightforward, however; Newhagen and Reeves (1992) found that compelling negative images interfered with recall of the material which preceded them, but enhanced recall of material following them. A study of Persian Gulf War footage with superimposed censorship disclaimers (Newhagen, 1994) found that the negative visuals could distract from “narrative information that might qualify or modify the meaning of the images” (p. 245).

The idea that news media set an agenda for public discourse has received a great deal of attention (McCombs & Gilbert, 1986). Iyengar and Kinder (1987) found that the choice of stories and the amount of coverage influence viewers' perceptions of issues and their salience, even while effects of persuasion (in the “magic bullet” sense) were minimal. Of interest here is the finding that, perhaps contrary to expectation, the agenda-setting effect was not enhanced by emotionality in the content (p. 46).

### *Visuals, Narratives, and Interpretation*

Another interesting area is that of visuals as narrative devices. Kaplan (1992) used analysis of print advertisements to derive three forms of visual metaphor: juxtaposition (A is similar to B), identity (A is B), and second-order (A acquires a desirable characteristic of B). A metaphor exists when two ideas are combined in such a way that one is used to conceptualize the other. Relevant to this study is the implication that the visuals are not merely an add-on to the words of a story, but may substantially influence the meaning.

Kraft, Cantor, and Gottdiener (1991) ran an experiment using still images as test visuals, and asking the test subjects to frame narratives given different shot sequences and camera perspectives. They found establishing shots (\*I) and directional continuity to be critical to the viewers' ability to construct a coherent narrative sequence. Earlier, Kraft (1987) had found, in experiments using sequences of still images, that camera angle could strongly influence the meaning of the images (p. 305). Messaris (1992, 1994) has produced a great deal of work on how camera angle, focal length, and background objects might influence viewers' perceptions of video messages. The image properties which have the potential to influence fall into two categories: composition (the arrangement of objects within the scene), and juxtaposition (the sequencing of shots). Both can suggest relationships among people or things which may not be stated explicitly in the words of the message.

Cinematography and advertising have long been concerned with deliberately stimulating emotional responses to images. A study of television commercials found that the spots with a high degree of persuasiveness also had a high degree of “connectedness” in the sequencing of images (Young & Robinson, 1992). Zettl (1973) analyzed time, motion, and lighting as tools for purposely creating visual images with the desired dramatic impact. It would seem unlikely that visual devices so effective in shaping the meaning of film drama would lack impact in news (Adams, 1978, p. 161 ff.) A survey of camera operators in German television found them to have quite specific ideas how they would compose a shot of a politician to present the subject in a positive light (Kepplinger, 1982).

Graber (1990) split the content of news stories into verbal themes and visual themes. In a laboratory setting, subjects' recall of the visual themes was higher than of the verbal. Emphasis on facial close-ups tended to focus attention on the individual actors in a story. The subjects felt

quite positive about news images: the visuals helped them to assess people and events, and clarify their judgments of situations. Another study of television news found the degree of “personalization” of a television story to affect both recognition and recall of the story (Price & Czilli, 1996), reinforcing the notion that stylistic features can play an important role. Rucinski (1992, pp. 93-94) argues that news stories may center on individual actors, such as political leaders or other celebrities, and de-emphasize structural or systemic factors. There is evidence that correspondence between pictures and words affects both recall and judgment of the information: when the pictures and text diverge, viewers tend to form negative judgments (Brosius, Donsbach, & Birk, 1996, p. 191).

Work on cultivation processes places the issue of media effects in a broader cultural context. Some argue that television has become our primary means of socialization into society (Gerbner, Gross, Morgan, & Signorielli, 1986). Of particular interest here are two ideas. The migration from print to television as our primary source of information has had a profound effect; these authors argue that television culture tends to saturate the entire population with a small set of common narratives. The effect on viewers is attributable to the message content, however, and not the medium itself.

### *The Medium and Meaning*

While there is no consensus on the particulars, many scholars have argued that there has been some essential long-term change in the public mind since television has become pervasive. Altheide and Snow (1991), for instance, see a postmodern culture shaped largely by the institutional and technological imperatives of television. The influence of television thus goes far beyond any simple model of persuasion, in that our social institutions have adopted the “logic and formats” of the broadcast media (p. 241). In such a culture, form becomes the preeminent dimension of the message.

Meyrowitz (1985, p. 96) holds that while print is adept at packaging discursive (i.e., abstract) information, television excels at presentational (i.e., expressive) information. The inherent difference between those two types of information accounts for the channel effect, since expressive information seems “more natural and real than words” (p. 105). Graber (1988, p. 167-168) notes that viewers infer meanings not just from the spoken words, but from the movement and appearance of people on the screen. In sum, Postman (1985, p. 7) observes that “television gives us a conversation in images, not words.”

A number of years ago Marshall McLuhan made the argument that television as a medium has profoundly altered our construction of meaning and social institutions (1964). There are hints in McLuhan that it is the visual nature of television which undermines the abstraction of print, precipitating the large-scale, long-term changes in culture: “The mosaic form of the TV image demands participation and involvement in depth of the whole being, as does the sense of touch. Literacy, in contrast, had ... conferred the power of detachment and noninvolvement” (1964, p. 334). McLuhan (1995) also writes: “Every aspect of Western mechanical culture was shaped by print technology, but the modern age is the age of the electric media .... The aloof and dissociated role of the literate man of the Western world is succumbing to the new, intense depth participation engendered by the electronic media (pp. 244 & 248-249).

Along this line Neuman, Just, and Crigler (1992) found that audience members' construction of meaning emerges from a complex brew of their personal frames and the media frames of the

stories. Even when news coverage seems dry and factual, the viewers' readings are often figurative and emotional, integrating news information and their personal experiences.

In short, print news can run with or without pictures while television news must of necessity generate a constant stream of images. This difference is inherent in the media themselves. Print news contains a great deal of information encoded as abstract symbols on paper. Television news contains a great deal of information encoded as seemingly natural expression. This difference, too, is inherent in the media. How might one's sense of a news story be conditioned by the medium in which it is received?

### **Research Hypotheses**

This project was a small pilot study of a large question. Unlike other research on television news, this study examined stories with bland images, rather than images likely to elicit strong emotions. Unlike other research, it did not measure the subjects' recall of facts, but rather their sense of the story.

If it is true that the medium has some fundamental, systematic influence on the meanings audience members construct, it should be possible to predict the medium from their judgments of the story content. One basic judgment is the blameworthiness, or praiseworthiness, of the people or institutions involved in the story.

H1 -- It will be possible to predict the medium in which the subjects received a news story (i.e., print or video) from their identification of actors who have done something wrong, and actors who have done something right.

One actor is common to almost all television news stories: the reporter. Because he or she appears on screen, it is plausible that the reporter of a television news story would be seen as a participant in the events, to a much greater extent than a print journalist would be.

H2 -- Identification of the reporter as an actor in the story is contingent on Receiving the story as video.

Some of the research literature suggests that television news can cause a heightened sense of the importance of the topic, or of the prevalence of the situation described in the story. It seems plausible that the medium might also affect the subject's expectations of the outcome.

H3 -- Subjects will differ in their estimation of the personal importance of the story. Subjects viewing the video will think the subject more important to them personally, than those who read print.

H4 -- Subjects will differ in their estimation of how concerned the public should be about the issue. Subjects viewing the video will think the public should be more concerned, than those who read print.

H5 -- Subjects will differ in their estimation of their learning from the story. Subjects viewing the video will feel they have learned more, than those who read print.

H6 -- Subjects will differ in their belief that the outcome will be positive. Subjects viewing the video will be less likely to believe this, than those who read print.

H7 -- Subjects will differ in their estimation of the prevalence of the situation described in the story. Subjects viewing the video will feel the situation is more widespread, than those who read print.

## Method

This study used an experimental design; the treatment was the medium in which the subjects received a news story. Four television news stories were recorded off-air from *ABC World News* during March and May of 1994. The researcher deliberately avoided stories which contained visuals usually thought stimulating or memorable, such as carnage or violent behavior, or stories which seemed to be unusual examples of television news with regard to their use of such devices as graphics, stand-ups, voice-overs, natural sound, or cutaway shots. "Print" versions of these stories were generated by transcribing the spoken words of the news stories with as few changes as possible (\*2).

While there was some concern that this might privilege the video versions of these stories with regard to their narrative structure, generating video versions from print news stories seemed to be even more problematic in that this would require the researcher to choose a large number of visuals. In short, there is an unavoidable problem with attaining exact equivalence between print and video versions of news stories, and transforming a television story into print seemed to introduce the fewest potential confounds. In this way the words of the stories were held constant and the medium varied. The four stories concerned fraud by defense contractors, the UN embargo of Haiti, testing of chemical weapons on military personnel, and programs to encourage teenage sexual abstinence. The stories are described in greater detail in the Appendix.

Questionnaires were devised for each of the four stories. Two closed questions asked the subjects to identify actors who had done something wrong, and actors who had done something right. The subjects did this by checking off actors on a list of names which was specific to each story. Other closed questions asked the subjects to rate how important the situation was to them, how much they learned from the story, and how concerned they thought the American public should be about the situation. These items were identical for all four stories. There were additional closed questions adapted to the specifics of each story, which asked the subjects to rate their sense of the prevalence of the situation, the harm done to the public, and the possible outcome. As a way of triangulating the quantitative measures, open-ended questions asked the subjects to describe aspects of the story that aroused their feelings, or that they might recall in particular. For each story, the closed questions were identical for the two treatment levels. As the subject matter of the stories varied, the items could not be identical from story to story, but were written to be parallel in their focus.

The data collection was conducted in regular class meetings of humanities courses (\*3) at a community college in a suburban county of New Jersey. The subjects were told in advance that the researcher would visit their class, and that their participation was voluntary; no incentive, such as money or course credit, was offered. Within a particular class all subjects received the same packet, which consisted of one of the print stories and its questionnaire, and the questionnaire related to a different video story (\*4). The subjects individually read the print

story and completed its questionnaire, then watched a playback of the video together, and finally completed its questionnaire individually. They did not discuss the stories or consult with each other on their answers.

171 full- and part-time students (and a few of their instructors who wished to take part) participated in this study during May and June of 1994. 67% (n= 115) of the subjects were female; 61% (n= 104) were 22 years or younger. As might be expected given the research site, 93% (n = 157) had some college education but not a college degree; at this institution it is not unusual to find students who already hold a bachelor's degree but are retraining in a different area or pursuing a personal interest. Television was the news medium of choice for most ( 62%, n= 106), followed by radio (13%, n=22) and newspapers (12%, n=21).

## Results

Logistic regression was used to test H1, that it would be possible to predict the treatment (print, or video) from the subjects' answers to the items asking them to identify which actors had done something right, and which had done something wrong. As the four news stories contained different actors, a regression was run on each story separately with treatment level as the outcome, and all actors mentioned in the story, plus choices for “nobody” and “the reporter,” as the predictors. In addition to the full models, reduced models were generated by using a likelihood-ratio test to remove the least significant variable, one in each iteration, until the significance of the model could not be improved any further. In three of the four stories, the full models were significant; in the remaining story, removing only a couple of the items produced a significant model.

**Table 1**  
**Results of Logistic Regressions, Predicting the Medium**

	predicted by null model	predicted by regression	nd	f	x2
Story #1 Defense Contractors (all predictors)	55.32%	76.60%	94	20	42.50**
Story #2 Haiti Embargo (some predictors Removed)	51.22%	70.73%	82	16	26.75*
Story #3 Chemical Weapons (all predictors)	52.56%	75.64%	78	23	38.62%*
Story #4 Teenage Abstinence (all predictors)	57.95%	80.68%	88	21	52.12***

\*p < .05; \*\* p < .01; \*\*\* p , .001



A chi-square test supported H2, that the subjects' identification of the reporter as an actor in a story was contingent on watching the video, but with an interesting twist. Across all four stories, identifying the reporter as having done something right was contingent on the treatment, ( $\chi^2(1, n = 342) = 4.78, p < .05$ ). The degree of association was modest, ( $\phi = .12, p < .05$ ). Identifying the reporter as having done something wrong, however, was not significant.

An independent samples t-test supported H3, that subject viewing the video would think the issue more important to them personally,  $t(339)=1.91, p < .05$ . On a scale of 1 (very important) to 4 (not important at all), the mean for subjects watching the video ( $M = 2.03, n = 172, SD = .81$ ) was significantly different from those subjects reading the print ( $M = 2.20, n = 169, SD = .85$ ), in the predicted direction. T-tests did not, however, find significant differences between treatments regarding the appropriate level of public concern (H4), or the amount of learning (H5).

The questionnaires for the stories on the Haiti embargo and military testing of chemical weapons contained items relating to the subjects' belief that the outcome would be positive. The responses on these items did not find significant difference between treatments, and hence did not support H6. There was a similar item on the questionnaire for the story about defense contractors; here the question asked if the subject thought the attempt at reform would be successful. On this item there was a significant difference in the predicted direction between subjects watching the video ( $M = 3.85, n = 40, SD = .83$ ), and subjects reading the text ( $M = 3.50, n = 52, SD = .92$ ),  $t(90) = 1.89, p < .05$ . In the story about defense contractors, subjects who watched the video expected reform to be less successful than those who read the print text.

Items on the questionnaires for three of the stories concerned the prevalence of the situation described in the stories. T-tests of these items by treatment did not show significant support for H7, that subjects who watched the video would think the situation more prevalent than subjects who read the text.

## Discussion

None of the four stories concern dramatic action or events commonly thought to have special attention-grabbing qualities or to generate emotionally-stimulating visuals, such as riots, fires, explosions, disasters, or personal tragedy. The words of both the print and the video form of each story are virtually identical. Still, it is possible to predict with a good degree of accuracy which treatment group a subject belonged to, from that subject's responses to the story. The implication is that print news may be understood or responded to differently than television news, not just because of differences in the journalistic conventions associated with those media, but because something inherent in those media influences the viewer's sense of meaning (\*5).

The logistic regressions using full models (i.e., with all the actors, right or wrong, as predictors) support this idea, at least regarding assignment of praise and blame. Inspection of the variables which remained in the smaller models suggest that print may incline the reader to more precise judgments, while video may dispose the viewer toward generalities (\*6).

In the case of the defense contractors' story, the smallest model contained three significant predictors of the treatment: nobody (did something right), the reporter (did something right), and defense contractors (did something wrong). Examination of the raw frequencies of the subjects' responses to these items shows that these were the items on which there were some of the largest differences between the subjects who read the text, and subjects who viewed the video. The content of the story specifically identified two contractors who had broken the law, and a senator and government agency which were investigating the situation. The generic items, defense

contractors and nobody, could be used to predict the two treatment levels, while the specific names of the contractors, senator, and watchdog agency could not. The response to an open-ended question, by a subject who watched the video, illustrates the tendency to generalize the blame:

The sunny scene with the sailboat, the pools by the beach in Montego Bay, and the baseball game are all pleasurable activities most people would like to participate in....[T]he DOD is still being ripped off by the military industrial complex at the taxpayer[']s expense.

There are similar hints of this tendency in other stories, as well. In the teenage abstinence story, one of the significant predictors of treatment in the smallest model is the name of one particular teenager who describes her experience in the program. Subjects who read the print text identified her as doing something positive far more often than those who watched the video. In the same model, a significant predictor is nobody (has done something negative); this generic label appears more often in the responses of subjects who watched the video. In the story about testing of chemicals on military personnel, the smallest model included two significant predictors, the generic senators (have done right) and veterans (have done right), even though the copy included specific names of both senators and injured veterans, as in the other stories.

Admittedly, this writer is being selective in picking out variables in the regressions which illustrate the generic/specific theme; other items surviving in the smallest models are not as readily interpreted. Further, one might expect a significant difference between treatment groups on the prevalence of the situation described in the story, on the grounds that if subjects were inclined to judge actors as generalities they might also be inclined to generalize the situation. As noted above, t-tests did not support this hypothesis.

The regression worked most poorly in the story of the Haiti embargo. Unlike the other three stories, the full model was not significant. Unlike the other three stories, the backward elimination of variables ultimately removed all but two variables: nobody (has done right) and smugglers (have done wrong). Perhaps the explanation for this can be found in the specific content. Blame or praiseworthiness is much less clear cut in this story, and the situation is described for the most part in terms of abstractions, rather than specific actors: class dominance and military rule in Haiti, the role of the Dominican Republic in the smuggling of gasoline, the failure of the US embargo to oust the military junta and the hardships it caused the Haitian poor, the difficulty the U.S. faces in managing its policy.

Almost a third of the subjects watching the video saw nobody as having done something right (\*7). The visuals of the piece are predominantly shots of poor Haitians, the Haitian military, and extensive footage of gasoline smugglers. While distinguishing Haitian military from Haitian poor is a matter of noting who is wearing a uniform and carrying a rifle, the gasoline smugglers were as badly dressed as the poor! When the narration reads “the military regime in Haiti [is] getting even richer from the sales” of bootlegged gasoline, and “the Dominican Republic has now requested UN help to stop the smuggling,” the images depict what seem to be poor people with the jugs of gasoline. A subject who watched the video commented, “wheelbarrows of gasoline show that people can get whatever they want even if there is an embargo on it” (\*8). The comment of another subject illustrates the emotionality of the situation and the difficulty the subjects had carving this issue into right and wrong sides:

I feel as though I want to help them, those that need it in Haiti, but if they are smuggling things in then we shouldn't help. It's one thing if they work with us but to take advantage is wrong.

The story on abstinence programs also shows how a particularity of the story content might bedevil an explanation of differences between the treatment groups. On the open-ended question, "Did anything arouse your feelings?," a number of the respondents mentioned concerns about the connection of the abstinence programs to religion. One subject who read the print text described her feeling of:

wariness -- how church [is] involved in this curriculum. There was a short statement that it is not, but I wanted more details.

Another was quite direct about her irritation over the story's references to religion.

I thought it was annoying to see the statement about the girl who 'got her strength from the Lord.' That may be true but why focus on religion when abstinence can be a choice of an atheist?

It seems plausible, given the salience this aspect of the story had for some subjects, that there can be confounds in the story content, apart from the visuals.

### *Findings*

This author would not claim to have resolved the long-running controversy over channel effects with this simple pilot study. It does seem, however, that this project adds evidence that there is some important link between human information behavior and the communication infrastructure through which that information is delivered. That regression models can, with a good degree of accuracy, predict the medium in which a story was delivered from the subjects' responses to the story lends credence to the idea that meaning is in some important way conditioned by the medium.

Beyond this high-level proposition, the project yielded hints of more specific medium effects which warrant further study, not just in broadcast television journalism but with regard to the newer forms of computer-mediated communication. There are some indications that the viewer of motion video images may:

- tend to overlook individual names, and identify actors by groups or institutions;
- tend to generalize from specific cases to categories, groups, or institutions;
- feel a heightened sense of personal connection to the topic; and
- see the reporter or narrator as a legitimate actor in the situation described.

Experimental research studies and natural observations would seem to offer complementary advantages and disadvantages for further exploration of these qualified findings. While an experimental design such as this must accept the limitation in equivalence between forms of the treatment, a field study must deal with an assortment of confounds with regard to story content, informants, and context.

The relationship between medium and meaning is evidently very complex and rich. The subject of channel effects remains every bit as intriguing at the dawn of the network age as it was at the dawn of the television age.

### Endnotes

(\*1) Shots which show the entire scene, usually called “wide” or “long” shots, as opposed to close-ups of details called “tight” shots.

(\*2) There were two necessary changes in generating the print versions of the stories. The first was to simply delete the television reporter’s self-identification in the standup (“This is John Cochrane reporting from the Capitol.”) The other was to attribute a quote to a speaker, when the speaker was identified in the television clip by a superimposed visual, but not spoken words. This was done by transcribing the spoken words, then adding an attribution (“... , said Madeleine Albright, U.S. Ambassador to the United Nations”).

(\*3) The courses were in a variety of disciplines: Communication, English, Political Science, Sociology, and Speech.

(\*4) This was done to maximize the amount of data gathered in the available time, not to make within-subjects comparisons. Between-subjects analyses are appropriate here because no subject generated responses to the same story in the two treatment levels, and because the combinations of stories were randomized.

(\*5) It is interesting, in passing, to note how different a transcription of the narration track of a television news story is from the “inverted pyramid” format typical in print news. All four of the stories used in this study are closer to feature style than straight news; none use the traditional who-what-where-why-when-how lead of print news.

(\*6) This recalls Brosius’ comment (1993, p. 199) that “receivers pay differential attention...to certain aspects of the news item during the reception process. Consequently, most of the minutiae in the news get lost or are transformed into broad and unspecific semantic categories.”

(\*7) This seems contrary to Graber's suggestion (1988, p. 168) that facial close-ups tend to emphasize the individual personalities in the stories. In this story, neither the ambassador to the UN nor the ambassador to Haiti seemed to make much of an impression on subjects who watched the video, even though both appeared in “talking head” close-ups.

(\*8) This recalls Graber's observation (1990, p. 149) that her respondents “believed that the visuals allowed them to form more complete and accurate impressions of people and events.”

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### **Appendix - Descriptions of the News Stories**

*Story #1: Fraud by Defence Contractors:* This story is an example of investigative reporting. The General Accounting Office has reviewed entertainment expenses which a sample of Defense Department contractors have submitted for reimbursement. Fiscal abuse has occurred, as these expenses are not legitimately reimbursable under the contract terms, and the reporter details some numbers concerning the dollar value of the abuse, identifies two particular contractors by name, and examines the government's response to the abuse. The story includes interview segments with an official from the General Accounting Office, an official from the Defense Logistics Agency, and then-US senator Jim Sasser. There are computer graphics illustrating the dollar value of the fraud, and covering footage (i.e., pictures of the subject, but with narration by the reporter) of vacation spots and recreational activities for which the contractors improperly sought expense reimbursement.

*Story #2: The UN Embargo of Haiti:* This is a hard news story on the start of the UN embargo of Haiti. The news event is a Security Council vote to embargo all trade but food and medicine. The reporter examines the lack of success the earlier unilateral US embargo had, particularly regarding the smuggling of gasoline from the Dominican Republic. The story includes interview footage with the US ambassador to the United Nations, and the U.S. ambassador to Haiti. There is also covering footage of the Haitian military leaders, poor people in Haiti, and gasoline smugglers in operation.

*Story #3: Testing of Chemical Weaponry on Military Personnel:* This is another example of investigative reporting. The Senate Veterans' Affairs Committee is holding hearings into complaints that military personnel have been injured by exposure to chemicals, but denied compensation. This piece details the cases of two individuals, a Navy veteran of World War II who was used as a test subject in a mustard gas experiment, and an Air Force veteran of Operation Desert Storm who suffers from "Persian Gulf Syndrome." An interesting visual device is the juxtaposition of still photos of the men as young and apparently healthy servicemen (i.e., prior to their exposure to chemicals) with the live action of their Senate testimony describing their subsequent medical problems. After a sound bite of Senator Jay Rockefeller accusing the Pentagon of using an unproved anti-chemical warfare pill in the Persian Gulf, the piece closes

with a reference to the pending court cases of Vietnam veterans claiming injury from Agent Orange exposure, illustrated by archival footage of a helicopter spraying a jungle.

*Story #4: Programs to encourage Teenage Sexual Abstinence:* This story differs from the other three in some respects: it is longer, it is a feature story rather than a news story, and it closes with an action shot in place of the customary head shot of the reporter. The piece profiles two programs promoting sexual abstinence to teenagers as a way of avoiding sexually transmitted diseases and unwanted pregnancy. The first sequence examines a Baptist church program in which teenagers vow to remain virgins until they marry: there are a number of sound bites from young people, expressing their approval of the program. A “standup” in which the reporter is on-camera for the only time during the piece bridges into documentary footage of an abstinence program run in an Atlanta public school. In this second sequence there are again a number of sound bites from young people, and action footage of role playing in the class. The tone throughout the piece is affirmative on the success of the abstinence programs. After a brief reference to critics of the programs, the piece closes with an action shot of high school students walking down a staircase and the reporter's voice-over saying “that it's becoming cool to be a virgin.”