

PATTERNS OF RECALL AMONG TELEVISION NEWS VIEWERS*

BY W. RUSSELL NEUMAN

A few years ago, Tichenor, Donohue, and Olien reviewed research findings concerning a growing knowledge gap between the better and less educated segments of the population. They formulated their central hypothesis as follows:

As the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments so that the gap in knowledge between these segments tends to increase rather than decrease.¹

Their work represents an interesting extension of the familiar "know-nothing" phenomenon—the existence of a bottom stratum of the public which is least informed on public affairs but which unfortunately is also least likely to be reached by news and information campaigns.² They suggest that the increased quantity and complexity of public issues could lead over time to increasing social tensions between the attentive and the "know-nothing" strata of the population.

But as Tichenor *et al.* point out, the general research literature, as well as their own work, is based primarily on learning from the print media. Whether the knowledge-gap phenomenon applies to learning from broadcast news remains an open question. Toward the end of their article they speculate that in the long run television may actually prove to be a "knowledge leveler." There are, indeed, a number of clues in the research literature which support such a hypothesis.

First of all, in sharp contrast to newspaper, magazine, and book reading, television news viewing is not correlated with education. A review of three recent television ratings studies revealed an average difference of only 4 percent between the proportion of network news

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¹ P. J. Tichenor, G. A. Donohue, C. N. Olien, "Mass Media Flow and Differential Growth in Knowledge," *Public Opinion Quarterly*, Vol. 34, 1970, pp. 159-70.

² Herbert H. Hyman, Paul B. Sheatsley, "Some Reasons Why Information Campaigns Fail," *Public Opinion Quarterly*, Vol. 11, 1947, pp. 412-23.

viewers in the college and noncollege segments of the population.³ This contrasts with differences of from 15 percent to 30 percent for the print news media.⁴

The less educated also express a general subjective preference for television over newspapers and magazines as a source of news.⁵ This preference may be in part simply a reflection of functional literacy problems—it may take individuals with only a grade-school education a great deal more time and effort than their college-educated counterparts to read and comprehend an average-length news story.

Another clue concerns contrasting motivational patterns for TV news viewing as opposed to newspaper reading. People think of television as primarily an entertainment medium,⁶ and it is not clear to what extent they perceive news and public affairs as a special and distinct category of television programming. Moreover, watching television is a rather passive act. One thinks of the evening television audience as tired after a hard day's work, staring blankly at their sets as news and entertainment come at them in a steady stream of words and images. It may be that the special attentiveness to political issues usually associated with higher levels of education simply does not come into play under such circumstances.

Finally, the print-media readers are free to follow their inclinations and read only those sections of the newspaper or magazine they find interesting. Thus, the less politically oriented individual who would perhaps skip most of the more abstract national and international news stories in a newspaper, cannot skip over them in the same sense when they are presented in a newscast. Perhaps the less interested segment of the television audience mentally "tunes out" when a complex and abstract news story is being presented. Nonetheless, there would certainly seem to be less opportunity for such selectivity in the case of television.

The research to be reported here attempts to isolate and identify the influence of level of education, motivation for watching TV news, and general news consumption habits on what and how much is learned from television news viewing.

The primary indicator of media impact in this study is aided and

³ Two of the ratings studies are described in Harold Israel and John P. Robinson, "Demographic Characteristics of Viewers of Television Violence and News Programs," in George A. Comstock and John P. Murray, eds., *Television in Day to Day Life: Patterns of Use*, Washington, D.C., U.S. Department of Health, Education and Welfare, 1972. The third is based on national data made available by the A. C. Nielson Company.

⁴ John P. Robinson, "Public Information about World Affairs," Ann Arbor, Survey Research Center, 1967, p. 30.

⁵ The Roper Organization, *What People Think of Television and Other Mass Media, 1959-1971*, New York, Television Information Office, 1973, pp. 4-5.

⁶ Robert C. Bower, *Television and the Public*, New York, Holt, Rinehart and Winston, 1973, p. 14.

unaided recall of specific news stories. It may well be that much of the impact of television news is visual and perhaps even subliminal in character—a phenomenon not easily tapped by the verbalized response of listing remembered stories. It may be difficult for individuals to identify whether their recognition of a story (especially in the aided recall measure) is indeed due to exposure to TV news rather than to some other news source.⁷ Nevertheless, it was felt that the spontaneous as well as stimulated recollection of specific news stories viewed within several hours of the interview would provide evidence for at least an initial test of the knowledge leveler hypothesis.

PROCEDURES

A sample of San Francisco Bay Area telephone listings was drawn, and households were called in the early evening over a two-week period in the spring of 1971. Only adults who had watched all or part of a network newscast that evening were interviewed. There were 232 complete interviews, representing a response rate of approximately 75 percent among news viewing households.⁸

Following a series of questions to establish rapport and obtain information on media habits and attitudes toward the news, the interviewer read the following question: "We are interested in what TV viewers can recall from watching the dinner-hour news. Often people can only remember a few stories. Can you recall any of the news stories on the network news this evening? Do any details come to mind?" After each story was mentioned the respondent was asked if any other stories could be recalled. These initial recall data were termed *unaided recall*. A respondent may be unable to recall any stories offhand or might mention several stories including a number of details from each one. Then the interviewer would read down a list of "headlines" from the particular network newscast watched skipping the stories already mentioned. The format was: "Do you recall the story about [the Secretary of State's speech on the Middle East situation]?" Whenever the respondent indicated that he remembered the story, he would be asked if any details came to mind. Thus there were two lower levels of recall: *aided recall with details* and *aided recall without details*.

⁷ This is not a crucial problem, however, because most of the evening network news is "fresh" in the sense that it concerns stories breaking that day. Those respondents exposed to evening newspapers showed no higher levels of news story recognition, and visual details of recalled stories confirmed that in most cases respondents were able to isolate recall from network television.

⁸ Of course, the overall response rate was much lower because of unanswered telephones (representing presumably nonwatching households) and the many households which responded that no adult had watched the news and accordingly no interview could be conducted.

HYPOTHESES

The principal hypotheses in this study concern the roles of education, interest in the news, and patterns of exposure to TV news in the process of learning about public affairs from television. Education is taken as the central causal variable. The primary hypothesis suggests simply that education will affect levels of recall. It was thought that this would be especially true for the unaided and aided-with-details levels of recall. The analysis then explores how level of interest and news viewing habits might reinforce or specify this initial relationship.

A second hypothesis reviews the education-attentiveness relationship further and suggests that certain types of news stories may be more easily recalled by the better educated. Some researchers have emphasized that the less sophisticated focus on the more concrete and immediate aspects of what the media present.⁹ Thus one would expect, for example, that the less educated would have less difficulty recalling stories on weather conditions, such as droughts or floods, as opposed to more abstract stories on the economy and foreign affairs.

FINDINGS

During the two-week interviewing period there was an average of 19.8 news stories per network broadcast. When simply asked if they could recall any stories from the newscast they had just watched (unaided recall) respondents reported recalling on the average only 1.2 stories. Half of the respondents could recall no story at all. When the interviewer ran down the list of headlines, respondents reported recalling, on the average, 4.4 stories with supporting details and an additional 4.3 stories without details. This adds up to 9.9 out of 19.8 stories for a total recall rate of 50 percent. The initial review of the raw recall data revealed that only six people reported recalling none of the stories after reviewing the list of headlines. No one reported remembering them all. Quite surprisingly, level of recall was found to be unrelated to the length of time between the interview and the actual broadcast, which for this study ranged between several minutes and three hours.

Table I summarizes the zero-order analyses of variance at each level of recall for education, motivation for turning on the news, level of current event discussion, and media use habits.

It turns out that the college-educated do have a higher overall rate of news recall but the difference of some five percentage points is not very impressive. That translates into only one more story recalled on the

⁹ S. M. Lipset, "Working-class Authoritarianism," Chapter 4 in *Political Man*, New York, Doubleday, 1960; Richard Hoggart, *The Uses of Literacy*, New York, Oxford University Press, 1957.

TABLE I
AVERAGE RECALL OF TELEVISION NEWS AS PERCENT OF TOTAL STORIES IN NEWSCAST

	Total Recall	Unaided Recall	Aided Recall with Details	Aided Recall without Details	(N)
Education					
Non-college	47.1%	*4.0%	20.8%	22.3%	(88)
College	52.4	*7.0	23.6	21.7	(142)
Motivation for watching news					
"Watch to relax"	*41.9	3.2	*15.7	23.0	(28)
Casual viewer	*51.0	5.8	*21.4	23.7	(118)
"Keep informed"	*56.8	7.4	*27.1	22.3	(40)
Do you talk about current news with friends?					
Seldom	50.2	6.0	23.0	21.1	(87)
Often	50.6	5.9	22.0	22.6	(143)
TV news use pattern					
Irregular	48.7	6.9	21.0	20.9	(69)
Regular	51.0	5.5	23.0	22.6	(163)
Overall mean	50.3%	5.9%	22.5%	22.0%	(232)

* Significant at .05 level.

average out of a possible 19. Put in correlational terms, less than 1 percent of the variance in recall was explained by education.

Differences in recall by motivational level were somewhat more substantial. The small group of individuals who freely admit they watch the evening news primarily to relax and "get away from it all" did have significantly lower rates of recall, especially compared with those who want to "keep informed." But the watch-to-relax and keep-informed groups combined comprise only one-third of the sample. The great majority of viewers fall into a large undifferentiated middle mass of those who "just happened to catch the news" that night or who even watch regularly but express no special interest in keeping informed. The combined effects of education and motivation explain only 2 percent of the variance in recall. The extent of discussion of news and general broadcast news consumption habits appear to be completely unrelated to recall.

Having found very little variation in recall among the hypothesized subgroups, the analysis turned to the remaining hypothesis, which suggests that even if overall recall is the same, different educational strata may be paying attention to different aspects of the news. A content analysis of the broadcasts over the two-week period generated the following rough breakdown: (1) four stories on or related to Vietnam (this included news of military activity, antiwar demonstrations, and comments by administration spokesmen and critics; (2) four stories on foreign affairs news other than Vietnam-related stories; (3) two stories on economic affairs, including news of strikes and stock market reports; (4)

one and a half stories on United States politics (which for these two weeks were dominated by speeches of presidential aspirants); (5) one story concerning ecology; and (6) human interest stories, commentaries, weather stories, and stories concerning racial problems each averaging less than one per newscast.

Table 2 lists the different story types in descending order of overall recall. The rates of recall for the sample as a whole hovered close to the 50 percent overall average. The two types of news with the highest recall were weather stories at 64 percent recall and human interest at 59 percent. Both categories reflected a much higher recall of details. At the bottom was the commentary category with especially low recall of details.

Table 3 reorganizes and combines types of news stories in order to test the hypothesis that the less interested and less educated will have especially low recall of the more complex and impersonal news stories which deal with abstract political and economic concepts. Again the notion of differential impact is not supported by the data. The differences in recall rates between the college and noncollege segments of the sample are consistently small at all levels of abstraction. The data on motivation and recall, in fact, seem to run in the opposite direction, with greater differences in recall occurring at the level of the least abstract stories.

DISCUSSION

These findings are only preliminary. It is a geographically limited study and, of course, telephone interviewing generates less than ideally representative samples. Also, the prominent news stories during these particu-

TABLE 2
RECALL OF VARIOUS TYPES OF NEWS STORIES

Story Content	Total Recall	Unaided Recall	Aided Recall with Details	Aided Recall without Details	Average Number of Stories per Newscast
Weather	63.7%	6.9%	38.4%	18.3%	0.5
Human interest	58.7	7.5	32.2	18.9	0.9
U.S. politics	53.9	6.7	24.2	23.0	1.7
Race relations	53.0	5.9	22.9	24.1	0.4
Foreign affairs	53.0	5.5	21.4	26.1	3.9
Vietnam	52.3	9.9	19.2	23.2	4.1
Economy	50.5	0.8	22.9	26.9	2.3
Ecology	45.2	6.9	20.4	17.9	1.0
Miscellaneous	44.4	4.2	23.8	16.4	4.5
Commentaries	34.1	8.2	5.9	20.0	0.4
Total	50.3%	5.9%	22.5%	22.0%	19.8

TABLE 3
AVERAGE RECALL OF TYPES OF NEWS STORIES, BY EDUCATION AND MOTIVATION FOR WATCHING NEWS^a

Level of Abstraction	Education		Motivation for Watching News			Total
	Non-college	College	Watch to Relax	Casual Viewer	Keep Informed	
Low (human interest and weather stories)	60%	61%	53% ^b	61%	73%	60%
Moderate (racial issues, Vietnam, and ecology stories)	48	51	40	50	68	50
High (political commentaries, economic issues, foreign affairs, and general U.S. politics)	47	51	43	50	51	50
Total	47%	52%	*42%	*51%	*57%	52%

^a Miscellaneous category omitted from this table.

^b This seemingly large difference in rates of recall, however, is not statistically significant due to especially small *N*'s for these cells.

* Significant at .05 level.

lar two weeks of interviewing may not be representative of the overall pattern of news for the year. There are a number of ways in which further research might help to resolve these issues. A more refined measurement of motivation for watching news and the level of abstraction of news stories would certainly be necessary. Throughout this study there has been an implicit comparison of learning from print as opposed to broadcast media. Ideally, research of this sort should have parallel measures of recall from exposure to both media.

The overall rate of recall reported in this study and the fact that half of the sample could not recall a specific news story unaided have been interpreted by other analysts as dramatic evidence of the low impact of television news.¹⁰ But such findings are prone to overinterpretation. There are a number of problems: First, there is no real benchmark from which to measure high or low impact. The idea of "low" and "impact" in this case comes from an intuitive and subjective sense of what recall ought to be. Second, the approach in this study focused on short-term learning. Major news stories are, of course, discussed again and again in different contexts in the various media, and this method simply does not tap the dimension of long-term learning about public affairs. Third, undue atten-

¹⁰ John P. Robinson, "Mass Communication and Information Diffusion" in F. G. Kline and P. J. Tichenor, eds., *Current Perspectives in Mass Communications Research*, Beverly Hills, Sage, 1972.

tion can be focused on unaided recall. An hour or more may have elapsed since the respondent watched the news and turned his attention to other things. Many respondents may have simply commented that at the moment nothing came to mind. Fourth, any single measure of recall such as this is extremely sensitive to the nuances of the methodology used. If there had been fewer news stories per newscast, or an especially significant newscast, or had the interviewers cajoled the respondents more, the recall rates might have been much higher.

But the information-gap model developed by Tichenor *et al.* draws attention not to the question of the rate of recall as generated by any particular methodology but to the matter of differential rates of recall for different educational levels. The pattern with the print media is clear: the better educated strata are more attentive to developing stories in the print media, and over time the gap widens between themselves and the less attentive in terms of knowledge and understanding. But what role will the broadcast media play?

Data bearing on the initial issue of exposure to the various media suggest that television can play a potentially substantial role as a knowledge leveler because many people not reached by newspapers and magazines are exposed to television news. It would seem that a study of recall of news items based on the normal evening audience, watching with the usual distractions, presents an ideal test of the knowledge-leveler hypothesis because one expects to find two different types of viewers in front of their sets—the news buffs, who have probably already read a paper that day but who generally make an effort to watch the evening newscast as well, and the less interested mass audience, perhaps waiting for a favorite variety show. If differences in attentiveness and recall exist, they should be manifest here.

The findings of this study, however, reveal very little in the way of differential impact and tend to support the knowledge-leveler model. Analyses of variance in the recall of news items for each of the hypothesized causal variables revealed only small differences in rates of recall. In comparing the college professor and his construction-worker counterpart, it may be not only that they are equally likely to turn on the news but that they remember the same amount of what they see. This finding is reconfirmed not only on the lead story of the day and on human interest stories of general appeal but on the rank and file news items ranging from foreign affairs to national politics and issues of ecology.

Some people take the sanguine view that the increasing public dependence on television news will lead in time to a better informed citizenry. But it may be that television news has very little to do in the long run with how much people know about public affairs. Indeed, one study revealed that only about 1 percent of the variance in political knowledge at

election time is directly attributable to exposure to television news.¹¹ Nevertheless, the relative contribution of television to overall political knowledge has increased in the past 20 years,¹² and with the advent of cable and otherwise expanded electronic mass communications, the special character of learning from the broadcast media will require increasingly intense scrutiny.

¹¹ W. R. Neuman, "Political Knowledge: A Comparison of the Impact of Print and Broadcast News Media," paper delivered at the Twenty-ninth Annual Conference of the American Association for Public Opinion Research, 1974.

¹² *Ibid.*