

**NEWS RETENTION AS A FUNCTION OF NEWSCAST  
FORMAT PRESENTATION**

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**KATHRYN MARY LAMOND**



NEWS RETENTION AS A FUNCTION OF NEWSCAST  
FORMAT PRESENTATION

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An Abstract  
Presented to the  
Graduate and Research Council of  
Austin Peay State University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

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by  
Kathryn Mary Lamond  
May 1987

## ABSTRACT

This study examines news retention effectiveness as a function of newscast format presentation. The formats used involved auditory only, a talking head, and a videotaped footage. Three groups of subjects were exposed, one to each format, and were then tested for their retention level of the news information presented by responding to a questionnaire. The newscast presentation which combined the visual and auditory dimensions was expected to facilitate the most effective degree of news retention. This prediction, however, was not supported. It was found that the level of retention for those who watched and heard the videotaped stories was not statistically different from the retention levels of the other two groups. However, it was observed that age has a significant effect on how effectively the news is retained.

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To the Graduate and Research Council:

I am submitting herewith a Thesis written by Kathryn Mary Lamond entitled "News Retention Effectiveness as a Function of Newscast Format Presentation." I have examined the final copy of this paper for form and content, and I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Mass Communication.

  
Major Professor

We have read this Thesis and  
recommend its acceptance:

  
Second Committee Member

  
Third Committee Member

Accepted for the Graduate and  
Research Council:

  
Dean of the Graduate School

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## CHAPTER 1

### Introduction

A result of the technological advancements of contemporary society is the emergence of television as one of the most ubiquitous mediums of news presentation (Smith & Davis, 1979-80). In support of this statement, Graber (1987) observed that television has become the most widely used source of news for average Americans. Mankiewicz and Swerdlow (1978) reiterated this idea with the estimation that "for forty-five percent of the American population, televised news is the only source of public affairs information."

It would appear then that, in American society, the televised newscast's inherent importance is a function of its being not only a primary information source but also a central news information resource. Therefore, the television newscast is largely responsible for keeping the people of the United States informed. The newscast is viewed, in some shape or form, by Americans of all ages (Frank & Greenberg, 1980); furthermore, if a nation is to remain progressive and economically and technologically competitive, its workforce in particular must be aware of local, national, and international affairs (Gantz, 1978).

University students represent the nation's potential workforce and authoritative leaders of the future and thus need to be constantly acquainted with the current issues

of society. In order to maintain an informed nation, one fundamental component of the information transmission process is an effective method of conveying the news.

A principal aim of the newsbroadcastings is to inform audiences of current issues and their underlying assumptions (Stauffer, Frost & Rybolt, 1981). However, for this aim to be effective, understanding of how news programs enhance knowledge and comprehension of the topics presented is crucial. Consequently, an efficient mode of disseminating news, which facilitates its retention by university students, is examined in this study.

#### Statement of the Problem and the Study's Purpose

It is the purpose of this study to examine experimentally three different modes of newscast format presentation; namely, auditory, talking head, and videotaped footage plus audio, and from this analysis, determine which is the more conducive to the news retention levels of university students.

#### Justification for the Study

Awareness of current issues by university students which affect the economic, political, social, and physical dimensions of a society and nation at large are of fundamental importance. Generally, university students of today are the foundations upon which tomorrow's work force is built. For it to remain a major power on the international market, it is essential that its successors be aware of current affairs of the society on a local, state, national, and international level.



In an attempt to develop some degree of awareness about public affairs, students, like other members of society, develop viewing habits with a certain news information medium. With television being recognized as the premier news information source for the majority of Americans, it is vital that the news information level gained and retained from newscasts, by university students in particular, be determined.

Thus, the need for the study is justified by the necessity to identify a newscast presentation format which most effectively facilitates news retention. Once realized, news programmers could possibly incorporate this knowledge into their newscast programming strategies. Also, such information could influence the presentation of college-oriented current affairs programs.

#### Definition of Terms

The following terms provide the framework upon which this study is detailed. So then, a knowledge of these terms will establish the necessary background for an understanding of this study.

Auditory--This term relates to the human sense of hearing used to comprehend sounds.

Core classes--Those classes devoted to general education which collectively form a plan intended to develop unified studies based upon the common needs of the learners and organized without restriction by subject matter (Good, 1973).

Cued recall--In relation to this study, cued recall

is referred to as a measure of subjects' ability to retain and recall events and information they are exposed to by requiring them, with the aid of a prompt line, to select the most correct answers about the news content presented (Hintzman, 1978).

Grade-point-average (GPA)--Traditionally, GPA is defined as the core obtained by dividing the total quality points earned by the total hours attempted (Austin Peay State University, 1986). For this study, the GPA given by the respondent shall be regarded as an approximate value and will act as an indicator of the academic status of each participant.

Local television stations--Those television stations which primarily serve the needs of the particular district in which the immediate study was a part (Webster's, 1983).

News--Consists of reports which are aggregations of bits of information, processed and structured in accordance with certain professional rules and norms, to be sent to a relatively large audience (Sahin, Davis & Robinson, 1981).

Newscast--This term may be defined as a broadcast of a program of news stories which are of local, state, national, and international interest (Chester, Garrison & Willis, 1978).

Primacy--This term refers to the persuasive effect of an initial communication on the memory of the subject when, after being exposed to a number of successively presented communications, the subject is able to recall it the most effectively (Insko, 1967).

Recency--This term considers the persuasive effect of the last of a succession of communications whereby the subject recalls the content of the last communication more effectively/correctly than the others preceding it (Insko, 1967).

Retention--For its application to this study, retention is recognized as the ability to answer correctly questions requiring recall and comprehension of news information presented (Berry, 1983).

Treatment titles--For this study, the three treatment titles are defined as:

1. Auditory only--a testing situation where the subjects' auditory sense only is stimulated by their hearing the newscast.

2. Talking head--a visual and auditory situation whereby the subjects view a still picture of a news broadcaster reading the news stories (Comstock, 1980).

3. Videotaped footage--a visual and auditory presentation whereby subjects view a variety of footage of the news stories covered while simultaneously listening to the news being reported via a voice over accompaniment.

Visual--This is defined as the visible presentation of images that pertains to the human ability of sight.

#### News Presentation Research

With the initial process of identifying the topic to be investigated and the defining of its purpose and scope accomplished, an overview of the research concerning

news format presentations conducted to date is necessary. Subsequently, chapter two presents a review of literature related to this study. Following this, chapter three relates to the methodology of the research with chapter four presenting the results of the experiment. The thesis is culminated with the final chapter being dedicated to the discussion of the findings and the conclusions derived from the discussion.



## CHAPTER 2

### Review of Related Literature

Television has established itself as a major news medium in the United States (Roper, 1979). And yet, with this intensified reliance upon television, comes associated empirical research indicating that audiences of typical television newscasts retain, in relation to news content presented, little or nothing of their broadcast experience (Stauffer, Frost & Ryblt, 1981). This problem has been duly recognized by the television industry and as a result, newscast is a complex product whose effectiveness is influenced by a multiplicity of factors, including viewer characteristics ranging from motivation and attention (O'Donnell, 1981), to the brains' processing abilities and cognitive development (Woodall, Davis & Sahin, 1983); as well as production characteristics like redundancy (Edwardson, Grooms & Pringle, 1976), primacy and recency effects on sequencing (Katz, Adoni 7 Parness, 1977), pacing (Smith, 1982), the use of recaps (Perloff, Wartella & Becker, 1982), linguistic complexity (Housel, 1984), and the superiority of auditory or visual modalities when presenting the news (Gunter, 1979, 1980b; Edwardson, Grooms & Proudlove, 1981; Stauffer et al., 1981). Researchers at large have conducted many studies focusing on factors such as these, either individually or as interacting variables.

## Newscast Variables Influencing Retention

A surveillance of viewers' motivations for watching the news by O'Donnell (1982) discovered that a person's viewing motivation was proportionate to his retention levels. One result indicating that recall of the news stories viewed was low led O'Donnell to the conclusion that "television news is not an efficient source of information (and further) that viewer motivations serve as mediating variables in the mass communication process and in the determination of media effects." Also, prior research dedicated to another factor, namely redundancy, suggests that any redundancy between information channels affects the retention of and learning from the news.

A number of studies (Chu & Schramm, 1967; Woodall et al., 1983; Reese, 1984) have been dedicated to this concept of redundancy and the visual versus auditory issue with the majority of them consensually recognizing a trend which suggests that the use of visuals will improve learning from audio-visual messages where it contributes to the information contained in the audio-track; otherwise, visual images may actually cause distraction and interfere with learning and retention (Chu et al., 1967). The results obtained from redundancy studies in relation to comprehension and retention of newscasts is typified by Woodall et al. (1983) with their conclusion that visuals will aid comprehension as if they are complementary (redundant). The effect of story sequencing is another variable which has received

comprehensive study in relation to its effect on retention.

An inference to sequencing is commonly associated with the primacy-recency effect. Much research (Miller & Campbell, 1959; Lana, 1961, 1963, 1964; and Insko, 1964) identifying a relationship between retention and sequencing has been conducted in the way of 'order effect' of news story placement in the news broadcast presentation. However, despite these many endeavors, results have proved very conflicting and lacking in direction toward a universal law of primacy or of recency. Most of the studies conducted have their theoretical basis in one of three theories: the 'set' theory, the 'linear' theory, and the 'forgetting' theory (Insko, 1967). The most consistent of these and perhaps the most pertinent to the immediate study is the set theory. According to this theory, the first of two opposing communications produces a set or context for the interpretation of the second communication, thus resulting in a primacy effect. Furthermore, the first communication will be able to establish a stronger set if the issue in dispute is a completely familiar one. Its consistency is the product of supportive empirical evidence accumulated by a series of experiments implemented by Lana (1961, 1963, 1964). His results concentrate on 'order effect' considerations, that is, how the sequence in which items are ordered affects how well they are retained. Insko suggests that for items of low familiarity, low controversy, and no pretest, a primacy effect, as mentioned previously, is most likely.

One other factor of a newscast format which has received extensive research is the relative superiority of audio or visual modalities. With television being a visual medium, many television authorities have favored the belief that its visual channel should be utilized to the fullest extent. As a result, visual and auditory features have been the recipients of extensive research, especially in relation to news retention.

#### Auditory and Visual Channels in Relation to News Retention

Early research concentrated on the communicativeness of pictures with a spoken script compared with the effectiveness of a talking head alone (Gunter, 1980b). Since then and even now, the results have been inconsistent.

The case supporting the superiority of visuals as a facilitator of news retention commonly proclaims that the use of pictorial material consistent with the news script being reported enhances news impact and hence information gain (Gunter, 1980b). Barrow and Westley (1959) tested sixth graders with a radio and television version of a current affairs program designed for elementary school. They had two conditions, one titled viewers (film plus soundtrack) and the other, listeners (soundtrack only). They discovered that the viewers scored significantly higher than listeners on an immediate recall test of factual knowledge revealed in the program.

Similarly, Stauffer et al. (1981) measured recall and learning from television, audio, and print news to



determine how much is retained by Kenyan and American college students. They found that both groups' retention from television was significantly higher than from an audio source. This result reinforces the assumption that visuals enhance news retention. In two other studies, one by Gunter (1979) and the other by Edwardson et al. (1981), a comparison of news retention between an auditory plus film clip treatment and a talking head treatment revealed retention to be better for the group viewing the auditory plus film clip presentation.

One other study conducted by Gunter (1980b) employed a dual coding hypothesis which can generally be maintained as a basic foundation upon which most of the experiments implemented, including those already cited, can anchor their arguments in support of the positive impact of visuals on news retention. As explained by Paivio (1969), this hypothesis states "that high imagery (visualization) conditions are effective in learning and memory because they increase the probability that both imaginal (pictorial) and verbal processes will play a mediational role in item retrieval."

Gunter (1980b) applied this theory by reasoning that while processing this pictorial input, the subject would encode the pictorial items in terms of both their picture content and their verbal contents, whereas the auditory only stimulus would be processed in terms of their verbal content only. Gunter (1980a) maintained that the presence

of an additional memory code for picture items would enhance their probability of being recalled because if one code was forgotten or simply not available at retrieval, the other could be utilized. Conversely, many of the studies conducted which have produced results that question the actual enhancement of retention by visuals, employ an alternative theory which professes the superiority of retention when stimulating either the auditory or the visual sense, not both.

These studies which convey the concept that only one single mode of presentation most effectively facilitates news retention, utilize as their theoretical basis, Broadbent's theory (Edwardson et al., 1981) of selective attention. Briefly, Broadbent postulates that human information processing is restricted by a limited capacity filter between the retention and attention stages of input analysis. He claims that "both the auditory and visual perceptual systems function as parallel information processing channels, adding that at any one time only one of these channels can be effectively attended." That is, while being analyzed, stimuli are held in one of two short term mechanisms: echoic memory for auditory material and iconic memory for visual material. These messages are then passed from this system into the attention system (p system). To reduce the overload on this p system, a selective filter blocks irrelevant and different stimuli messages before they reach the selective membrane or differential canal

of the p system (Treisman, 1969). And only when the message sent through this membrane is processed will the filter allow another stimulus to enter the p system.

Using this theory, studies have offered little in the way of consistent support for the visualization effect on news retention. Warshaw (1978) used audio only, video only, and audio-video comparisons to measure the retention of meaningful information acquired when audio information was presented alone.

The pure fact that an investigator who, within the same year, conducted two similar experiments and obtained results which each offer support to different extremes of visual versus audio scale demonstrates the amount of inconsistency which exists about the superiority of one channel in relation to news retention. Gunter (1980a), in a study assessing the effects of visual format on information gain, found that individuals who viewed a news story accompanied by video footage gave fewer correct answers to questions about story content than when they viewed the same news items presented by a newscaster pictured against a plain studio background. Thus, the simpler and less distracting stimulus facilitated better retention in this particular study. However, in another study cited previously, Gunter (1979) found just the opposite, concluding that retention was better for the group viewing the auditory plus film clip treatment.

In a third investigation though, Gunter (1980b) does

offer some explanation for his observed discrepancy. He accounts for its existence by suggesting that the precise influence of picture materials on learning from television information sequences depends upon the nature of the learning task. With reference to his two conflicting experiments, he stipulates that:

The physical presence of film or other pictorial elements does enhance attention to and retention of news headlines when an audience is exposed to a sequence of brief news reports; however, learning at a deeper level is more likely to be adversely affected by dynamic visualizations. (p. 11)

Despite this explanation, other conflicting evidence which predicts no difference between the effectiveness of auditory or visual stimulation on news retention, further highlights the inconsistency that prevails.

In a field study which examined recall of broadcast news in Israel, Katz, Adoni, and Parness (1977) found that individuals who saw a television news broadcast performed no better on tests of news retention than individuals who had only listened to the same program on radio. Similarly, two other studies by Edwardson et al. (1976) and hazard (1962-63) found there to be no difference in information gain between a group viewing an audiovisual film of news stories and another group who heard the news stories while watching a newscaster's talking head.

### Summary

The retention of news per se, has received comprehensive



attention and has been measured from a variety of different factors which are characteristics of a newscast. Some of the more investigated variables are viewer demographics, the primacy-recency effect, and the relative superiority of audio, visual, or redundant audiovisual modalities. The body of knowledge which exists is a compilation of conflicting conclusions and as a result no concrete concepts can be attributed with a significant degree of confidence.

With the increased dependence on television as the primary source and resource of news for a growing portion of the American population combined with the need to maintain an informed nation, especially current and potential participants of the workforce, the search for a productive relationship between sound and picture in television news seems urgent. Also, if the country is to remain competitive and progressive, the expediency of this need is further exemplified.

It is with these considerations in mind that the immediate study's hypotheses, reiterated below, were established.

1. That university students who view news stories will retain them more effectively than students who only hear them;

2. That those exposed to videotaped footage in a newscast, in preference to a talking head presentation, will exhibit a more effective level of news retention; and

3. That the demographic variables of age and grade-point-average will influence participants' performance in each of the treatments.

#### Rationale for the Study

The technological advancements of contemporary society, both in industry and entertainment, has led to the introduction of many devices for pleasure as well as commercial purposes. Previously, such devices called on the utilization of either the visual or auditory senses, especially at any given instance. However, today's innovative equipment requires the employment of both the visual and auditory senses of the human, some simultaneously, when operating these devices.

As a result, modern day man is subjected to a mirage of multisensory stimuli. With man constantly encountering this type of equipment, be it with computer software, music video discs or video games, this continual exposure to situations where both senses are bombarded and consequently stimulated together, possibly has created the opportunity for the development of these senses, perhaps to the extent that man, especially the younger generations, can now coherently accommodate simultaneous stimulation of the senses. Such is the rationale for the stated hypotheses.

#### Conclusion

In the following chapter, one alternative method of presenting a newscast, which may facilitate news retention, is examined.

## CHAPTER 3

### Methodology

#### Design of the Experimental Study

Subjects. The study was conducted with undergraduate students attending lower division classes at Austin Peay State University during the winter quarter of 1987. Students from six full classes as well as volunteers from additional classes participated voluntarily in the experiment giving a total of 170 subjects who ranged in academic standing from freshmen to seniors.

The lower division core classes, as opposed to speciality subject classes, for example, medicine, were chosen in an attempt to approximate a cross section of university students. That is, with core classes being compulsory for all, students from every major in fulfillment of this specification, will undertake these classes in some point of their college career. Thus, this assumption affords the prediction that a variety of different major students are enrolled in a core class at any one time.

This limitation has a dual purpose. It serves to provide data on the effect of visualization of the news upon all students who are at differing academic levels. Also, it enables the satisfaction of a requirement of randomization which stipulates that the sampled population is from a normally distributed population (Peatman, 1963). If one or two specific major areas; for example, mass communication or nursing were used, these populations would

be specialized and not a true indication of the normally distributed university student population.

Additionally, with reference to this concept of randomization, the nine testing sessions available by arrangement with lecturers and students were randomly assigned to one of the three treatments. This was done by placing slips of paper, each separate slip representing a group involved in the experiment, in a box and drawing them out one at a time. With consideration of the laws of probability as well as those of random selection, all separate slips of paper were replaced in the box after being drawn out and assigned to a treatment. Three groups were assigned to each of the three treatments.

#### Experimental Treatments

The three treatments used in the experiment are recognized as auditory only (control group), talking head, and videotaped footage. Treatment one exposed its participants to an auditory account of the formulated newscast. The second treatment featured a visual presentation of a newscaster pictured against a plain studio background, in a moderate close-up, reading the news story. Treatment three involved video footage of the news stories with the accompaniment of a voice-over giving relevant story descriptions.

The video footage consisted of motion pictures in preference to still shots. This choice was simply a limitation selected by the tester. A review of related studies conducted to identify the superiority of one of the two forms has revealed conflicting conclusions concerning such superiority



of motion pictures as opposed to still pictures (Allen & Weintraub, 1968; Spangenburg, 1973; Wells, Van Mondfrans, Postlethwait & Butler, 1973; Phair, 1975). So then, the decision to use motion pictures was one of personal preference. The auditory scripts employed to describe each news story were identical for each of the three treatments. This element was kept constant so as to ensure that it was the visual feature which remained the distinguishing variable (see Appendix A).

The stories included in the newscast reported on the following local issues:

1. Missing marijuana from the Tennessee Bureau of Investigation's crime lab.
2. An increase in taxes for Nashville hospitals.
3. Church burglaries in the Nashville area.
4. Arson fires in a Nashville suburb.
5. Habitat for Humanity's house building project.
6. Nashville's Red Cross Center's appeal for blood donors.

#### Permission Forms

In order to conduct the experiment, two different permission forms were required. First, an official letter requesting the permission to use human subjects in the experiment was forwarded to the Human Experiments Board. This letter outlined the experimental procedure (see Appendix B).

An additional letter was sent to each of the Nashville

television stations requesting their permission to videotape news footage from their newscasts (see Appendix B). Permission was received and all footage used was selected from WSMV Channel 4. Information concerning the results of this study was requested by this station and consequently was provided.

### Description of the Experimental Instruments

Experimental apparatus. The newscast for all treatments consisted of six different news stories, each approximately one minute in length with a two second interval between each. These had originally been broadcast as videotaped reports in television newscasts, within a two-week period, approximately three months before the experiment was implemented. Actual stories were re-written to match the videotaped footage edited together to complete each story; however, after a pilot study was run to reveal any problems with the experimental design and also to validate the questions, one story was deleted. This was done because six of the seven stories covered concerned local low key Nashville issues whereas the deleted story was concerned with a national issue which did receive a great deal of media coverage.

By restricting the stories to local issues, an attempt was made to decrease or ideally delete any prior knowledge effect which may have influenced participant performance. Prior knowledge or greater exposure to the story did appear to have some influence on retention scores because correct answers to questions concerning this story were ranked

among the highest of any in each of the three treatment groups.

All videotaped footage was recorded from the same station's newscast so as to maintain consistency in format and reporting styles. The compilation of the apparatus for the three treatments began with obtaining permission from local television stations to videotape news footage. Once granted, news footage from WSMV Channel 4 was selected. Over a period of two weeks, the evening newscast was taped on a home video recorder. From these tapes, eventual news stories used were taken. The scripts were then made and given to the person nominated as the news reader (talking head) for the experiment. A videorecording was then made of a male newscaster reading all six stories. He was a member of the college speech, communication, and theatre department, as well as a radio personality on the campus radio station.

From this master tape, the auditory element was edited off onto a separate tape. This separate tape was then used as a basis from which the audio only and talking head tapes were created. The master tape was then dubbed off onto another tape which was combined with the actualities (videotaped footage) tape. The desired videotape footage of each story was then edited to formulate the news actualities tape which was used in the experiment. All the extraneous material was attempted to be edited out. The motion picture was then edited onto this tape.

The experimental newscast, similar to the typical network newscast presentation, consisted of a one-second pause between stories. With some consideration given to the primacy-recency paradigm, the order of presentation was maintained for all three treatments. This established a certain degree of consistency despite the fact that the primacy-recency concept was not a variable in contention. However, Insko's (1967) suggestion that a primacy effect is most likely to occur with items of "low familiarity and low controversy" was acknowledged. With these types of news stories being presented in this experiment, such an observation carries some weight. If such is the case, then that story presented first will facilitate the highest retention level. But until results have been analyzed, it is difficult to make such an assessment. The preceding example of the primacy effect is cited merely as an indication that the very nature of where a story is sequenced in a presentation affects the retention level of a subject.

Evaluation instrument. Originally, a questionnaire consisting of 19 cued recall multiple-choice questions which relate to the content presented in the newscast functioned as the method of evaluating subject performance. The cued recall question was structured so as to have a cue or prompt line consisting of two or three related words heading the answer alternatives for each question. However, as a result of the pilot study, the format of the questionnaire was altered somewhat.



The questions referring to the seventh news story which focused on a national issue were deleted, leaving 16 multiple choice questions. Also, one of the questions on the pilot study questionnaire was found to confuse the subjects. Consequently, this question was reworded. Other changes made as a result of the pilot study were the addition of a separate answer sheet to simplify results tabulation and also the inclusion of more precise directions on how and where to indicate the answers. See Appendix C for the specific questions included in the questionnaire.

In order to estimate any inherent testing advantage to the television viewers, all questions were developed from the verbal content of the newscast. None were derived from visual data, for example, what was the color of the house built by the Habitat for Humanity group? Questions tested for different types of information retention that is the name of places, numbers, and information that could reasonably be inferred from the newscasts.

Also, within the evaluation questionnaire, a section was included which required subjects to reveal demographic information concerning their age and current grade-point-average score. These were the only personal details required and their devolution did not negate the anonymity of the participant. These details served as variables of the experiment and provided insight into whether or not age or grade-point-average has an influence over students' retention of broadcasted news in one or all of the treatments.

Grade-point-average scores also enable a comparison of the groups within each treatment to determine if they each represent a cross section of academic ability, by exhibiting similar average means, and thus being equal. However, because grade-point-average scores are protected, the tester can only assume validity of the scores given. As a result, the scores shall be regarded as approximates.

### Limitations of the Study

Within the study the following limitations are recognized by the investigator:

1. The core classes selected--selection of the six core classes involved in the study was influenced by time-tabling schedules and the core courses offered in the school quarter.

2. Enrollment in core classes--the investigator had no control over the number of students enrolled in the core classes.

3. Grade-point-average information--the investigator had no control over the correctness of the grade-point-average score given by each subject but it was assumed that integrity would mediate approximates.

4. The news stories presented--when taping the news stories presented by the local stations, the investigator had no control over which stories the local stations covered.

5. Primacy/Recency effect--little attention was given to this paradigm and thus the investigator had no control over its effects because the experimental design was not organized to test for this variable.

6. Recognition of the talking head--students may have recognized the newscaster used in the experiment possibly causing the subjects to focus more attention than normal on the stories in the newscast. This may have influenced results, but, because this variable was not being measured, the investigator had no control over its effect on the procedure.

The experiment required 18 to 20 minutes to implement. The news presentation was approximately 10 minutes in duration and after all subjects were given as much time as they needed to answer the post-experiment, video to 10 to 15 minutes, the complete test including the testing period, the pre-up, which consisted of 15 to 20 questions on average for each session, listening and answering the appropriate news presentation. Each viewing session took place in a quiet classroom situation with the subjects seated at a right angle to the screen on which appeared the test, especially for the video tape pre-up. The attitude was to meet calmly and unimpressively.

Before the test, subjects were told that the purpose of the experiment was to examine certain variables which it was thought might influence retention of the information from television news. Also, they were informed of their anonymity and freedom of choice to participate. They were further told that a short sequence of televised news items would be played to them, and that afterwards they would be asked to answer a number of questions based on the content presented in the newscast. (see Appendix 1)

To discourage the subjects from paying more attention to the newscast than they normally do in real life, the investigator advised students that they should pay no more or less attention to the news programs than they do when they watch local news at home. Immediately after the news presentation, the subjects were administered with the questionnaire which they completed anonymously. Upon completion of testing, all results were coded and recorded in the computer for statistical analysis.

#### Method of Statistical Analysis

A two-way analysis of variance (ANOVA) was used to evaluate statistically the data collected from the experiment. ANOVA provides comparisons between the auditory and both the visual treatments as well as inter variable comparisons between the influence of demographics on treatments.

From a broader view, ANOVA enabled the analysis of:

1. The overall effect of visuals on the news retention levels of university students by statistically comparing the results of the questionnaire between the control treatment and the two visual treatments.
2. The effect of film footage on subjects' retention levels by statistically comparing the data collected between the two visual treatments.
3. The specific and overall effect(s) of one or both of the demographic variables upon the participants in each or all of the treatments.

ANOVA also employed the statistical hypothesis known as the null hypothesis. This hypothesis assumes that there



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is no significant difference between the mean results of the treatments. That is, that the differences which did occur were due to chance. The aim of this study, based on the statistical hypothesis presented, was to reject the null hypothesis. It is then possible to set about agreeing or disagreeing with the research hypotheses.

### Conclusion

In the following chapter, the results obtained from the experiment shall be tabulated.

## CHAPTER 4

### Analysis of the Study Data

In order to effectively analyze the data collected, a two-way analysis of variance, a technique for testing the effects of two or more variables on a concept simultaneously, was employed. As well as this, cross-tabulations of the frequency distributions for the data were conducted. The results were tabulated for the following purposes.

1. To determine the degree of effectiveness of each of the three news presentations formats, namely, audio only, talking head, and videotaped footage, in influencing the knowledge retained from the stories.

2. To determine the degree of influence age has on retention levels of the news stories presented.

3. To determine the degree of influence GPA has on retention levels of the news stories presented.

4. To determine the degree of interaction between treatment and demographic variables or between demographic variables alone on the retention of news information presented.

Each of the subject's scores for all of the six news stories presented were totaled to yield an overall news retention score. A maximum of 16 points was possible with subjects being awarded one point for each correct answer.

The total correct was then expressed as a percentage.

Table 1 indicates the overall effect of each of the treatments on score.

Table 1

Analysis of Variance of the Effect of Treatment on Retention Score

Source of Variation	SS	df	MS	F	Significance of F
Main Effects	20.131	2	10.065	1.455	0.236
Treat	20.131	2	10.065	1.455	0.236
Explained	20.131	2	10.065	1.455	0.236
Residual	1175.673	170	6.916		
Total	1195.803	172	6.952		

The type of treatment used to present the news stories was found to have no significant effect on the level of news information retained. That is, a figure of  $F=1.455$  with 2 degrees of freedom is not a significant score at the 0.05 level of significance, thus indicating that there is no significant effect of treatment on score. Basically, none of the treatment modes used had a significant effect on the retention level of the subjects.

To analyze the effect of treatment on score more comprehensively the data were collapsed by way of cross-tabulation. This is outlined in Table 2. In this tabulation the scores were analyzed on the basis of a low, medium, and high coding criterion with zero to five representing the low score/retention category, six to ten qualifying as the medium range group, and 11 to 16 registering as the high level group. Table 2 displays the similar distribution of subjects in each of the categories for all of the treatments. There was no one significantly larger count of subjects scoring higher and thus retaining more news information in any of the treatment groups.

Therefore, both hypotheses which predicted that university students who view news stories will retain them more effectively than students who only hear them, and that those exposed to videotaped footage as opposed to a talking head presentation would exhibit a more effective level of news retention were not supported. Consequently, the results failed to reject the null hypothesis. Interestingly, however, Table 2 displays that for each of the treatments more than 50



Table 2

Cross-tabulation of the Effect of Treatment on Retention

Score	Audio	Head	Video	Total
Low Range (0-5 points)	2 (3.6%)	6 (11.5%)	2 (3%)	10 5.8
Medium Range (6-10 points)	31 (56.4%)	27 (51.9%)	35 (53%)	93 58.8
High Range (11-16 points)	22 (40%)	19 (36.5%)	29 (43.9%)	70 40.5
Column Total	55 (31.8%)	52 (30.1%)	66 (38.2%)	173 100.0%

percent of all subjects participating in the experiment scored in the middle scoring category. So then, each of the treatments facilitates average retention of the news presented.

Despite the lack of a significant effect of treatment on score, age was found to influence retention levels significantly. This concept is illustrated in Table 3. With a significance level 0.026 for age, one can be more than 95 percent confident that there is a significant difference in the data when comparing one age group with another. Furthermore, a significance level of  $p=0.205$  for the effect of treatment on score, also exhibited in Table 3, indicates that treatment does not have a significant main effect on score. In comparison with the figure of  $p=0.026$  for the effect of age on score, the main effect of age on score, independent of treatment, is highlighted. In addition to this, the interaction figure of  $p=0.425$  displayed in Table 3 indicates that although there is a significant difference in data based on age, the type of treatment is not a contributing factor; the difference is present regardless of treatment and the lack of difference in treatments is true regardless of age.

For a more indepth analysis of the independent effect of age on score, a cross-tabulation of results was conducted and is exhibited in Table 4. The results indicate that in the youngest age group (17-19), the level of retention was not as high as for the other ages. That is, 13 percent

Table 3

Analysis of Variance of the Effect on Retention of Treatment  
When Controlling for Age

Source of Variation	SS	df	MS	F	Significance of F
Main Effects	87.749	5	17.550	2.657	0.025
Treatment	21.165	2	10.583	1.602	0.205
Age	62.934	3	20.978	3.176	0.026
2-Way Interactions	39.764	6	6.627	1.003	0.425
Treat Age	39.764	6	6.627	1.003	0.425
Explained	127.513	11	11.592	1.755	0.066
Residual	1050.112	159	6.604		
Total	1177.626	170	6.927		

Table 4

Cross-tabulation of Age by Score

Number of Correct Answers	Age Groups				Total
	17-19 yrs.	20-22 yrs.	23-25 yrs.	Over 25 yrs.	
Low Range (0-5 points)	5 (13%)	2 (3%)	3 (13%)	0 (0%)	10 5.8
Medium Range (6-10 points)	21 (54%)	34 (49%)	14 (61%)	23 (58%)	92 53.8
High Range (11-16 points)	13 (33%)	33 (48%)	6 (26%)	17 (52%)	69 40.4
Column Total	39 22.8%	69 40.4%	23 13.5%	40 23.4%	173 100.0%



of this group scored in the lowest retention category, one-third in the highest, and slightly more than half scored in the medium retention level category. Compared with the other groups these scores were distributed somewhat more evenly. For the second age group (20-22) the scoring was, in the main, distributed amongst the medium and high range categories. Thus, this older group (Over 25) retained the news information presented more effectively than their younger counterparts. The much smaller percentage of subjects scoring in the lowest category offers support to this.

The scores in the third age group (23-25) do not deviate from the trend being suggested per se; however, their distributions reflect those of the youngest group. With regards to the eldest group, 100 percent scored in the medium and high ranging categories. That is, 58 percent of this group answered between six to ten questions correctly and 42 percent answered between 11 and 16 questions correctly. Generally, from these statistics it appears that there is a trend, although not perfectly progressive, of a larger percentage of the older university student being able to retain news story information more effectively than younger students. The significant score for age resulting from the analysis of variance offers support to the hypothesis that a demographic variable will influence participants' performance in each of the treatments.

The effect of GPA on score, both independent and the interaction with treatment was then investigated, the findings of which are contained in Table 5. In looking

Table 5

Analysis of Variance of the Effect on Retention of Treatment  
When Controlling for GPA

Sources of Variation	SS	df	MS	F	Significance of F
Main Effects	74.810	5	14.962	2.302	0.047
Treatment	23.057	2	11.529	1.774	0.173
GPA	47.412	3	15.804	2.431	0.067
Two-way Interactions	68.331	6	11.388	1.752	0.112
Treatment GPA	68.331	6	11.388	1.752	0.112
Explained	143.140	11	13.013	2.002	0.031
Residual	1026.983	158	6.500		
Total	1170.124	169	6.924		

at the main effects on score, GPA and treatment in combination render a figure of  $p=0.047$ . This figure demonstrates that treatment and GPA account for a significant portion of the variance in score. Separately, however, a figure of  $p=0.067$  for GPA and one of  $p=0.173$  for treatment indicates that neither of these variables alone has a significant effect on score. That is, neither variable independently affects news retention but it can be expressed that GPA is more important than treatment in explaining the variation in score.

Also, it was found that in half of the news stories, subjects in the video treatment answered the questions with the highest percentage of correctness. These results are not statistically significantly above the scores for the other treatment groups, however (see Table 7 and Appendix D). So then, in every one out of two stories the video subjects retained the news information presented most effectively, this was reflected in their being able to answer 50 percent of the questions with the highest level of correctness. Perhaps it was the fact that in the remaining stories these subjects answered the questions with such a low level of correctness that it rendered their overall performance not significantly different from those of the other groups, therefore, not having a significant effect on retention levels.

To further examine the effect of the demographic variables on score, a two-way analysis of variance which

concentrates on these as main effects was conducted. Table 6 indicates a significant main effect of age and GPA on score; however, the significant score of  $p=0.030$  for age together with the score of  $p=0.117$ , which is not significant, denotes a situation similar to that illustrated previously whereby age is the more important demographic variable of the two when explaining the significance/probability of a variable affecting score. That is, the calculated significance figure for age suggests that this variable would be certain to affect news retention more than 95 percent of the time, whereas GPA not being significant would not. The interaction statistics calculated for age and GPA also support this concept.

In addition, although not a criterion of the experiment's testing procedure, a cross-tabulation of scores for each story by treatment revealed that there was a primacy effect on retention levels. That is, the order in which the stories were presented influenced how effectively the subjects retained the information presented to them. Table 7 indicates that for story number one 57.8 percent of all subjects, regardless of treatment group, responded correctly to each questions. That is, the subjects retained the information presented in the first story the most effectively. This retention level, however, deteriorated with each subsequent story to the extent that in the following stories, subjects in each of the treatments retained only enough news information to be able to answer one or two questions concerning each

Table 6

Analysis of Variance of the Effect on Retention by Age  
Controlling for GPA

Source of Variation	SS	df	MS	F	Significance of F
Main Effects	106.436	6	17.739	2.807	0.013
Age	54.683	3	18.228	2.884	0.038
GPA	37.813	3	12.604	1.994	0.117
Two-Way Interactions	90.359	9	10.040	1.589	0.123
Age GPA	90.359	9	10.040	1.589	0.123
Explained	196.795	15	13.120	2.076	0.014
Residual	973.329	154	6.320		
Total	1170.124	169	6.924		



Table 7

Cross-tabulation of Scores for Story One by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	2		1	3
1.00	4	7	10	21 12.1%
2.00	13	16	17	46 26.1%
3.00	36	29	34	99 56.8%
Column Total	55 31.1%	52 29.4%	62 34.5%	169 95.4%

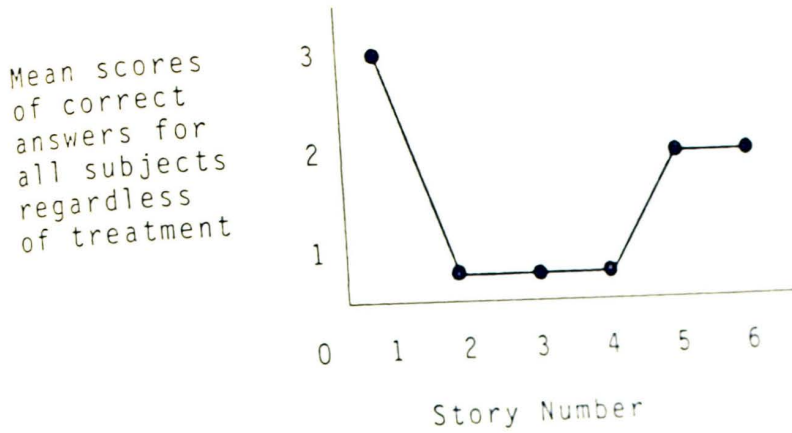
story correctly. This primacy effect is demonstrated in Figure 1 (also see Appendix D for other tables reinforcing to existence of this trend).

### Conclusion

In the following chapter, a summary of the analysis presented here as well as recommendations for future research shall be discussed.

Figure 1

Mean Scores for Correct Answers which Retention Levels as a Function of the Sequence of Story Presentation and Independent of Treatment Group



## CHAPTER 5

### Summary of Analysis and Recommendations

#### Summary of Analysis

The present research examined the effectiveness of various formats through which the media transmit newsworthy information. Using American university students as subjects, it presented news stories through, either independently or simultaneously, words and pictures. This study was conducted in an attempt to shed some light on the debate concerning the effectiveness of words and/or pictures in the newscast.

The study hypothesized that the presentation of news stories utilizing the visual and auditory senses in combination, would facilitate more effective news retention than would a presentation format based on the auditory only modality. The research failed to confirm this prediction in finding there to be no statistically significant difference in retention levels of subjects exposed to either. It was also hypothesized that the exposure to videotaped footage in a newscast, in preference to a talking head presentation, would furnish a more effective level of news retention. Similarly, this assumption was not confirmed with significant statistics.

Thus it was concluded that, for this study, there is no significant difference between presenting the news through the auditory only channel, via a talking head,

or by videotaped footage; especially in relation to facilitating retention of the information presented. As a result, the null hypothesis which assumes that there is no significant difference between the mean results of the treatments, was not rejected and the rationale for the research was not supported.

This failure of confirmation contributes support to the findings of Katz et al. (1971) and Stewardson et al. (1976) who found there to be no significant difference between the effectiveness of auditory or visual stimulation on news retention. It is necessary to mention, however, that although not statistically significant, in the present study, the videotaped footage group answered the highest percentage of correct answers in half of all the news stories presented (see Appendix 2).

One possible reason for the lack of statistical significance is the extremely poor performance by subjects in this treatment group in the other half of the questions on the questionnaire. It needs to be brought to the reader's attention that perhaps certain characteristics inherent in the visual element of the videotaped presentation may have caused subjects actually to retain the information presented but misinterpreted this information thus selecting the incorrect answer on the testing device. For example, in story number four the incident being reported on occurred in the early hours of the morning. When the story was filmed it was dark, thus possibly giving the viewer the impression that the incident occurred during the evening.



In observing the results, it was noticed by the investigator that the majority of those subjects who did answer the question asking the time of day when the incident occurred incorrectly had selected evening as their choice. Therefore, this is one possible explanation that can be stated in support of the proposal that videotaped footage of the news may be a more effective format for presenting the news. This assumption could serve as a basis for future research; despite this, however, it must be remembered that for this specific study, no significant difference was found for any of the treatments.

The study did, however, confirm the hypothesis that a demographic variable of age and/or GPA would influence participants' performance in each of the treatments. It was revealed that age has a significant effect on retention levels, regardless of format modality employed, such that the older students tend to retain news information presented more effectively than their younger colleagues. Possibly, the fact that the older students are more accustomed to the news because of greater chronological exposure to these presentations or that they have had more of an opportunity to refine their news viewing skills over the years could be contributing factors to the existence of this trend.

The evidence of a primacy effect presents some application to commercial newscast formats. With subjects, regardless of what treatment exposed to, being able to retain news information from the first story presented in the current

study's newscast more effectively than from preceding stories, commercial newscasters with the desire to have certain news information retained more effectively should consider presenting this information first.

In conclusion, the current research revealed that news presentation format does not have a statistically significant effect on the retention levels of university students. However, it must be remembered that the results obtained are specific to the conditions used in the immediate experiment and that while no significant difference in retention levels via any of the three treatment modes was found, one of these formats, under different circumstances, may prove conducive to news retention. For example, the employment of the video mode may promote news retention when combined with very short sequences of brief news which consists of little more than one or two sentence headlines. Such could be the basis for future research.

#### Recommendations for Future Research

The present study was successful in showing the age effect on the retention levels of university students for news reported in a newscast. But, it was unsuccessful in establishing the existence of a more effective method of presenting the news. From the findings within this study, it is concluded that there are a number of alternatives for future research. Further, with the maintaining of an informed nation of vital importance to a progressive country, further research which replicates or is similar to the current experiment with groups of individuals differing

in terms of age and demographic characteristics from those of the undergraduate university sample used here, in order to see whether the same effects emerge.

Also, a study employing another criterion for news presentation such as any of the already established commercial formats or a genre of these could be tested for their news retention effectiveness. Due to the importance of its function, the news presentation format is a consideration under constant scrutiny. The continual plight of programmers to search for the most effective format together with the prevailing inconsistency concerning the most effective medium through which to convey the news further reinforces the immediacy of the need.

One direction for future research could be the idea that the effectiveness of the presentation medium is a function of the learning task. That is, audio only may be a more effective transmitter of information when using short sequences of brief information whereas a videotaped type format may be more suited to longer, more detailed presentations which require the subject to process the information presented to a deeper level of consciousness.

Furthermore, another possibility and one very much in context with today's multi-stimulated environment is the effectiveness of graphics in presenting the news. Certainly, with the inconsistency in the age-old debate of picture versus words, there is a definite need for the establishment of concrete evidence upon which to refer

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when deciding on a news presentation format. Consequently,  
in retrospect, there are numerous possibilities upon which  
future research could be based.

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## APPENDIX A

## STORY ONE: MISSING MARIJUANA

The Tennessee Bureau of Investigations says it's not certain what happened to 16 lbs. of marijuana that went missing from the TBI's crime lab garage.

The missing marijuana was part of 120 lbs. of pot seized in Jiles County late last year.

The marijuana had been sent to the TBI's crime lab for testing and after tests were conducted was stored in the lab's garage awaiting reshipment back to Jiles county.

When it was to be returned, however, staff discovered that 16 lbs., approximately \$8,000 worth of the pot, was missing.

TBI deputy director, Steve Watson, says his department polygraphed 56 employees and the only explanation they can come up with is that the marijuana was thrown out with the trash.

So far no one has been charged or disciplined.

Authorities say the loss did not interfere with the Jiles County case, it will still be prosecuted as a class "X" crime.



## STORY TWO: TAXES FOR HOSPITALS

According to Jim Ed Clary, Metro's tax assessor, many of our hospitals and other health related facilities here in Nashville, may not be dedicating the required fifty percent of their total business to the treatment of needy and indigent patients, therefore, disqualifying them from the fifty percent tax exemption.

Most Nashville hospitals, nursing homes, and other health care facilities are considered not-for-profit so, in exchange for treating the poor, they pay only a percentage of a set property tax instead of the full value.

However, the exemption is now in question.

New construction at many of the not-for-profit hospitals is increasing their value and many millions of dollars are being spent on new equipment.

As a result of these improvements, health costs for the average citizen are increasing reportedly to cover the costs of indigent care.

Clary believes it's time for this burden of payment to be redistributed.

A reassessment of the tax exempt status for health facilities has not been conducted since 1963.

The decision to introduce the tax will affect more than thirty facilities and it is estimated that the decision will mean many of thousands of new dollars for Metro.

## STORY THREE: CHURCH BURGLARIES

The current series of church burglaries in the Nashville area is the worst Metro Police have seen in the last five years.

Ninety-nine churches have been broken into during the past three months, with most of those hit in the Bellview and south Nashville areas.

Police say that to date, the thieves have netted more than fifty thousand dollars worth of VCRs, TVs, typewriters, and other electronic equipment.

In each of the burglaries, the pattern has been the same: thieves have kicked in doors, ransacked offices, and even attempted to open safes in pursuit of money.

The similar patterns adopted by the thieves have led the police to believe that the burglaries are related but, so far they have no definite leads and none of the stolen property has been recovered.

## STORY FOUR: ARSON FIRES

A fire destroyed another house in the Woodbine area of Nashville early this morning and once again investigators suspect arson.

It's been more than a month since the last of a rash of arson fires in the area but today's fire has revived fears that the mysterious arsonist may be at it again.

The house of Jerry Cox went up in flames early this morning while all its occupants were still sleeping.

No one was injured as Cox and his wife got all five children out safely but almost everything was destroyed.

Fire investigators agree it looks like arson and it's not the first time the Woodbine neighborhood has been the victim of arson.

Late last year a series of similar arson fires destroyed several building in the neighborhood, two of them in sight of the Cox home.

Fire investigators say there are some similarities between today's blaze and the previous fires but, officials also say that they don't beleive the fire was set by the same suspect because it's been more than a month since the previous arson fires in the area.

Police are currently conducting intensive investigations.

## STORY FIVE: HABITAT FOR HUMANITY

A national movement called Habitat for Humanity has concentrated its efforts, here in Nashville, on the construction of economical housing for the less fortunate in our community.

The movement is ten years old, with the Nashville affiliate beginning only two years ago.

Habitat for Humanity depends mostly on volunteer labor, much of which comes from college students on vacation.

Usually these students know little about the mechanics of building a house and so rely heavily on tips given to them by volunteer tradesmen.

To date, the Nashville group has built one house but by this summer, it hopes to have four completed.

To "Wipe out shacks and slums" is the group's motto and it plans to achieve this ambitious goal without government aid or welfare.

Instead, Habitat for Humanity relies on the check books and willing hands of concerned Christians.

The volunteer labor and donations help to cut building costs markedly, enabling the group to make a profit.

Generally, the group can build a house for half its market value.

With the profit made by each Habitat for Humanity affiliate group across the country, ten percent is given to the National organization.

That money then goes overseas to help build homes in developing countries, so each time a house goes up here in America, it represents other homes going up in other parts of the world.

## STORY SIX: RED CROSS APPEAL

The Nashville Regional Red Cross Center, like most centers nation-wide, is currently experiencing a critical shortage of blood for surgical emergencies.

The center normally tries to keep a three-day supply of blood on hand, which is approximately two thousand units. This afternoon, however, the inventory was four hundred and sixty-seven units.

Blood services director, Mr. Ken Forces, says there are two main reasons for the current shortage.

He suggests that there is a normal seasonal drop right after the holidays because many donors do not come in around Christmas time.

And secondly, the stricter safety tests now conducted by the Red Cross on blood donated has decreased the percentage of useable blood to about ninety-five percent of what it was in the past.



## APPENDIX B

EVALUATION OF PROPOSAL  
RESEARCH INVOLVING HUMAN SUBJECTS

Title of Proposal: Visualization of the News: Its Impact on the Retention Levels  
of University Students  
Principal Investigator: Kathryn Lamond

Sponsor (if student): Dr. Paul Shaffer, Speech, Communication & Theatre

Action of the Human Research Review Committee:

XX A. Approved as described. Researcher is responsible for obtaining approval from the Committee prior to introducing any changes in protocol; for keeping signed consent statements for the duration of the project and 3 years thereafter; and informing the Committee of any unexpected physical or psychological effects on subjects.

\_\_\_ B. Approved with recommendations as follows:

Researcher may revise the project in accordance with recommendations and communicate in writing the changes which have been made; discuss the action with the Committee; or withdraw the proposal.

\_\_\_ C. Proposal deferred for additional evidence as follows:

Further action is contingent on the investigator supplying the Committee with appropriate information.

\_\_\_ D. Proposal not approved for the following reasons:

Researcher may revise the project or discuss the action with the Committee.

Reviewed by: xx Chairperson,  
Human Research Review Committee

  
11/11/80 Signature

\_\_\_ Membership,  
Human Research Review Committee

\_\_\_\_\_  
Signature

Copies to: Investigator  
File with proposal

\_\_\_\_\_  
DATE

TV 43: Hopkinsville

Graduate of Mass Communication,  
Dear Kathryn,

I have read your letter and I do / ~~do not~~ give  
my consent for you to make a tape of some of our local  
news film footage for your thesis experiment.

Yours Sincerely,

Date: 11-13-86

*TV 43  
O. J. [unclear]  
L. [unclear]*

Channel 4: Nashville

Graduate of Mass Communication,  
Dear Kathryn,

I have read your letter and I do / ~~do not~~ give  
my consent for you to make a tape of some of our local  
news film footage for your thesis experiment.

Yours Sincerely,

*Ann Woodmore  
Adm. Asst.*

Date: 11-12-86

*We would appreciate a copy of study results.*

## Permission from TV Stations

Channel 5: Nashville

Graduate of Mass Communication,  
Dear Kathryn,

I have read your letter and I do / do not give  
my consent for you to make a tape of some of our local  
news film footage for your thesis experiment, *PROVIDED IT IS NOT*  
*REBROADCAST ON ANY TV STATION.*

Yours Sincerely,

*Mike L.*  
NEWS DIRECTOR

Date: 10/13/86

## Permission from TV Stations

Channel 2: Nashville

November 12, 1986


Ms. Kathryn Lamond  
Austin Peay State University  
P.O. Box 6783  
Clarksville, TN 37044

Dear Ms. Lamond:

This is to advise WKRN's approval to tape Channel 2 News segments off the air.

The single purpose of your request is for an experimental research thesis in news reporting for a Degree of Master of Arts at Austin Peay State University.

Cordially,

  
Evelyn Keller  
Manager of Programming



## APPENDIX C

QUESTIONNAIRE

Read the questions carefully and then circle the most correct answer on the answer sheet provided.

Story One: Missing Marijuana

1. What was the amount of marijuana that went missing from the Tennessee Bureau of Investigation's crime lab?
  - (a) 12 pounds
  - (b) 20 pounds
  - (c) 16 pounds
  - (d) 120 pounds
2. What was the Bureau's explanation for what happened to the missing marijuana?
  - (a) it was stolen by employees of the Bureau;
  - (b) it was thrown out with the trash;
  - (c) it was sent back to Giles county without the Bureau's knowledge.
3. The approximate value of the missing marijuana is estimated at:
  - (a) \$10,000
  - (b) \$500
  - (c) \$800
  - (d) \$8,000

Story Two: Taxes For Hospitals

4. When was the last assessment of the tax exemption status for health facilities conducted?
  - (a) 1960
  - (b) 1980
  - (c) 1975
  - (d) 1963
5. Atleast half of a 'not-for-profit' health facility's total business must involve the treatment of a specific type of patient, what is this 'type'?
  - (a) terminally ill patients;
  - (b) mentally disturbed patients;
  - (c) needy and indigent patients;
  - (d) blind patients.
6. What is the percentage of exemption from the set property tax that a 'not-for-profit' health facility currently receives?
  - (a) 50%
  - (b) 25%
  - (c) 45%
  - (d) 80%

Story Three: Church Burgularies

7. How many churches have been broken into during the past 3 months in Nashville?
  - (a) 80
  - (b) 90
  - (c) 99
  - (d) 78
8. To date, the burglars have netted stolen property to the value of over:
  - (a) \$45,000
  - (b) \$50,000
  - (c) \$10,000
  - (d) \$20,000

Story Four: Arson Fires

9. What is the area in Nashville experiencing the arson fires?
 

(a) Bellview	(c) Lebanon
(b) Gallatin	(d) Woodbine

-2-

10. One of the reasons for why officials do not believe that the fire was set by the same arson suspect as last year is:
- (a) the technique for setting this recent fire is different to that used in the previous series of arson fires;
  - (b) the previous fires have almost all involved a vacant building;
  - (c) the suspect of the previous fires has been caught.
11. At what time of day did the fire at the Cox home occur?
- (a) evening
  - (b) mid-day
  - (c) late afternoon
  - (d) morning

Story Five: Habitat For Humanity

12. The Nashville affiliate of Habitat for Humanity began how many years ago?
- (a) 2
  - (b) 10
  - (c) 5
  - (d) 7
13. The type of labor the organization relies on is?
- (a) hired tradesmen;
  - (b) sub-contractors;
  - (c) government appointed workers;
  - (d) volunteer.
14. How much of the profit made by each affiliate group is donated to the national organization?
- (a) 50%
  - (b) 10%
  - (c) 15%
  - (d) 30%

Story Six: Red Cross Appeal

15. How many units of blood were registered on the supply inventory at the Nashville regional Red Cross center?
- (a) 300 units
  - (b) 570 units
  - (c) 650 units
  - (d) 467 units
16. One of the stated reasons for the current blood supply shortage was?
- (a) the stricter safety tests now conducted by the Red Cross on the donated blood decreases the percentage of useable blood;
  - (b) the Nashville regional center has had to send a large amount of its supply to other areas;
  - (c) a number of recent surgical emergencies have depleted blood supplies.
17. What is your age grouping?
- (a) 17-19 years
  - (b) 20-22 years
  - (c) 23-25 years
  - (d) over 25 years
18. What is your current grade-point-average grouping?
- (a) below 2.0
  - (b) 2.0-2.5
  - (c) 2.5-3.0
  - (d) above 3.0
-

QUESTIONNAIRE ANSWER SHEET

Circle the answer you consider to be the most correct.

Question

1. (a) (b) (c) (d)
  2. (a) (b) (c) (d)
  3. (a) (b) (c) (d)
  4. (a) (b) (c) (d)
  5. (a) (b) (c) (d)
  6. (a) (b) (c) (d)
  7. (a) (b) (c) (d)
  8. (a) (b) (c) (d)
  9. (a) (b) (c) (d)
  10. (a) (b) (c) (d)
  11. (a) (b) (c) (d)
  12. (a) (b) (c) (d)
  13. (a) (b) (c) (d)
  14. (a) (b) (c) (d)
  15. (a) (b) (c) (d)
  16. (a) (b) (c) (d)
  17. (a) (b) (c) (d)
  18. (a) (b) (c) (d)
-

## APPENDIX D



Table 8

Cross-tabulation of Scores for Story Two by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	4	4	4	12 6.9%
1.00	23	26	24	73 42.2%
2.00	23	14	28	65 37.6%
3.00	5	8	10	23 13.3%
Column Total	55 31.8%	52 30.1%	66 38.2%	173 100.0%

Table 9

Cross-tabulation of Scores for Story Three by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	20	16	16	52 30.1%
1.00	24	26	34	84 48.6%
2.00	11	10	16	37 21.4%
Column Total	55 31.8%	52 30.1%	66 38.2%	173 100.0%

Table 10

Cross-tabulation of Scores for Story Four by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	8	5	9	22 12.7%
1.00	20	22	18	60 34.7%
2.00	22	17	26	65 37.6%
3.00	5	8	13	26 15.0%
Column Total	55 31.8%	52 30.1%	66 38.2%	173 100.0%

Table 11

Cross-tabulation of Scores for Story Five by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	6	4	1	11 6.4%
1.00	11	16	7	34 19.7%
2.00	20	20	34	74 42.8%
3.00	18	12	24	54 31.2%
Column Total	55 31.8%	52 30.1%	66 38.2%	173 100.0%

Table 12

Cross-tabulation of Scores for Story Six by Treatment

Number of Correct Answers	Audio	Head	Video	Total
.00	6	12	6	24 13.9%
1.00	17	17	37	71 41.0%
2.00	32	23	23	78 45.1%
Column Total	55 31.8%	52 30.1%	66 38.2%	173 100.0%