

THE CATHODE RAY TUBE: CONDUIT TO LOST KNOWLEDGE

by

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This thesis is an inquiry in the study of information retention. It begins to answer some questions surrounding the knowledge of public affairs and how newspaper reading and television viewing may affect that process.

Studies in this area are limited, but a distinct pattern is developing. Newspaper readers tend to retain knowledge of public affairs information better than their television counterparts.

In this particular study a group of citizens from the Eugene-Springfield community of Oregon were randomly selected to be subjects, and were administered one of two current affairs questionnaires. Results of this study are consistent with the findings of predecessors. Newspaper readers tend to retain knowledge of public affairs information with greater success than do television viewers.

This study also reveals that the newspaper success rate is consistent whether the questions pertain to local, national or international news items.

A final finding reveals that male subjects performed better than female subjects on these particular questions. Analysis suggests that the "gender gap" is induced by the questions themselves which are in turn induced by the events the media choose to cover.

This manuscript is by no means exhaustive. On the contrary, the following findings are but a part of the foundation being laid down in this area of communications research. More study needs to be done in the area of information dissemination and retention.

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CHAPTER I

INTRODUCTION

The purpose of this thesis is to determine whether newspaper readers or television viewers are better equipped to retain information about current events.

Recent research has not examined this question fully, but the diffusion of information has been the focus of a great deal of study. Early studies supported a magic bullet or hypodermic needle theory between the mass media and its audiences. The theory professed that each subject responded to the media in the same fashion. Human beings are not clones and this theory was eventually declared invalid. The pendulum would swing as experimenters concluded that the media had minimal effects upon audiences.

The magic bullet theory was borne out of a legacy of fear. People were gravely concerned about the impact movies and other mass media could potentially have on the population. At the time, many felt the mass media could produce "direct, immediate, and powerful influences"¹ on a population. An attitude shift took place in the middle part of this century. Experimenters began to find that film, for example, "did produce changes in their audiences, but changes were limited."²

Proponents of both theories still exist. In the middle of it all, very few studies examine how the media contribute to or hinder knowledge of public affairs.

In a 1978 master's thesis at the University of Oklahoma, Karen Browne said this still-unanswered question had increased in urgency with the increasing importance of television as a source of information. We are now entering the 1990's, and it is my contention that the effort to find an answer has fallen short of Browne's goal. More research in this area still needs to be done.

While at the University of Oklahoma, Browne examined and compared the factual recall of subjects exposed to film and print stimuli. Subjects either saw a film or were allowed to read the transcript of the film on one occasion. Immediately afterward subjects in both the film group and the transcript group were asked a series of questions about information either contained in the film or in the transcript of the film. Browne's research revealed that print (transcript) participants scored significantly higher (statistically) than their film counterparts in recalling information contained in the film or its transcript. The experiment was constructed in such a fashion as to simulate television viewing and newspaper reading adequately. The television subjects were actually shown a documentary, and the print subjects given a transcript of the documentary.

In 1981 John Stauffer, Richard Frost and William Rybolt studied the recall and learning involved in viewing broadcast news to see if the print media was a better educational resource.

In the introduction to the study the authors state:

Television has clearly established itself as a major news medium in the United States. Growing numbers of studies in the U.S., Europe, the Middle East and Africa found that the audience of radio and television news recall little of the broadcast experience.³

The broadcast experience is defined as news content or the information contained in a newscast (i.e. news stories, items). As in Browne's study, the newspaper prevails over its television counterpart in its ability to convey information that is retained and recalled by subjects.

In 1987, an assistant professor in Tennessee found that television news elements can clutter a story. Larry L. Burriss concluded that as stories become more complex, the subjects' recall of story facts decrease. News elements were defined as such things as actualities, stand-ups and graphics.

The project included three versions of the same story and was prepared by personnel at a Nashville television station. All three versions were delivered by the same person using an increasing number of broadcast elements. All three versions were based on a mock news conference.

The simplest version was a stand-up. The reporter simply stood in place and read a story. Version two was an anchored story but contained a video portion. This is commonly described as news "footage". The anchor was also flanked by a graphics box. The most complex version was a produced package that included audio and visual portions and an announcer voicing over the material. This is commonly described as a "wrap" as all the necessary material is self-contained in the produced package.

The packaged version was the least effective while the stand-up was the most effective source of subject recall. Burriss concluded that stories using multiple elements (i.e. audio and visual elements or actualities) adversely affect audience recall.

Burriss states:

As a technological medium it (television) sometimes appears to be dependent on razzle-dazzle and image at the expense of substance. As a journalistic medium, TV news should be able to stand on its own, without the use of graphics, actualities and other electronic effects.⁴

Newspaper readers are introduced to far fewer news elements than a television viewer encounters in watching a story. Until recently, readers would only come across quotes (print equivalents to the broadcast actuality). Now graphics boxes are also seen by readers.

Still, the reader is encountering less "Burrissian" clutter than the viewer. Carrying out his findings to a

logical conclusion, one could hypothesize that newspaper readers as a whole would fair better in recalling a story's facts than their television counterparts. My study sought to confirm this hypothesis.

¹ Melvin L. DeFleur, Everette E. Dennis, Understanding Mass Communications (Boston: Houghton Mifflin Company, 1985), p.290.

² Ibid. p.308

³ John Stauffer, Richard Frost, William Rybolt, "Recall and Learning From Broadcast News: Is Print Better?", Journal of Broadcasting, 25 (Summer 1981) p.253.

⁴ Larry L. Burriss, "How Anchors, Reporters and Newsmakers Affect Recall and Evaluation of Stories", Journalism Quarterly, (Summer/Autumn 1987) p.514.

CHAPTER II

METHODS

The conclusions made within this thesis are drawn from a study involving 80 subjects in the Eugene-Springfield community. It examines the information retention of newspaper readers and television viewers through two questionnaires that included timely local, national and international items.

Four pre-tests preceded the actual study. The first pre-test contained flaws in its introductory section. The introductory questions were designed to separate individuals into distinct subject groups of either newspaper readers or television viewers. Upon reviewing the results, it was determined that the responses to these questions failed to serve their designed function.

Question number one asked respondents whether they read the paper, watched television or did both when it came to gathering information. Answers indicated that subjects tended to use either both media or neither one. The question actually sought to determine which medium a subject used more often. The desired response of either the newspaper or television was seldom given because of ambiguity in question one's design (See Appendix A).

The second question was a follow-up to the first question. It sought to determine how many hours a week a subject turned to a medium of choice for information. In question number two, those respondents who indicated using both media in question number one tended to answer for one of the two media rather than both of them. Furthermore, the response often failed to clarify which medium the answer was referring to if the subject indicated the use of both the newspaper and the television. This tendency further contaminated the results of the first pre-test (See Appendix A).

Question number three sought to determine how much time was spent with the medium of choice in quarter hour intervals. Once again, responses were given for only one medium even though a subject may have indicated using both media in the first question (See Appendix A).

The results, though unusable were helpful. Introductory questions would be altered for the second pre-test and prove effective in categorizing whether a subject tended to use the television or the newspaper in gathering information.

The subjects for the first pre-test were a group of college students enrolled in the University of Oregon's Robert D. Clark Honors College. Arrangements were made with a professor to use a group of literature students as

subjects. The students had no prior knowledge that a questionnaire was to be administered to them. the types of questions utilized in all the pre-tests are similar to the ones used in the actual questionnaires and will be described in detail on subsequent pages.

Pre-test number two was also administered to a second honors literature class. The introductory questions were reduced to two from three and were not open-ended like the ones drafted for the first pre-test.

The first question specifically asked if the individual subject received more news from the paper or the television. If the subject indicated they used another medium for most of their information, they were eliminated from the pre-test subject pool (See Appendix B).

Question number two allowed for eight specific responses ranging from using a medium for less than an hour every week to seven hours or more every week (See Appendix B).

Results from this first valid test showed that newspaper readers tended to retain significantly more information than their television counterparts. The total number of newspaper respondents was 16 with an average score of 10.4 correct answers out of 15 questions. There were only 3 television subjects, who achieved an average score of just 6.6.

The third pre-test group consisted of college journalism students. Both newspaper and television subjects attained higher scores in the third pre-test group of subjects, compared to previous subjects. This boost in scores can probably be explained by the subjects having a penchant for news material. However, a significant gap between newspaper readers and television viewers was maintained. This pattern of newspaper readers performing better than television viewers was maintained over a cross-section of different subject populations.

Seven newspaper subjects took part in pre-test number three with an average score of 12.7. There were two television respondents in pre-test number three with an average score of 10.

The fourth pre-test group was composed of more journalism students. It provided results consistent with pre-test number three and maintained the pattern established in pre-test number two. There were five newspaper respondents in pre-test number four with an average score of 9.2. There were seven television respondents with an average score of 7.2.

The overall pre-test results included twenty-eight newspaper respondents with an average score of 10.78, while there were twelve television respondents with an average score of 7.58. The number of subjects in the pre-tests were

not designed to provide any valid statistical information, but were generated to see if any consistent pattern was developing. The test did, in fact, demonstrate that newspaper readers were scoring higher on average than their television viewing counterparts.

The questions designed in the actual study and the pre-tests were selected on the basis of newsworthiness. For the purposes of this study newsworthiness meant both the local newspaper (The Register-Guard) and the local television stations (KEZI, KMTR and KVAL) covered the story. Viewing certain news items or reading about them should have provided each subject with the information necessary to answer fifteen multiple choice questions provided on either of the two study questionnaires correctly.

Random digit dialing was employed to gain subjects for the actual study. Random digit dialing is a method of selecting telephone numbers that ensures that all telephone households have an equal chance of being selected. Several RDD methods exist. The method selected for this particular study was chosen for its tendency to decrease the number of invalid numbers in a given sample by adding one to three digits to a selected number to achieve additional numbers.

The method was found in a book titled Mass Media Research and is best explained by authors Roger D. Wimmer and Joseph R. Dominick who state:

One first selects a number from a list of telephone numbers (a directory or list purchased from a supplier). Assume that the number 448-3047 was selected from the list. The researcher could simply add a predetermined number, say 6, to produce 448-3053; or a pre-determined two-digit number, say 21, to achieve 448-3068; or even a three-digit number, say 112, to produce 448-3159.¹

The authors explain that each variation of the method helps to eliminate many of the invalid numbers produced in random number generation because telephone companies tend to distribute telephone numbers in series, or blocks.

Invalid numbers still appear in a subject sample. For instance, some numbers are disconnected, some generated haven't been assigned, and there are other reasons. Of the 439 numbers eventually used in conducting the study, a full 146 proved invalid (86 were non-working numbers while 60 were non-residential numbers).

Because invalid numbers arise so often, Mass Media Research authors Wimmer and Dominick say, "It is advisable to produce at least three times the number of telephone numbers needed....² Heeding this advice, I selected three times the numbers I thought I'd need to provide a valid sample. The study originally called for 100 subjects (50 newspaper readers and 50 television viewers). Eventually only 80 subjects were needed to provide a statistically valid sample (40 newspaper readers and 40 television viewers). However, to achieve my desired N's, another 300 phone numbers were produced with 139 being used.

Following the steps outlined in Mass Media Research, the number I retrieved from the telephone directory was 688-0353. This number served as my random starting point. My three digit number was generated by the alphabet and the corresponding one-digit number on a push button phone. The letters A, B and C all correspond to the number two on a push button phone; and therefore, my three digit number became 222. Consequently, my second telephone number became 688-0797 by adding 222 to the last three digits of the first telephone number.

This method proceeded in the same fashion until number 688-9899 was achieved. Adding 222 to 9899 would change the prefix 688 to 689. In an effort to limit the possibility of generating unusable prefix numbers, I chose to once again randomly select a second number as a starting point for a new series.

Ironically, the next number randomly selected from the Eugene-Springfield telephone directory began with the prefix 689 (689-8822). I also chose to alter the three-digit number by reciting the ABC's.

Since I changed the prefix by a second random selection, I also opted to alter the three-digit number by continuing to recite the ABC's. The letters D, E and F are next in the alphabet and all three correspond to the number

three on a push button telephone. Consequently, 333 became the next three digit number.

This method of choosing a new randomly selected number from the phone book and new three-digit number by way of the alphabet and a push button phone was repeated each time the addition of the current three-digit number would roll a phone number into the next prefix (See Appendix D).

A coding sheet was assigned to each potential subject telephone number. It included eight categories of potential solicitation outcomes (See Appendix E). A total of three attempts were made to reach a usable adult subject at each randomly selected telephone number.

A code number was assigned after each call:

Example: Call 1: 3 Call 2: 2 Call 3: 1

The example shows that on the first call there wasn't an answer, on the second call the telephone was busy and that a potential subject was reached and an interview completed on the third attempt (See Appendix E).

Call attempts were not consecutive or immediate. A second call was usually made at least several hours after the initial call, and more often than not on a subsequent day. Efforts were made to call at different times to maximize the potential of reaching a usable adult subject. For example, if a call was placed at midday without success the follow up calls would take place in the afternoon and

evening. A conscious effort was made to find a subject at each home.

In addition, blocks of calls to different numbers were made at the aforementioned times (mid-morning, afternoon and evening). This step was employed to avoid reaching too many men or women and too many workers or retirees. This is not to say imbalances didn't exist--they did. These imbalances will be discussed further in the Results section.

Finally, a caveat must be issued regarding the results in this study. Because participants (i.e. subjects) were allowed to identify themselves as either newspaper readers or television viewers, the results preclude an incontrovertible analysis of the results. However, it is the opinion of this author that the results clearly suggest that newspaper readers probably are better able to retain knowledge of public affairs as compared with their television counterparts.

¹ Roger D. Wimmer, Joseph R. Dominick, Mass Media Research, (Belmont: Wadsworth Publishing Company, 1987), p.74.

² Ibid. p.74

CHAPTER III

RESULTS

This study included 80 subjects (40 newspaper readers and 40 television viewers); and therefore, the (N) for both subject groups was 40. (N) is significant in determining whether a study is statistically valid. In the simplest terms, an experimenter must always use an (N) of 30 or more to ensure a standard deviation is statistically valid.¹

There is also concern whether results provide a significant statistical difference between subject groups. The specific number (N) is plugged into a standard deviation formula to determine whether the scores for a particular subject group are significantly different from another subject group. If the distribution formula falls within a certain range, the results of the study are not statistically significant. This makes scientific analysis for such a study suspect. However, if the results of a study are not within a certain range, a positive or negative significant statistical difference is said to exist.

Two study questionnaires (See Appendix F and Appendix G) were administered on separate weeks in August and September of 1989 to attain 40 newspaper and 40 television subjects. The combined scores from these two separate test

dates showed that the 40 newspaper viewers (25 in test A and 15 in test B) had an average score of 9.47 questions answered correctly out of 15 questions. meanwhile, the 40 television viewers (21 in test a and 19 in test B) had an average score of 7.75 questions answered correctly out of 15 questions (See Appendix H). Subtracting the average television score from the average newspaper score showed the newspaper readers, on average, answered 1.725 more questions correctly than their television counterparts.

The central question in this thesis is whether newspaper readers or television viewers may be better equipped to retain knowledge of public affairs. A standard deviation was used to determine whether the average difference in newspaper and television scores was statistically significant. The appearance of a statistically significant difference would prove that in this particular study, newspaper readers appear better able to retain knowledge of public affairs.

The standard deviation formula used in this particular study was provided by the University of Oregon Mathematics Department:

where X=the total # of
correct answers provided
by newspaper readers.

where Y=the total # of
correct answers provided
by television viewers.

The letters n and m are set according to the total number of subjects multiplied by the total number of questions.

Plugging in the appropriate numbers and working out the formula provides a single number, which will either be within or outside five percent of a normal distribution (-1.96 and $+1.96$).

Falling within the safe range indicates there is no significant difference between the newspaper and television scores. Falling outside the safe range indicates there is a significant statistical difference between the newspaper and television scores. In this first calculation, $X=379$; $Y=310$; $n=600$; and $m=600$ (See Appendix I for calculation).

The number 4.02 is significantly outside the range of -1.96 and $+1.96$. Therefore, there was a statistically significant difference between the scores registered by newspaper readers and television viewers. The central question of this thesis was answered--newspaper readers appeared better equipped to retain knowledge of public affairs.

Other questions can also be raised. Some answers can be based on statistically valid numbers (N) greater than 30 while others cannot. The answers to questions with N 's of less than 30 can lead to inferences but cannot be validated by statistics.

The test questions and responses can also be broken down into three distinct categories based on local, national and international news items. Referring to the methodology section, test questionnaires included 15 multiple choice questions each. Each of the questionnaires included an equal number of questions based on local news items (five), national news items (five) and international news items (five). This approach allowed for the study of the Afghanistan Principle.

The Afghanistan Principle suggests that as events occur farther away from a given population, most members of that population will be less concerned with the events. The logic behind the principle is people perceive events which unfold farther away from a population to have less impact on them; therefore, these events have less have less relevance to that population.. This being the case, a given population pays attention to news items based, at least in part, on the proximity of events to them. Consequently, the majority of a population comes to know less and less about news generated farther and farther away from them because it is of little or less importance to them.

The Afghanistan Principle may have been at work and may have led to the answers provided by both newspaper and television subjects to the local, national and international questions posed in questionnaires one and two. With the

exception of one slight aberration, the scores of both newspaper subjects and television subjects declined as events originated farther and farther away from the Eugene-Springfield area (See Appendix J). In other words, scores were best on local items and worst on international items.

The larger question of whether the differences between newspaper and television scores were statistically significant on the local, national and international questions was answered by the same formula that determined the aggregate scores between the newspaper subjects and television were statistically significant.

Newspaper subjects did score better than their television counterparts on the local, national and international questions. However, the difference in international scores were not statistically significant (See Appendix K).

The numbers 3.02 and 2.67 are significantly outside the range of -1.96 and +1.96. Therefore, there were statistically significant differences between the scores registered by newspaper readers and television viewers on local and national questions in test questionnaires one and two. The number 1.82 isn't outside the range -1.96 and +1.96. Therefore, there was no statistically significant difference between the scores registered by newspaper

readers and television viewers on international questions in test questionnaires one and two (See Appendix K).

The subject of how male and female subjects performed in the study can also be approached on the basis of statistical data. The total number of female subjects and male subjects in the two questionnaires were 49 and 31 respectively. Since both (N)'s exceeded 30, any standard deviation between the two sexes can be validated by statistics. The same formula used in the preceding pages was implemented once again (See Appendix L and M).

The number -5.99 is significantly outside the range of -1.96 and +1.96. Therefore, there was a statistically significant difference between the scores registered by male and female subjects. Men were performing much better than women on information retention of news items in both newspaper and television categories for test questionnaires one and two.

¹ Frederick J. Gravetter, Larry B. Wallnau, Statistics for the Behavioral Sciences, (St. Paul: West Publishing Company, 1988), p.223.

CHAPTER IV

ANALYSIS

An accumulation of facts is a trivial pursuit unless it can be put into thought. Therefore, an analysis of the results in this study is necessary. The study shows newspaper readers may be better equipped to retain current public affairs information. There are some factors which can support this finding.

Newspaper readers must be active participants in acquiring information. Readers must decode the symbols on the printed page to read an article. Television news viewers, on the other hand, are using a passive medium. Words and images flash across a screen with no effort on the part of the audience. This lack of participation can lead to a lack of attentiveness, and knowledge on a given subject may never be obtained by the television news viewer or soon forgotten. Readers of newspapers also forget information but participation in the information gathering process may improve a reader's ability to recall information which a passive television viewer may not remember.

The inherent passivity in watching a television may also lead to a viewer's distraction during a news program. Unlike the newspaper reader who must make a conscious effort

to attend to symbols on a page to decipher meaning, the viewer can allow his mind to wander. The words continue to flow whether the viewer is attending to them or not.

Finally, distractions from television news content can come from television news itself. Television news, remember, is filled with "Burrissian" clutter. The theories of Larry L. Burriss suggest television news could be acting as its own worst enemy. Viewers may pay attention to graphics, stand-ups, actualities and other television news elements at the expense of attending to the news itself. Sequins could be taking from the substance of television news.

Story depth can also be seen as a contributing factor to information retention of public affairs information. A traditional newspaper contains articles which address topics and issues in greater depth than a traditional ENG (Electronic News Gathering) story:

It has frequently been noted that a full transcript of the nightly news--foreign and domestic--would not fill half of the front page of an average daily newspaper.¹

In general, the amount of information a television viewer has to work with on a given news item is tiny in comparison to the information available to a newspaper reader.

The lowering of both newspaper and television scores from the local level to the international scene suggests the Afghanistan Principle may be at work. The Afghanistan

Principle is practiced by the media itself. Whether it be an effort to give the public what it wants or an agenda-setting role, little newspaper or television news content is devoted to international matters:

It has been estimated that foreign affairs news coverage constitutes on the average only eleven percent of all stories in American newspapers in periods when there are no major crises. television programming, furthermore, is overwhelmingly oriented toward local news, not national or international news.²

With a piecemeal media diet in the area of international news items, it isn't surprising that readers and viewers would be challenged to recall information on specific foreign news items. When a limited opportunity to read or view international news, the scores newspaper readers and television receive are not surprisingly lower than for those questions dealing with the more often publicized national and local items.

The third and final item for comparison in this study is the divergent scores received by male and female subjects. A large gap in scores exists between the sexes in this study. The gap may be produced by the questions themselves.

The questions selected for this study were formulated and based solely on the amount of news coverage devoted to certain subjects by the Eugene-Springfield newspaper (The Register-Guard) and television stations (KEZI, KMTR and

KVAL). A review of the study's questions reveal a disproportionate amount of material related to political and economic matters. However, news itself is dominated by these same matters. The study questions simply reveal an inherent bias in mass media news content.

Taking this one step further, areas like politics and economics are predominantly male fields. Consequently, one might expect male subjects to perform better on these questions than female subjects. This not to say women don't possess the political savvy or business acumen to attain high-ranking political office and economic status, but rather that society frowns upon women focusing their attention in these areas.

An inherent subject pool bias may also be at work in this study. Those individuals who agreed to participate in this study probably felt comfortable about their knowledge of public affairs. Some of those contacted through RDD (Random Digit Dialing) who declined participation in the study may have felt their knowledge of public affairs was deficient. As a result, studies recruiting subjects from the general population can never obtain a completely unbiased cross-section of that population.

Furthermore, the amount of time spent with the newspaper medium or television medium was voluntarily provided by each subject. Subjects could easily

misrepresent the time they spend with their medium of choice. The newspaper is read by the better educated and the affluent. Television audiences cross all educational levels and social classes, but there is a stigma associated with watching television. The television has been described as a wasteland by critics. Subjects may have fudged the amount of time spent with the newspaper or television in order to look better to the interviewer.

There are some messages found in this study. The results suggest that the newspaper is a better conduit for the retention of current public affairs information. Nevertheless, the television is the medium of record. " 98 percent of all American households own at least one television set."³ It is now being viewed on an average of seven hours per day. Even the most avid newspaper readers in this study spent no more than two hours with the paper on a given day.

Television usage has been readily increasing since 1960. In 1960, TV Facts reported the average amount of time a television receiver was on in a U.S. household was five hours and six minutes. The publication readministered the study in 1970 and the amount of time the receiver was on had increased to five hours and 59 minutes. The study was repeated once more in 1980 and the amount of time increased again to six hours and 13 minutes.

Somewhere along the way, America began losing its knowledge of public affairs. It has been chronicled in books like Professor Allan Bloom's, The Closing of the American Mind. It has also ironically been the subject of television and news talk shows--ironic because television is often cited as a contributing factor in America's overall ignorance of public affairs.

For example, "The Oprah Winfrey Show" approached the subject in an installment called "How Dumb Are We?". The show's audience was polled and some didn't even know how many states there are in the United States (52 seemed to be a popular answer).

Ted Koppel's "ABC News Nightline" also asked Americans questions about current public affairs on a show aired on July 27, 1988. Johnny Q. Public thought the Contras and Sandinistas continue to fight in Norway. The Soviet Union was also viewed as a powerful force in the NATO alliance (North Atlantic Treaty Organization).

These findings are alarming to former Secretary of State Henry Kissinger. Kissinger believes America's deficiencies in the knowledge of current affairs stems from a poor grasp of, among other things, geography:

Americans have to learn geography because they are living in a world which they're no longer isolated, and which distances are no longer so crucial, and they simply will not make--will not be able to make sense out of what they read in their newspapers and about

decisions their government makes unless they understand some historical and above all, geographical, relationships.⁴

According to statistics, Kissinger may be giving Americans too much credit. The newspaper is being replaced by the television as the predominant medium used in the United States.

Kissinger appears correct in his assumption that Americans cannot begin to understand the current world situation because they lack knowledge of public affairs. One case in point is a survey conducted by the National Geographic Society. According to President Gilbert Grosvenor, almost half of the American population doesn't know where the Persian Gulf is and why it's strategically important to the United States. America's overall ignorance about the Persian Gulf region is appalling when one considers the recent loss of life registered by American sailors defending the United States' oil interests in the gulf.

Similarly, in a recent test developed and administered by the National Assessment of Educational Progress, 33 percent of the students tested couldn't find France on a map. The World Economic Summit was held in Paris last summer, but many of this study's subjects did not know the event took place in the French capitol.

The message I receive from these test scores is identical to that of Professor Allan Bloom--America, as a

whole isn't reading anymore. Statistics cited earlier show the majority of the nation is turning to the television set for news and information. This study suggest the medium mat be an inferior product when it comes to providing the viewer with an ability to obtain knowledge of current affairs.

The Afghanistan Principle may be contributing to this malaise:

In 1982 barely half of the American public indicated they were "very interested" in reading articles dealing with "national news" and only 45 percent indicated they were very interested" in news about the relation of the United States with other countries.⁵

Americans are seemingly uninterested in news that isn't directly related to their immediate geographic are. This tendency is a dangerous precedent to adopt. As Henry Kissinger alluded to on "Nightline", Americans will not be able to make sense of the world around them if the nation doesn't attend to all news foreign and domestic.

Future study is needed in the area. It can begin with the attempted replication of this study and its findings. This study is just part of the foundation being laid down in the field of information dissemination and retention.

This study has once again raised the question of an Afghanistan Principle. As the world becomes more interdependent the American nation isolates itself from global developments by not attending to what goes on outside U.S. borders.

An isolationist stance has been part of the American psyche in this century, but can no longer be employed. The communications age has made even the greatest distances within a moments reach of each other.

Geography was mentioned earlier in this analysis. Statistics reveal U.S. adults rank third from the lowest in geographical knowledge among industrialized nations. We are near the bottom of the ladder in other areas as well.

Certainly not all of this criticism can be leveled upon the medium of record--the television. But as Marshall McLuhan put it--"the medium is the message"--the message isn't getting through "vid-a vid" the television set. More study should be focussed on whether television can reinforce the Afghanistan Principle.

The gender gap found in this study is worth further examination. A study of individual questions pertaining to newspaper and television stories could be analyzed to see which subjects are male oriented, which can be classified as female oriented and which can be classified as androgynous. This examination could explain why a majority of men and women are predisposed to follow and correctly answer certain questions about certain news topics. It might even behoove the media to conduct its own studies in this area. Media managers could learn from the study and structure their news presentation to reach the broadest audience base possible.

Another area of study could ask subjects to take part in a longitudinal study. The design would test subjects on news items over an extended period of time to see what the long-term recall is for newspaper readers and television viewers. From the findings codified in this study, I would hypothesize that the Afghanistan Principle and newspaper superiority over television would remain constant over time. However, that issue is best left to another experimenter.

The record of increased television usage followed by the publication TV Facts since 1960 is timely. It's been said that America lost its innocence after the Kennedy Assassination--one of the first major events shown on TV. In 1963, television moved toward becoming the medium of record. In 1963, America may have moved toward its losing its ability to acquire and retain information critically. The memory moved toward becoming a fleeting moment which mirrors the flashing pictures and sounds provided by the cathode ray tube. The cathode ray tube may be the conduit by which our knowledge drained away.

¹ Charles C. Kegley, Eugene R. Wittkopf, American Foreign Policy Pattern and Process, (New York: St. Martins Press, 1987), p.318.

² Ibid. p.318

³ Ibid. p.316

⁴ Henry Kissinger, Interviewed by Ted Koppel on "Nightline" Story: Geography, July 27, 1988.

⁵ Charles C. Kegley, Eugene R. Wittkopf, American Foreign Policy Pattern and Process, (New York: St. Martins Press, 1987), p.288

PRE-TEST THESIS QUESTIONNAIRE:

APPENDIX A

1. DO YOU WATCH TV, READ THE PAPER, OR DO BOTH? _____
 2. ON A DAILY BASIS (HOW OFTEN)? _____
 3. FOR HOW LONG (IN QUARTER HOURS)? _____
-
1. THE MORGAN-NICOLAI STRIKE HAS BEEN GOING ON FOR... A. 1 WEEK B. 1 MONTH
C. 1 YEAR D. 6 MONTHS E. 72 HOURS
 2. NASA COMMEMORATED WHAT EVENT LAST WEEK? A. THE FIRST MOON WALK
B. ITS RETURN TO SPACE C. THE FATAL CHALLENGER MISSION D. THE LAUNCH OF
SKYLAB E. THE APOLLO SEVEN ASTRONAUTS MARRED BUT SUCCESSFUL REENTRY
 3. LAST WEEK PRESIDENT BUSH SPOKE WITH _____ ABOUT SOVIET RELATIONS.
A. MIKHAIL GORBACHEV B. GEORGE SHULTZ C. ANDREI GROMYKO D. VLADAMIR
POSNER E. HENRY KISSINGER
 4. WHO IS THE MAYOR OF SPRINGFIELD? A. BILL MORRISETTE B. RICH GORMAN
C. RON LeBLANC D. BILL DWYER E. FREEMAN HOMER
 5. WHO IS THE EUGENE SCHOOL DISTRICT SUPERINTENDENT? A. JIM HOWARD
B. MARGARET NICHOLS C. BOB BENNET D. PEG JOLIN E. DENNIS BRODIGAN
 6. ALASKA HAS BEEN IN THE NEWS LATELY BECAUSE OF... A. THE IDITAROD SLED RACE
B. A RECORD COLD SPELL C. JOINT U.S.-CANADIAN MILITARY ~~MANEUVERS~~ ^{BERING} THERE
D. VOLCANIC ACTIVITY IN THE ~~US-Soviet~~ STRAIT E. AN ENVIRONMENTALLY HARMFUL
OIL SPILL ALONG THE PIPELINE
 7. WHAT COUNTRY IS ACCUSED OF ASSISTING LYBIA IN THE CONSTRUCTION OF A CHEMICAL
WEAPON'S PLANT? A. WEST GERMANY B. SYRIA C. ALGERIA D. IRAN E. THE
SOVIET UNION
 8. WHO IS ~~FRANKE~~ ^{MICHAEL} FRANKE? A. A EUGENE CITY COUNCIL MEMBER B. A GAY RIGHTS
ACTIVIST C. A SLAIN STATE CORRECTIONS OFFICER D. A CONVICTED MURDERER
LODGED IN SALEM E. THE STATE FIRE MARSHAL.

9. WHAT WORLD FAMOUS ARTIST DIED RECENTLY? A. SISTER EDEL B. JOHN POWELL
C. YVGENI YEVERTSHENKO D. SALVADOR DALI E. JAMIE WYTHE
10. WHERE IS KABUL? A. SAUDIA ARABIA B. TURKEY C. AFGHANISTAN D. JORDAN
E. LEBANNON
11. WHO WILL BE THE NEXT DEMOCRATIC NATIONAL COMMITTEE CHAIR? A. RON BROWN
B. PAUL KIRK JR. C. REP. JAMES JONES D. REP. MICHAEL BARNES
E. MICHIGAN CHAIRMAN RICHARD WIENER
12. AFTER AN EXTENSIVE POLICE INVESTIGATION OF AN INFANT DEATH IN SPRINGFIELD,
IT WAS DETERMINED THAT THE BOY DIED OF... A. SEVERE HEAD CONTUSIONS
B. ASPHIXIATION C. CONGENITAL HEART FAILURE D. UNDETECTED LEUKEMIA
E. SUDDEN INFANT DEATH SYNDROME.
13. WHO IS HELMUT KOHL? A. A NAZI WAR CRIMINAL B. THE LAST OF THE WWI
FLYING ACES C. THE AMBASSADOR TO EAST GERMANY D. A GERMAN PHYSISIST
E. WEST GERMANY'S CHANCELLOR
14. OLYMPIC SILVER MEDALIST BRUCE KIMBALL HAS... A. BEEN DIAGNOSED WITH AIDS
B. BEEN SENTANCED TO A JAIL TERM ON CHARGES OF MANSLAUGHTER C. BEEN
CHOSEN SPORTMAN OF THE YEAR BY UPI D. BEEN KILLED IN A DIVING MISHAP
E. BEEN ADMITTED TO A DRUG REHAB CENTER IN GAINESVILLE
15. WHERE IS BOGOTIA? A. COLUMBIA B. COSTA RICA C. PERU D. BRAZIL
E. GUATEMALA

Thank
you.

PRE-TEST THESIS QUESTIONNAIRE: 2b

APPENDIX B

1. HOW DO YOU RECEIVE MOST OF YOUR NEWS?

_____ THE PAPER _____ THE TELEVISION

2. IF YOU SELECTED THE PAPER (T.V.), HOW MUCH TIME DO YOU SPEND READING (VIEWING) NEWS EVERY WEEK?

_____ LESS THAN AN HOUR _____ 1 TO 2 HOURS _____ 2 TO 3 HOURS

_____ 3 TO 4 HOURS _____ 4 TO 5 HOURS _____ 5 TO 6 HOURS

_____ 6 TO 7 HOURS _____ 7 HOURS OR MORE

1. WHO IS THE MAYOR OF EUGENE? A. BRIAN OBIE B. EMILY SCHUE C. FREEMAN
HOLMER D. JEFF MILLER E. BILL MORRISETTE

2. WHO IS UNDERGOING SENATE CONFIRMATION AS DEFENSE SECRETARY? A. FRANK
CARLUCCI B. CASPER WEINBERGER C. JOHN TOWER D. SAM NUNN E. JIM
WRIGHT

3. WHAT COUNTRY IS ACCUSED OF ASSISTING LIBYA IN THE CONSTRUCTION OF A
NUCLEAR WEAPON'S PLANT?
A. WEST GERMANY B. SYRIA C. ALGERIA D. IRAN E. THE SOVIET UNION

4. KITTY DUKAKIS WAS IN THE NEWS RECENTLY. WHY? A. SHE'S SIGNED A BOOK
CONTRACT WITH DOUBLEDAY B. SHE HAS A DRINKING PROBLEM C. SHE HAS
DECIDED TO RUN FOR PUBLIC OFFICE D. SHE'S THE NEW HOST OF A BOSTON
TALK RADIO SHOW E. SHE'S FILING FOR A DIVORCE

5. WHERE IS KABUL? A. SAUDIA ARABIA B. TURKEY C. AFGHANISTAN D. JORDAN
E. LEBANNON

6. ALASKA WAS IN THE NEWS RECENTLY BECAUSE OF... A. THE IDITAROD SLED RACE
B. A RECORD COLD SPELL C. JOINT U-S CANADIAN MILITARY MANEUVERS
D. VOLCANIC ACTIVITY IN THE ~~BOZEMAN~~^{BEKING} STRAIT E. AN ENVIRONMENTALLY
HARMFUL OIL SPILL ALONG THE PIPELINE
7. PAT SCHROEDER CANCELED HER APPEARANCE WHERE LAST WEEK? A. THE OREGON
FORESTS IN 20-10 CONFERENCE B. THE INTERNATIONAL NUCLEAR FREE ZONE
CONFERENCE C. THE OREGON RIGHT TO LIFE CONFERENCE D. THE OREGON WOMEN
IN POLITICS CONFERENCE E. THE WILLAMETTE AIDS COUNCIL HOSPICE SYMPOSIUM
8. WHERE IS BOGOTA? A. COLOMBIA B. COSTA RICA C. PERU D. BRAZIL
E. GUATEMALA
9. WHO IS BOBBY GREEN? A. EUGENE'S FIRST BLACK CITY COUNCIL MEMBER
B. EUGENE'S POLICE CHIEF C. A LOCAL ENVIRONMENTALIST D. EUGENE'S
CITY MANAGER E. THE ARTISTIC DIRECTOR OF THE EUGENE BALLET
10. PRESIDENT BUSH BEGAN TO ATTACK WHAT PRESSING NATIONAL PROBLEM LAST WEEK?
A. THE NATION'S DRUG PROBLEM B. THE HOMELESS PROBLEM C. THE HEALTH
INSURANCE CRISIS D. THE S&L CRISIS E. THE ILLITERACY RATE
11. WHO IS THE CHANCELLOR OF HIGHER ED? A. DAVE FEDANKE B. BILL DWYER
C. "BUD" DAVIS D. THOMAS BATLETT E. RON LEBLANC
12. WHO IS MICHAEL FRANKE? A. A EUGENE CITY COUNCIL MEMBER B. A GAY RIGHTS
ACTIVIST C. A SLAIN STATE CORRECTION OFFICER D. A CONVICTED MURDER
LODGED IN SALEM E. THE FIRE MARSHAL

13. WHO IS THE SOVIET FOREIGN MINISTER? A. ANDREI GROMYKO B. VLADAMIR
POSNER C. YVGENI YEVTERSHEKNO D. EDUARD SHEVARDNADZE E. SERGEI
GORIEFF
14. EUGENE HAS A SISTER CITY IN IRKUTSK AND IN... A. KAKEGAWA, JAPAN
B. SOEUL, SOUTH KOREA C. LENINGRAD, U.S.S.R. D. FLORENCE, ITALY
E. HARBIN, CHINA
15. A COUP RECENTLY OCCURRED IN... A. SWAZILAND B. ZAMBIA C. DJIBOUTI
D. PARAGUAY E. THE UNITED ARAB REPUBLIC

THANK
YOU

PRE-TEST THESIS QUESTIONNAIRE: 3

APPENDIX C

1. HOW DO YOU RECEIVE MOST OF YOUR NEWS?

_____ THE PAPER _____ THE TELEVISION

2. IS YOU SELECTED THE PAPER (T.V.), HOW MUCH TIME DO YOU SPEND READING (VIEWING) NEWS EVERY WEEK?

_____ LESS THAN AN HOUR _____ 1 TO 2 HOURS _____ 2 TO 3 HOURS

_____ 3 TO 4 HOURS _____ 4 TO 5 HOURS _____ 5 TO 6 HOURS

_____ 6 TO 7 HOURS _____ 7 HOURS OR MORE

1. WHO IS THE ~~MEMBER~~ OF THE U-S HOUSE FACING ETHICS VIOLATIONS?
 A. MAJORITY LEADER THOMAS FOLEY OF WASHINGTON B. ASSISTANT MAJORITY LEADER TONY COELHO OF CALIFORNIA C. HOUSE SPEAKER JIM WRIGHT OF TEXAS
2. EUGENE'S SOVIET SISTER CITY IS... A. TASHKENT B. LENINGRAD
 C. IRKUTSK D. NAHODKA E. KIEV
3. WHERE IS LA PAZ? A. MEXICO B. BOLIVIA C. BRAZIL
 D. SPAIN E. GUATEMALA
4. IN THE RECENT ELECTION... A. BALLOT MEASURE ONE PASSED AS WELL AS THE 4-J LEVY B. BALLOT MEASURE ONE FAILED AS WELL AS THE 4-J LEVY C. BALLOT MEASURE ONE PASSED BUT THE 4-J LEVY FAILED D. BALLOT MEASURE ONE FAILED BUT THE 4-J LEVY PASSED E. THERE WAS NO BALLOT MEASURE ONE

5. WHO IS CHINA'S PREMIER? A. WAN LI B. ZHAO ZIYANG
C. DENG XIAOPING D. LI PENG E. NONE OF THE ABOVE
6. WHICH STATE OFFICIAL MET WITH REPRESENTATIVES FROM
CHEVRON AND MOBIL OIL COMPANIES THIS WEEK?
A. ATTORNEY GENERAL DAVE FROHNMAYER B. HOUSE MAJORITY
LEADER DAVID DIX C. STATE HEALTH DIVISION ADMINISTRATOR
KHRISTINE GEBBIE D. GOVERNOR NEIL GOLDSCHMIDT E. BOTH
Co. TURNED DOWN REQUESTS TO MEET WITH ANYONE
7. A TEACHER'S STRIKE HAS JUST ENDED IN... A. SEATTLE, WASH.
B. TACOMA, WASH. C. SAN DIEGO, CA. D. YUBA CITY, CA.
E. LOS ANGELES, CA.
8. THE NATION'S DRUG CZAR (tsar) IS ... A. WILLIAM BENNET
B. VICE PRESIDENT DAN QUAYLE C. HOWARD BAKER D. BUSH
HAS YET TO SELECT ONE E. MARLON FITZWATER
9. THE U-S HAS JUST ~~ANNOUNCED~~ *ANNOUNCED* THAT THEY MAY OPT FOR TRADE
SANCTIONS AGAINST INDIA, BRAZIL AND... A. THE SOVIET UNION
B. SOUTH AFRICA C. PANAMA D. JAPAN E. CHINA
10. WHO IS THE CURRENT U-S SECRETARY OF STATE? A. BARBARA
ROBERTS B. HOWARD BAKER C. JAMES BAKER D. SAM NUNN
E. SAM RAYBURN
11. WHO IS THE CURRENT CHANCELLOR OF HIGHER EDUCATION?
A. WILLIAM "BUD" DAVIS B. MYLES BRAND C. THOMAS BARTLETT
D. VERN DUNCAN E. LANE DEBOSE

12. WHO IS GUILLERMO ENDARA? A. A CONTRA REBEL LEADER
B. RIGHT HAND MAN TO DANIEL ORTEGA C. EL PRESIDENTE
DE MEXICO D. ~~OPPOSITE~~ ^{OPPOSITION} PRESIDENTIAL CANDIDATE TO
MANUEL ANTONIO NORIEGA E. THE U.S. AMBASSADOR TO
PARAGUAY
13. A RECENT NATIONAL AIDS STUDY HAS FOUND... A. ONE OF
EVERY THOUSAND COLLEGE STUDENTS HAS AIDS B. ONE OF
EVERY TEN THOUSAND STUDENTS C. TWO OF EVERY THOUSAND
D. ONE OF EVERY ONE HUNDRED THOUSAND E. ONE IN A
MILLION
14. WHAT IS THE YELLOW RIBBON COALITION? A. A GROUP OF
ENVIRONMENTALISTS FOR THE SPOTTED OWL B. A GROUP OF
AIDS ACTIVISTS C. TIMBER INDUSTRY SUPPORTERS D. EXXON
VALDEZ PROTESTORS E. SUPPORTERS OF THE COQUILLE INDIANS
RIGHT TO ANCIENT FISHING GROUNDS
15. THE SOVIET UNION'S POLITICAL MAVERICK HAS BECOME...
A. BORIS YELTSIN B. YURI OSIPYAN C. ~~MIKHAIL~~ GORBACHEV
D. ANDREI GROMYKO E. LEV LIGACHEV

THANKS FOR YOUR HELP TODAY!!!



RANDOM DIGIT DIALING NUMBERS

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344-9568
344-9679
344-9790
334-9901
222
689-9572
689-9794
333
342-4087
342-4420
342-4753
342-5086
342-5419
342-5752
342-6085
342-6418
342-6751
342-7084
342-7417
342-7750
342-8083
342-8416
342-8749
342-9082
342-9415
342-9748
444
485-1111
485-1555
485-1999
485-2443
485-2887
485-3331
485-3775
485-4219
485-4663
485-5107
485-5551
485-5995
485-6434
485-7327
485-7771

APPENDIX E

NUMBER _____

CALL #1 ____ #2 ____ #3 ____

CODE

- 1 COMPLETED INTERVIEW
- 2 BUSY
- 3 NO ANSWER
- 4 REFUSAL
- 5 APPOINTMENT TO CALL AGAIN
- 6 NON WORKING # (OUT OF ORDER, DISCONNECTED, NONEXISTENT)
- 7 NONRESIDENTIAL
- 8 REACHED BUT RESPONDENT UNAVAILABLE, UNUSABLE (CHILD, PHYSICAL PROBLEM)

PILOT TEST QUESTIONNAIRE: 1

APPENDIX F

1. HOW DO YOU RECEIVE MOST OF YOUR NEWS?

_____ THE PAPER _____ THE TELEVISION

2. IF YOU SELECTED THE PAPER (T.V.), HOW MUCH TIME DO YOU SPEND READING (VIEWING) EACH WEEK?

_____ LESS THAN AN HOUR _____ 1 TO 2 HOURS _____ 2 TO 3 HOURS
 _____ 3 TO 4 HOURS _____ 4 TO 5 HOURS _____ 5 TO 6 HOURS
 _____ 6 TO 7 HOURS _____ 7 HOURS OR MORE

1. OREGON RESIDENTS ARE BEING INTRODUCED TO A NEW LOTTERY GAME THIS FALL BASED ON...

- A. PRO BASEBALL B. PRO FOOTBALL C. PRO BASKETBALL
 D. VIDEO POKER E. HORSE AND GREYHOUND RACING

2. CAPTAIN ^{Joseph} ~~REDACTED~~ HAZLEWOOD IS FAMOUS FOR...

- A. PILOTING THE SECRET SPACE SHUTTLE MISSION
 B. HEROICALLY PILOTING FLIGHT 232 INTO SIOUX CITY, IOWA
 C. PILOTING THE TANKER EXXON VALDEZ

3. THE EASTERN OREGON FIRES THAT BURNED NEARLY 90-THOUSAND ACRES THIS SUMMER WERE TOUCHED OFF BY...

- A. LIGHTNING STIKES B. A CARELESS SMOKER C. A CAMPER'S CIGARETTE
 D. MALFUNCTIONING LOGGING EQUIPMENT E. AN AN ARSONIST

4. POLITICAL LEADERSHIP HAS CHANGED IN ALL BUT ONE OF THE FOLLOWING COUNTRIES THIS SUMMER?
- A. CHINA B. IRAN C. POLAND D. THE SOVIET UNION
- E. SOUTH AFRICA
5. THE HOSTAGE CRISIS IN LEBANON HAS BEEN HIGHTENED BY THE ABDUCTION OF SHEIK OBIED BY THE...
- ISLAMIC JIHAD B. SHITE MOSLEMS C. THE UNITED STATES
- D. ISRAELI COMMANDOS
6. ADDIS ABABA IS THE CAPITOL OF... A. KENYA B. ETHIOPIA
- C. THE SUDAN D. DJIBOUTI E. BERUIT
7. PUBLIC OPINION POLLS SHOW THAT THE FOLLOWING IS THE #1 ISSUE IN THE MINDS OF AMERICANS...
- A. ABORTION B. THE SAVING AND LOAN CRISIS C. DRUGS
- D. AIDS E. AIRLINE SAFETY
8. WHO IS MICHAEL FRANCKE... A. A EUGENE CITY COUNCIL MEMBER
- B. A GAY RIGHTS ACTIVIST C. A SLAIN STATE CORRECTIONS OFFICER D. A CONVICTED MURDERER LODGED IN SALEM
- E. THE STATE FIRE MARSHAL
9. WHAT BASEBALL ^{FIGURE} ~~PLAYER~~ IS IN TROUBLE FOR ALLEGED GAMBLING VIOLATIONS?
- A. DAVE DRAVECKY B. PETE ROSE C. JIM ABBOTT
- D. BART GIAMATTI

10. THE NATION'S DRUG CZAR IS... A. WILLIAM BENNETT
B. VICE PRESIDENT DAN QUAYLE C. HOWARD BAKER
D. THERE IS NONE E. MARLON FITZWATER
11. THE WORLD ECONOMIC SUMMIT WAS HELD IN WHAT EUROPEAN CITY THIS SUMMER?
A. GENEVA B. BONN C. STOCKHOLM D. FRANKFURT
E. PARIS
12. WHICH LANE COUNTY COMMISSIONER HAS RESIGNED...
A. JERRY RUST B. ELLIE DUMDI C. BILL ROGERS
D. JOHN BALL E. STEVE CORNACCHIA
13. WHAT IS THE YELLOW RIBBON COALITION... A. A GROUP OF ENVIRONMENTALISTS B. A GROUP OF AIDS ACTIVISTS
C. TIMBER INDUSTRY SUPPORTERS D. EXXON VALDEZ PROTESTORS
E. SUPPORTERS OF THE COQUILLE INDIANS RIGHT TO ANCIENT FISHING GROUNDS
14. THE SOVIET UNION'S POLITICAL MAVERICK HAS BECOME...
A. BORIS YELTSIN B. YURI OSIPYAN C. ANDREI GROMYKO
D. LEV LIGACHEV E. YVGENI YEVTERSHENKO
15. THE CONTROVERSIAL WEBSTER DECISION BY THE U-S SUPREME COURT SURROUNDS... A. ABORTION B. CAPITOL PUNISHMENT
C. ILLEGAL SEARCH AND SEIZURE D. LIBEL E. MERCY KILLING

PILOT TEST QUESTIONNAIRE: 2

APPENDIX 6

1. HOW DO YOU RECEIVE MOST OF YOUR NEWS?

_____ THE PAPER _____ THE TELEVISION

2. IF YOU SELECTED THE PAPER (T.V.), HOW
HOW MUCH TIME DO YOU SPEND READING (VIEWING)
EACH DAY?

_____ LESS THAN AN HOUR _____ 1 TO 2 HOURS _____ 2 TO 3 HOURS
 _____ 3 TO 4 HOURS _____ 4 TO 5 HOURS _____ 5 TO 6 HOURS
 _____ 6 TO 7 HOURS _____ 7 HOURS OR MORE

1. OREGON RESIDENTS HAVE BEEN INTRODUCED TO A NEW LOTTERY GAME
THIS FALL BASED ON...

A. PRO BASEBALL B. PRO FOOTBALL C. PRO BASKETBALL
 D. VIDEO POKER E. HORSE AND GREYHOUND RACING

2. CAPTAIN JOSEPH HAZLEWOOD IS FAMOUS FOR...

A. PILOTING THE SECRET SPACE SHUTTLE MISSION
 B. HEROICALLY PILOTING FLIGHT 232 INTO SIOUX CITY, IOWA
 C. PILOTING THE TANKER EXXON VALDEZ

3. THE EASTERN OREGON FIRES THAT BURNED NEARLY 90-THOUSAND
ACRES THIS SUMMER WERE TOUCHED OFF BY...

A. LIGHTNING STRIKES B. A CAMPER'S CIGARETTE C. AN ARSONIST
 D. MALFUNCTIONING LOGGING EQUIPMENT

4. POLITICAL LEADERSHIP HAS CHANGED IN ALL BUT ONE OF THE
FOLLOWING COUNTRIES THIS SUMMER?

A. CHINA B. IRAN C. POLAND D. THE SOVIET UNION
 E. SOUTH AFRICA

5. WHAT COUNTRY IS FACING A MAJOR EXODUS OF CITIZENS?
A. HUNGARY B. WEST GERMANY C. POLAND D. EAST GERMANY
E. BOLGARIA
6. BOGATA IS THE CAPITOL OF... A. COSTA RICA B. COLOMBIA
C. PERU D. BRAZIL E. GUATEMALA
7. PUBLIC OPINION POLLS SHOW THAT THE FOLLOWING IS THE #1 ISSUE
IN THE MINDS OF AMERICANS?
A. ABORTION B. THE SAVINGS AND LOAN CRISIS C. DRUGS
D. AIDS E. AIRLINE SAFETY
8. WHO IS MICHAEL FRANCKE? A. A EUGENE CITY COUNCIL MEMBER
B. A SLAIN STATE CORRECTIONS OFFICER C. A CONVICTED MURDERER
D. THE STATE FIRE MARSHAL
9. WHAT BASEBALL FIGURE WAS BANNED FROM BASEBALL THIS SUMMER?
A. DAVE DRAVECKY B. BART GIAMATTI C. JIM ABBOTT D. PETE
ROSE
10. THE NATION'S DRUG CZAR IS... A. WILLIAM BENNETT B. VICE
PRESIDENT DAN QUAYLE C. HOWARD BAKER D. THERE IS NONE
JAMES BAKER
11. WHAT HURRICANE HAS BLASTED INTO THE ANTILLES? A. GABRIELE
B. GILBERT C. HUGO
12. WHICH OF THE FOLLOWING IS NOT TRUE ABOUT RICHARD CARPER...
A. HE HAS SUCCESSFULLY COMPLETED HIS CROSS COUNTRY WALK
B. HE WAS ARRESTED TWICE DURING HIS WALK
C. HIS WIFE HAS OBTAINED A RESTRAINING ORDER AGAINST HIM
D. HE MET WITH BARBARA BUSH
E. ALL OF THE ABOVE ARE TRUE STATEMENTS

13. WHAT IS THE YELLOW RIBBON COALITION... A. A GROUP OF ENVIRONMENTALISTS B. TIMBER INDUSTRY SUPPORTERS C. EXXON VALDEZ PROTESTORS D. SUPPORTERS OF OREGON INDIAN TRIBES
14. THE SOVIET UNION'S POLITICAL MAVERICK HAS BECOME... A. BORIS YELTSIN B. YURI OSIPYAN C. ANDREI GROMYKO D. IGOR LIGACHEV E. YVGENI YEVTERSHEKNO
15. WHAT ~~TRAGIC EVENT~~ ROCKED LOUISVILLE, KENTUCKY RECENTLY? A. A FLASH FLOOD B. A MUDSLIDE C. A COLLAPSED BRIDGE D. A MURDEROUS SHOOTING SPREE E. A NIGHT CLUB FIRE

APPENDIX H

NEWSPAPER VERSUS TELEVISION SCORES

SUBJECT PAPER	SUBJECT TV
1: 05	04
2: 06	04
3: 04	08
4: 12	04
5: 11	09
6: 07	06
7: 10	06
8: 13	05
9: 09	07
10: 10	06
11: 07	05
12: 08	09
13: 10	06
14: 13	08
15: 08	09
16: 12	05
17: 08	08
18: 07	04
19: 09	11
20: 07	09
21: 07	08*
22: 10	10
23: 14	10
24: 08	09
25: 09	07

26: 12	12
27: 11	09
28: 12	11
29: 11	07
30: 11	10
31: 09	15
32: 06	08
33: 12	07
34: 13	01
35: 12	11
36: 10	11
37: 05	10
38: 08	08
39: 13	07
40: 10	06
379/40=	310/40
9.475	7.75

APPENDIX I

$$\textcircled{1} \quad \frac{379}{600} - \frac{310}{600}$$

$$\sqrt{\left(\frac{379+310}{1200}\right) \left(\frac{1-379+310}{1200}\right) (1200)}$$

$$360,000$$

$$\textcircled{2} \quad \frac{379}{600} - \frac{310}{600}$$

$$\sqrt{\left(\frac{689}{1200}\right) \left(\frac{1-689}{1200}\right) (1200)}$$

$$360,000$$

$$\textcircled{3} \quad \frac{379}{600} - \frac{310}{600}$$

$$\sqrt{0.574166 (1-0.574166) (1200)}$$

$$360,000$$

$$\begin{array}{r} 379 \\ - 310 \\ \hline 600 \\ \hline \sqrt{0.0008149} \end{array}$$

$$\begin{array}{r} 379 \\ - 310 \\ \hline 600 \\ \hline \sqrt{293.3918} \\ \hline \hline 360,000 \end{array}$$

$$\begin{array}{r} 379 \\ - 310 \\ \hline 600 \\ \hline \sqrt{0.574166 (0.425834) (1200)} \\ \hline \hline 360,000 \end{array}$$

$$\textcircled{+} \quad \begin{array}{r} 379 \\ \hline 600 \end{array} - \begin{array}{r} 310 \\ \hline 600 \end{array}$$

$$0.0285481$$

$$\textcircled{8} \quad \begin{array}{r} 69 \\ \hline 600 \end{array}$$

$$0.0285481$$

$$\textcircled{9} \quad \begin{array}{r} 0.115 \\ \hline 0.0285481 \end{array}$$

ANSWER: $\textcircled{4.02} / 82891$

APPENDIX J
AFGHANISTAN PRINCIPLE SCORES

PAPER SUBJECTS (TEST A)	%
L: R: 98 W: 27= 125	.784
N: R: 81 W: 44= 125	.648
I: R: 46 W: 79= 125	.368
T: 225 + 150= 375	

PAPER SUBJECTS (TEST B)	%
L: R: 54 W: 21= 075	.72
N: R: 56 W: 19= 075*	.7466*
I: R: 47 W: 28= 075	.6266
T: 157 + 68= 225	

TLVSN SUBJECTS (TEST A)	%
L: R: 66 W: 39= 105	.6285
N: R: 54 W: 51= 105	.5142
I: R: 21 W: 84= 105	.20
T: 141 + 174= 315	

TLVSN SUBJECTS (TEST B)	%
L: R: 58 W: 37= 095	.6105
N: R: 57 W: 38= 095	.60
I: R: 54 W: 41= 095	.5684
T: 169 + 116= 285	

APPENDIX K
LOCAL

$$\textcircled{1} \quad \frac{152}{200} - \frac{124}{200}$$

$$\sqrt{\left(\frac{152+124}{400}\right) \left(\frac{1-152+124}{400}\right) (400)}$$

$$40,000$$

$$\textcircled{2} \quad \frac{152}{200} - \frac{124}{200}$$

$$\sqrt{\left(\frac{276}{400}\right) \left(\frac{1-276}{400}\right) (400)}$$

$$40,000$$

$$\textcircled{3} \quad \frac{152}{200} - \frac{124}{200}$$

$$\sqrt{(0.69) (1-0.69) (400)}$$

$$40,000$$

$$\begin{array}{r} \sqrt{10.002139} \\ \hline 152 - 124 \\ \hline 200 \quad 200 \end{array}$$

$$\begin{array}{r} \sqrt{85.56} \\ \hline 152 - 124 \\ \hline 200 \quad 200 \end{array}$$

$$\begin{array}{r} \sqrt{(0.69)(0.31)(400)} \\ \hline 152 - 124 \\ \hline 200 \quad 200 \end{array}$$

APPROVED BY
DATE: _____

$$\begin{array}{r} \textcircled{7} \quad \underline{152} - \underline{124} \\ \underline{200} \quad \underline{200} \\ 0.0462493 \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad \underline{28} \\ \underline{200} \\ 0.0462493 \end{array}$$

$$\begin{array}{r} \textcircled{9} \quad \underline{0.14} \\ 0.0462493 \end{array}$$

ANSWER: 3.02/70728

APPENDIX K
NATIONAL

$$\textcircled{1} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{\left(\frac{137+111}{400}\right)\left(\frac{1-137+111}{400}\right)(400)}$$

$$40,000$$

$$\textcircled{2} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{\left(\frac{248}{400}\right)\left(\frac{1-248}{400}\right)(400)}$$

$$40,000$$

$$\textcircled{3} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{(0.62)(1-0.62)(400)}$$

$$40,000$$

$$\textcircled{4} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{(0.62)(0.38)(400)}$$

$$40,000$$

$$\textcircled{5} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{\frac{94.24}{40,000}}$$

$$\textcircled{6} \quad \frac{137}{200} - \frac{111}{200}$$

$$\sqrt{0.002356}$$

APPENDIX A
INTERNATIONAL

$$\textcircled{7} \quad \begin{array}{r} 137 \\ \hline 200 \end{array} - \begin{array}{r} 111 \\ \hline 200 \end{array}$$

$$0.0485386$$

$$\textcircled{8} \quad \begin{array}{r} 26 \\ \hline 200 \end{array}$$

$$0.0485386$$

$$\textcircled{9} \quad \begin{array}{r} 0.13 \\ \hline 0.0485386 \end{array}$$

ANSWER: $\textcircled{2.67}/82808$

APPENDIX K
INTERNATIONAL

$$\textcircled{1} \quad \frac{93}{200} - \frac{75}{200}$$

$$\sqrt{\left(\frac{93+75}{400}\right)\left(\frac{1-93+75}{400}\right)(400)}$$

$$40,000$$

$$\textcircled{2} \quad \frac{93}{200} - \frac{75}{200}$$

$$\sqrt{\left(\frac{168}{400}\right)\left(\frac{1-168}{400}\right)(400)}$$

$$40,000$$

$$\textcircled{3} \quad \frac{93}{200} - \frac{75}{200}$$

$$\sqrt{(0.42)(1-0.42)(400)}$$

$$40,000$$

$$\begin{array}{r} \sqrt{0.002456} \\ \hline 93 - 75 \\ \hline 200 \\ \hline 200 \end{array}$$

$$\begin{array}{r} \sqrt{40,000} \\ \hline 97.44 \\ \hline 93 - 75 \\ \hline 200 \\ \hline 200 \end{array}$$

$$\begin{array}{r} \sqrt{(0.42)(0.58)(400)} \\ \hline 40,000 \\ \hline 93 - 75 \\ \hline 200 \\ \hline 200 \end{array}$$

$$\textcircled{7} \quad \frac{93}{200} - \frac{75}{200}$$

$$0.0493558$$

$$\textcircled{8} \quad \frac{18}{200}$$

$$0.0493558$$

$$\textcircled{9} \quad \frac{0.09}{0.0493558}$$

ANSWER: 1.82/34939

FEMALE SCORES (ALL TESTS)

1. 04
2. 04
3. 04
4. 06
5. 06
6. 05
7. 07
8. 06
9. 05
10. 09
11. 06
12. 08
13. 09
14. 05
15. 08
16. 04
17. 11
18. 09
19. 10
20. 07
21. 09
22. 07
23. 08
24. 10
25. 08
26. 07
27. 09
28. 13
29. 10
30. 12
31. 04
32. 06
33. 05
34. 06
35. 07
36. 10
37. 11
38. 01
39. 07
40. 08
41. 07
42. 07
43. 09
44. 08
45. 10
46. 12
47. 06
48. 11
49. 11

T= 372

MALE SCORES (ALL TESTS)

1. 09
2. 08
3. 09
4. 04
5. 14
6. 08
7. 07
8. 08
9. 12
10. 13
11. 10
12. 07
13. 11
14. 10
15. 10
16. 12
17. 09
18. 11
19. 10
20. 15
21. 11
22. 08
23. 12
24. 11
25. 12
26. 09
27. 13
28. 12
29. 05
30. 13
31. 10
T= 317

APPENDIX M

$$\textcircled{1} \quad \frac{372}{735} - \frac{317}{465}$$

$$\sqrt{\left(\frac{372+317}{1200}\right)\left(\frac{1-372+317}{1200}\right)(1200)}$$

$$341,775$$

$$\textcircled{2} \quad \frac{372}{735} - \frac{317}{465}$$

$$\sqrt{\left(\frac{689}{1200}\right)\left(\frac{1-689}{1200}\right)(1200)}$$

$$341,775$$

$$\textcircled{3} \quad \frac{372}{735} - \frac{317}{465}$$

$$\sqrt{(0.5741666)(1-0.5741666)(1200)}$$

$$341,775$$

$$\textcircled{4} \quad \begin{array}{r} 372 \\ 735 \overline{) 2534} \\ \underline{2190} \\ 344 \end{array}$$

$$\sqrt{(0.5741666)(0.4258334)} (1200)$$

$$341,775$$

$$\textcircled{5} \quad \begin{array}{r} 372 \\ 735 \overline{) 2534} \\ \underline{2190} \\ 344 \end{array}$$

$$\sqrt{\begin{array}{r} 293.39918 \\ \hline 341,775 \end{array}}$$

$$\textcircled{6} \quad \begin{array}{r} 372 \\ \hline 735 \\ \hline 465 \\ \hline \sqrt{0.0008584} \end{array}$$

$$\textcircled{7} \quad \begin{array}{r} 372 - 317 \\ 735 \quad 465 \\ \hline 0.0292994 \end{array}$$

$$\textcircled{8} \quad \begin{array}{r} (-) 60015 \\ 341,775 \\ \hline 0.0292994 \end{array}$$

$$\textcircled{9} \quad \begin{array}{r} (-) 0.1755979 \\ 0.0292994 \end{array}$$

ANSWER: $(-)\textcircled{5.99}/32279$

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