Comprehension of active and passive messages at normal and compressed rates

Michael Gerald McBride
The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd

Let us know how access to this document benefits you.

Recommended Citation
McBride, Michael Gerald, "Comprehension of active and passive messages at normal and compressed rates" (1975). Graduate Student Theses, Dissertations, & Professional Papers. 7804. https://scholarworks.umt.edu/etd/7804

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
THE COMPREHENSION OF ACTIVE AND PASSIVE
MESSAGES AT NORMAL AND COMPRESSED RATES

by

MICHAEL C. McBRIDE

B.A., LACIFIELD COLLEGE, 1972

Presented in partial fulfillment of the requirements for the degree of
Master of Arts
UNIVERSITY OF MONTANA
1975

Approved by:

[Signature]
Chairman, Board of Examiners

[Signature]
Dean, Graduate School

Date
Dec 3, 1975
ABSTRACT

McBRIDE, MICHAEL GERALD, M.A., June, 1975. Interpersonal Communication
The Comprehension of Active and Passive Messages at Normal and Compressed Rates
Director of Thesis: Wesley J. Shellen

The purpose of this study was to attempt to further the research done in comparing active forms of speech and their comprehension to passive forms of speech and their comprehension.

Public speaking classes at the University of Montana were asked as part of their classwork to listen to a taped message and take a test over that message. Randomly assigned subjects heard one of four different versions of 'The Irreverent Adman' message. One fourth of the randomly assigned subjects heard an active message at 166 wpm and took an active cloze test. One fourth of the randomly assigned subjects heard a passive message at 166 wpm and took a passive cloze test. One fourth of the randomly assigned subjects heard an active message at 238 wpm and took an active cloze test. One fourth of the randomly assigned subjects heard a passive message at 238 wpm and took a passive cloze test. It was hypothesized that the difference between the compressed versions would be statistically significant as compared to the normal versions.

The experiment failed to reject the null hypothesis as no results were statistically significant.
ACKNOWLEDGEMENTS

This paper was a trying experience. Without the help of several very important people it would have never been a reality. First, my wife Jan was instrumental in keeping me going when it seemed so far from finished. Second, my advisor Wes Shellen was always positive and helpful when I most needed rescuing. Third, my good friend Don Wolff was always willing to talk thing over which made them seem not as large an obstacle. Finally, Cinda Purdy, my initial associate gave added expertise to the message selection and direction. All four of these people deserve a big THANK YOU for the typing, proofing, running and general sacrificing they did for this paper and its author. It was a GROUP EFFORT!
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. THE PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>Importance of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>A Review of Literature</td>
<td>1</td>
</tr>
<tr>
<td>The Distinction between Active and Passive Sentence Structure</td>
<td>2</td>
</tr>
<tr>
<td>Comprehension of Active versus Passive Sentences</td>
<td>3</td>
</tr>
<tr>
<td>Comprehension of Active versus Passive Messages</td>
<td>6</td>
</tr>
<tr>
<td>The Thought Speed-Speech Speed Proposition</td>
<td>9</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>10</td>
</tr>
<tr>
<td>Statement of the Hypothesis</td>
<td>11</td>
</tr>
<tr>
<td>II. METHODS</td>
<td>12</td>
</tr>
<tr>
<td>Subjects</td>
<td>12</td>
</tr>
<tr>
<td>Materials</td>
<td>13</td>
</tr>
<tr>
<td>The Experimental Messages</td>
<td>13</td>
</tr>
<tr>
<td>Tests</td>
<td>16</td>
</tr>
<tr>
<td>Experimental Procedures</td>
<td>17</td>
</tr>
<tr>
<td>III. ANALYSIS AND RESULTS</td>
<td>18</td>
</tr>
<tr>
<td>IV. DISCUSSION</td>
<td>21</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Sentences versus Messages ........................................ 22
Compression Time ...................................................... 23
Methodology ..................................................................... 24
Further Research .......................................................... 24
Conclusions ....................................................................... 25

REFERENCES ...................................................................... 27

APPENDIXES .................................................................... 30
A. Active Message ......................................................... 31
B. Passive Message ........................................................ 37
C. Active Test .................................................................... 43
D. Passive Test ............................................................... 50
E. Related Pilot Studies ................................................... 57
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mean Number of Correct Answers on the Cloze Tests</td>
<td>18</td>
</tr>
<tr>
<td>2. Analysis of Variance of Correct Answers on the Cloze Test</td>
<td>19</td>
</tr>
<tr>
<td>3. Mean Correct Scores for the First Pilot Study</td>
<td>61</td>
</tr>
<tr>
<td>4. Analysis of Variance of Scores from the First Pilot Study</td>
<td>61</td>
</tr>
<tr>
<td>5. Mean Scores for the Second Pilot Study</td>
<td>63</td>
</tr>
<tr>
<td>6. Analysis of Variance of Scores on the Cloze Tests for the Second Pilot Study</td>
<td>63</td>
</tr>
</tbody>
</table>
Chapter I

THE PROBLEM

The purpose of this study was to attempt to further the research done to discover the effects of active versus passive sentence structure on the comprehension of human messages.

This chapter contains a statement of the problem, a review of literature and the hypothesis for the experiment.

Importance of the Problem

Past advice generally seems to recommend the use of active over passive forms of speaking and writing. Active-passive sentence structure and its study through psycholinguistics suggests several key questions dealing with the human mind and its ability to comprehend word and sentence meanings. Noam Chomsky (1965) stated:

"It is an important question of psychology to determine to what extent other aspects of cognition share properties of language acquisition and language use, and to attempt in this way to develop a richer and more comprehensive theory of the mind."

Specifically, Chomsky was interested in the question: "Are transformations unique to language, or is the ability to relate deep to surface forms a mental ability having both linguistic and non-linguistic manifestations?" (Chomsky 1965).

A Review of Literature

The review of literature will be divided into three sections. First, a linguistic description of the difference between active and
passive sentence structures will be presented. Second, research studies will be reviewed in which active versus passive sentences were presented to human subjects to assess the effect of these sentences upon various measures of comprehension. These studies generally have shown that active sentences are significantly easier to comprehend than passive sentences. The third section will review research in which entire messages consisting of active versus passive language were presented as stimulus materials to assess comprehension. These studies generally have shown no difference in comprehension of active versus passive messages. It is the thesis of the present study, then, that these two bodies of literature conflict in their results largely because of the differences in the stimulus materials (single sentence versus entire messages) employed, and the amount of time subjects were given to recall significant data. Thus, the review is an attempt to explain the conflict in the literature.

The Destinction between Active and Passive Sentence Structure.

The Active-Passive comparison has as its basis generative transformational grammar as described by Noam Chomsky (1965). He suggested that both active and passive sentences are related to the same deep structure and differ only in what he calls surface structure. Of importance to the study, then, is the concept that no matter how much the active and passive surface structures may seem to deviate, parallel deep structures can be determined. In the example below, the active and passive deep structure or meaning is similar; only the surface structure differs.

Active: The boy hit the ball.
Passive: The ball was hit by the boy.

A diagram of transformational rules shows that in the passive (1) the logical subject and logical object have been reversed and (2) the func-
tion words "was" and "by" complete the sentence. The same two sentences would be described by these transformational rules:

Active:  Determiner + Noun + Verb + Determiner + Noun
Passive: Determiner + Noun + was + Verb + by + Determiner + Noun

This description applies basically to active-passive comparisons with some exceptions in the English grammar rules.

Comprehension of Active versus Passive Sentences

Various empirical research has substantiated that transformations affect sentence comprehension. The logical importance seems that since active structure is normally used more often and since passive structure contains more transformations, the passive meaning uses more comprehension time and is harder to grasp. Jaques Mehler (1963), for instance, asked subjects to recall sentences involving various types of transformations, including active-passive transformations. The hypothesis was advanced that subjects analyze sentences into a semantic component plus syntactic corrections when they learn them and that this separation of semantic content from syntactic form is one reason that the basic meaning of a message is generally so much easier to recall than its exact wording.

The Mehler rationale came from Chomsky's (1957) discussion of deep and surface structure:

Normal mastery of language involves not only the ability to understand immediately an indefinite number of entirely new sentences, but also the ability to identify deviant sentences and, on occasion, to impose an interpretation of them... The syntactic component generates strings of minimal functioning elements—specific categories, functions and structural inter-relations of a sentence. The semantic component, correspondingly, assigns a semantic interpretation to an abstract structure generated by the syntactic component which must provide for each sentence (actually for each interpretation of each sentence), a semantically interpretable deep structure and a phonetically interpretable surface structure and, in the event that these are distinct, a statement of the relation between these structures. (Chomsky 1957)
The results of Mehler's study suggested that subjects recall sentences by encoding them as a kernel (deep structure). For example, in the sentence "The ball has been hit by the boy," the subjects presumably code it as an underlying kernel plus some mental tag that would indicate the passive transformation must be applied for recall. Mehler suspected subjects would make significantly more errors when recalling passive sentences than when recalling active sentences.

The Mehler experiment used immediate recall as part of the total method, and thus differed from the rationale of later studies in that subjects response time was limited. The immediate recall factor may have been important in causing differences between active and passive comprehension. This importance was again evident when Savin and Perchonock (1965) also used the immediate recall method in their experimentation. Their rationale, however, went beyond the Mehler study in that it suggested: the more complex the transformation the more mental space and time the transformation uses. The rationale for the Savin and Perchonock study centered on the notion that all subjects would get some underlying meaning (deep structure), combining the two to get meaning.

The Savin and Perchonock study employed the following method in the basic experimental procedure:

On the typical trial, the subject heard a sentence followed by a string of eight unrelated words. He was instructed to recall the sentence verbatim. Subjects were allowed as much time as they wished to complete the recall; the next trial would not begin until they indicated they were ready for it. The sentences were read with normal intonation; there was a five second pause between the end of the sentence and the beginning of the list. The words on the list were read at the rate of 3/4 seconds per word. All material was tape recorded. (1965, p. 351)
The dependant variable that measured memory for each syntactical structure in the Savin and Perchonock experiment was a "mean number of words recalled" (MNR) measure. Savin and Perchonock predicted that certain sentences such as passive, question, passive negative, and negative question would require more processing time and thus more memory space than a simple active sentence. An active declarative sentence had a MNR of 5.27 while a passive sentence had a 4.55 MNR and finally, a passive question sentence had only 4.02 MNR. Like the Mehler experiment, then, the empirical findings of Savin and Perchonock seem to indicate that transformations do occupy space in a person's memory and that the more complex the transformation, the more memory space the transformation will occupy.

The Savin and Perchonock, and Mehler experiments were followed by the Wright (1968) study and the Howe (1970) study. These two studies criticized the earlier results in that they suggest and unmeasurable combination of syntactic and semantic impediment of test results. The Wright study, for example, used the Savin and Perchonock format but found that phrase structure might be used as a variable. The conclusion of this study still found transformational complexity as the most important variable but left no answer to present comparisons. The Howe study used Mehler's transformational information and Miller's (1962) one-step, two-step and three-step information. The study suggested that syntactic and semantic errors in transformations account for a subject's uncertainty when tested. Howe suggested that verbal material is not totally learned as a kernel plus a syntactic footnote but rather it is learned in a syntactical-semantic combination.

It is evident in the studies above that the procedures deal with comprehension under unnatural conditions. In everyday life for instance,
one is not usually subjected to a barrage of sentences followed by unrelated words. The subjects of the early active-passive research were also tested in conditions that left the subjects little time to comprehend the sentence meaning. Another series of experiments, on the other hand, did allow time for subjects to hear connected discourse and to comprehend fully its meaning.

Comprehension of Active versus Passive Messages

The ability of subjects to derive meaning from messages written in active or passive language, was measured in the connected discourse (message) experiments of Sachs (1967) and Tognetti and Shellen (1975). This second section of active-passive research differs not only in method but also in results from the previous research.

In the first empirical study employing connected discourse, Jacqueline Sachs (1967) presented subjects with twenty-eight passages of related material after which they received a test consisting of subjects' recognition of semantic or syntactic changes in sentences. The test sentences were either identical to the passage they heard or changed in form or meaning:

Original Sentence: He sent a letter about it to Galileo, the great Italian scientist.

Semantic Change: Galileo, the great Italian scientist, sent him a letter about it.

Active to Passive Change: A letter about it was sent to Galileo, the great Italian scientist.

Formal Change: He sent Galileo, the great Italian scientist, a letter about it.

When subjects were tested, they experienced one of three time delay intervals between the original and test sentences. The intervals were either no delay, 80 syllables (about 27 seconds), or 160 syllables.
(about 4.6 seconds). The subjects had no idea what sentence they would be tested on. If the test sentence was heard with no intervening delay, subjects were able to recognize both semantic and syntactic changes; after twenty-seven seconds delay, subjects' recognition of syntactic changes (active-passive) and other formal changes were close to chance, while their recognition of semantic changes remained accurate even after 4.6 seconds.

The Sachs study was very different in method from previous research in that subjects were given time to forget syntactic and semantic operations. The results were also different in that the semantic information was more important than the syntactic. Apparently the subjects had little trouble with meaning, but forgot syntax.

The findings...are consistent with a theory of comprehension which contends that the meaning of the sentence is derived from the original string of words by an active, interpretive process. That original sentence which is perceived is rapidly forgotten and the memory then is for the information contained in the sentence. (Sachs, 1967, p.422)

The Sachs study, then, suggested that the surface structure of a sentence, active or passive, is not the critical factor in the recall of information in connected discourse.

The second study, employing connected discourse, was done by Jeanne Tognetti and Wesley Shellen (1975). The study employed a message approximately five minutes in length, which was written in active or passive language versions. The study was designed to get at contradictions between the Sachs study and an earlier message study done by Devito (1969). The Devito experiment had two versions of a message, one active and one passive. After each subject heard his message, he was tested for comprehension by a cloze procedure test (filling in deleted words on a written text of the message). Devito found that subjects who heard
the active message and took an active cloze test performed significantly better than subjects who heard the passive message and took a passive cloze test. The Tognetti and Shellen study concerned itself with adding a control group to the Devito design to determine whether the lower scores (less errors) in the active condition were actually due to the difficulty in comprehending the message or whether the results were possibly an artifact of the passive cloze test being more difficult than the active cloze test.

Tognetti and Shellen found that the active message was no easier to comprehend than the passive message, because control subjects who heard no message differed as much on the active versus passive cloze tests as did subjects who heard the messages. Thus, Devito's results were probably due to the artifact of lack of control of differences due to test difficulty (the active test was easier than the passive test).

The basic rationale of the Devito, (1969) and Tognetti and Shellen (1975) methods seems sound. The use of a message to measure active-passive differences seems more applicable to real-life situations than the earlier isolated sentence-immediate recall experimentation. Both types of experimentation do, however, suggest important points. A basic linguistic comparison of active versus passive sentence structure indicates more lexical items in the passive tense, and a reversal of logical subject and object. As a result an active-passive difference in comprehension and recall usually favors the active tense. The experimentation using connected discourse, on the other hand, posits that the human mind is able to cope with passive transformations in plenty of time to retain meaning. Therefore it is the thesis of this study that, although these two bodies of rationale conflict, there seems to be a logical explanation.
The Thought Speed-Speech Speed Proposition.

If an active sentence is easier to comprehend than a passive sentence, why haven't all researchers found the same results? The answer to this question is paramount. The Mehler (1963) and Sevin and Perchenock (1965) studies indicated comprehension differences while the Sachs (1967) and Tognetti and Shellen (1975) studies did not. The notion of "handling" data as presented by Weaver (1972) is a step toward an explanation of past research inconsistencies. "Handling" consists of instituting a search of all or part of the memory to find where the stimulus fits.

If the process of handling an active sentence seems on the surface to take less effort than handling a passive sentence, it follows that there should also be a similar time difference for handling an active message as compared to a passive message. It is well established that listeners have more than enough time to process or "handle" connected discourse when it is presented at normal speaking rates (Weaver, 1972). This fact may explain why subjects had no difficulty comprehending the messages in the Tognetti and Shellen study regardless of whether they were written in active or passive sentence structure.

A possible rationale for explaining the conflict between the sentence-centered studies and the message-centered studies may be found by using compressed speech. Compressing or speeding up speech rate, deals with increasing the number of words a person listens to in an equal space in time. For example, a record played at 33½ r.p.m. (revolutions per minute) takes 2½ minutes to play while the same record at 45 r.p.m. takes only one and one-half minutes to play. If one increases the rate of words per minute, (W.P.M.) one will also increase the burden on cognitive operations of the mind. Thus, an experimenter can limit the amount of material any subject can handle by using compressed presentations.
The sentence-centered studies had a kind of immediate recall compression that limited handling time. The message-centered studies, however, did not. A combination of the effects of the two methods using compressed speech to limit cognitive processing in a message form seems a plausible method of explaining the controversy. The subjects' difficulty in comprehending the passive tense presentation would more likely appear in a compressed presentation, if indeed, passive tense is harder to comprehend than active tense is.

The use of compressed speech to limit a person's processing time, then, is important to an active-passive comparison. If, by use of a compressed message, a subject's cognitive processes could be pressed toward capacity, a more clear differentiation between the active and passive transformations should be attainable. The optimum rate of compression where subjects comprehend as well as at normal rates but hear information in less time, has no exact empirically set point. Specific locations, tasks and experiments tend to vary the optimum rate. Several researchers agree, however, that between 200-300 words per minute is the range within which comprehension suffers because of compression (Foulke 1966, Wood Core, 1967, Reid, 1968, and Orr, 1968). By compressing an active and passive message of equal length and content, an experimenter should be able to discover differences resulting from syntactical difficulties. In short, the normal subject should have more than enough time to process active or passive messages under normal conditions. Compression, on the other hand, should curtail processing time and thus differentiate active and passive forms.

Statement of the Problem

The empirical study of active versus passive sentence structure
has two separate conflicting bodies of research that attempt to explain the transformational process and its effect on human abilities to comprehend. Studies employing the method of immediate recall of isolated sentences generally indicate the superior comprehension of the active tense by subjects. Studies employing connected discourse or messages, on the other hand, posit no significant difference in comprehension between the active and passive tenses. The thesis of this study proposed that the presentation of active versus passive messages at normal and compressed rates may help to explain the conflicts in the results of the previous studies.

**Statement of the hypothesis**

The major hypothesis for this study, then, was as follows: There will be an interaction between message types and rate of presentation; more specifically, the difference between comprehension scores of subjects listening to active and passive messages at the compressed rate will be significantly greater than the difference between comprehension scores of subjects listening to active and passive messages at the normal (uncompressed) rate.
Chapter II

METHODS

The subjects, materials, and procedures used in the experiment are described in this chapter. Two pilot studies were conducted in advance of the experiment to test the feasibility of the design and procedures. The description and results of the two pilot studies are reported in Appendix E.

Subjects

The subjects for the experiment were undergraduate volunteers enrolled in Introduction to Public Speaking classes at the University of Montana during spring quarter 1974. Eighty students were part of the experimental design.

The design was a 2X2 completely randomized factorial design. The purpose of using the 2X2 design was to assess the interaction or difference between the differences in comprehension of active versus passive messages presented at the normal and the compressed rates.

The subjects were randomly assigned to one of four experimental conditions, twenty in each group. Figure 1 illustrates the experimental design.

Figure 1: Illustration of the Experimental Design

<table>
<thead>
<tr>
<th>Rate of Presentation</th>
<th>Active Message</th>
<th>Passive Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncompressed (Normal)</td>
<td>(A)</td>
<td>(B)</td>
</tr>
<tr>
<td>Compressed</td>
<td>(C)</td>
<td>(D)</td>
</tr>
</tbody>
</table>
1. Cell A subjects heard an active message at the normal rate of 166 wpm and took an active cloze test.
2. Cell B subjects heard a passive message at the normal rate of 166 wpm and took a passive cloze test.
3. Cell C subjects heard an active message at the compressed rate of 233 wpm and took an active cloze test.
4. Cell D subjects heard a passive message at the compressed rate of 233 wpm and took a passive cloze test.

**Materials**

The materials in the experiment consisted of four tape recorded versions of the experimental message and the tests with instructions.

**The Experimental Message**

The message, "The Irreverent Adman," originally appeared in the New York Times and later was reprinted in the anthology, *New Words Change Our Lives* (McDougal, Littell, 1971). This message was chosen because it fit the time available for experimental treatment, and most of the sentences were declarative, thus making them easy to transform. For the purpose of this study, the message was rewritten in two versions, one active and one passive (see Appendix A and B for copies of the experimental messages). With only a few exceptions the active version of the message required little change from the original article. Where necessary, however, sentences were altered from passive to active to render all of the sentences in the active voice. The passive version of the message required more thorough rewriting. Goodman (1965, p. 351) gave the following formula for the passive transformation:

\[
NP_1 + \text{Verb} - \text{Tpas} + NP_2 - \text{Tpas} = \\
NP_2 + \text{be} + \text{past} + - \text{Tpas} + \text{pp (by + NP}_1)\
\]

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Except for sentences containing auxiliary verbs, the above formula was uniformly applied. No changes in tense were made, and no portions of the message were deleted. However, the passive transformations required the addition of extra words, especially the verb be in varied forms, and the word by. (IP is made the object of the preposition by, when it is not suppressed in the passive transformation.) The consequences of these additions was a difference in length between the two messages. The active message contained a total of 1146 words; the passive, 1303.

One of the problems in changing the original message centered around auxiliary verbs. Sentences which contained auxiliaries were altered from active to passive by one of two methods. The first method involved eliminating the auxiliary. For example, in the sentence "This doesn't bother Freberg," the auxiliary is does. The does was eliminated in the passive, and the sentence became "Freberg isn't bothered by this." Is was used as the form of the verb be to make the passive transformation. The second method retained the auxiliary verb, and the transformational verb be was kept in the infinitive form. For example, the active sentence "Some fellow admen would love to show him the way out of business" contained the auxiliary would. The passive counterpart to this sentence became, "To show him the way out of business would be loved by some fellow admen." The more comprehensible result was the criterion for choosing which method to use to make the passive transformation.

Comprehensible sentences were another cause of concern during the active-passive transformation. Passive sentences are limited by what Ralph Goodman calls a "scale of grammaticality." In other words, the degree of acceptability of passive sentences frequently depends on such variables as context, noun phrases involved, common usage, and/or the
approximation to "natural English." The experiment was designed to test the ability of the listener to transform the syntactic structure into deep structure in a given amount of time. Therefore, it was important that the passive sentences be fairly high on the "scale of grammaticality" so that the basis for significance, if any, was not the result of incomprehensible or anomalous sentences. Instead, any significance needed to be the result of the time factor involved in transforming passive sentences to deep structure. However, because of the need to minimize deletions and to remain as close as possible to the original form of the message, some anomalous sentences were unavoidable.

Once the original message was transformed, the active and passive messages were recorded on tape by a female graduate student from the Department of Interpersonal Communication. The normal or uncompressed messages in both the active and passive versions were recorded at a speed of 166 WPM. The two message versions were recorded at rates as similar as possible. After the messages were recorded they were compressed at a rate of 30% to 238 WPM, a rate chosen as optimal partly because of work done by Charles Rossiter:

"When Rossiter was developing his listening test, he presented his fourteen messages on audio tape at three speeds; 175, 233, and 265 words per minute. He found that the mean scores for the seventy-four listeners at each rate declined from 44.33 at 175 WPM to 34.95 at 233 WPM, and to 29.63 at 265 WPM. (Weaver, 1972, p. 146)

As Rossiter suggested then, subjects who heard the 175 WPM message scored significantly better than subjects who heard the message at 233 WPM. The scores at 265 WPM were, however, not significantly different from those at 233 WPM. For the present study, it was hoped that somewhere around 233 WPM a subject's comprehension rate would be significantly affected. The messages as given in the present study were approximately five minutes in length at normal speed and approximately four minutes.
in length at the compressed speed. The active version in both instances was shorter than its passive counterpart due to passive transformational additions.

Tests

The cloze procedure test was the basic evaluation instrument used to measure the dependent variable in this study. The cloze procedure, as developed by Taylor (1956), depends on a human's tendency to perceive as complete (or closed) forms which are actually incomplete.

"Cloze procedure seems to tap many variables, such as knowledge of the deep structure of the language and the predictability of form-class and function words, arising partly from the structure of the language and partly from semantic implications." (Weaver, 1972)

Cloze procedure provides accurate rankings in terms of difficulty where other approaches may fail. It also takes into consideration most language factors influencing readability. For instance an item such as "Horses trot but fish ____." demonstrates cloze procedure. To finish the sentence, the reader would have to know how a fish propels itself through water. In this example, the fish must swim to move about as horses have to trot. This procedure was considered a measure of how well each subject comprehended message meaning, (Taylor 1956). Pilot research indicated that the cloze test over the entire message would be too long for the subjects to complete during time allotted. Thus, the final tests were constructed by working with only the last 625 words from each message. This procedure randomly eliminated one of the first five words of the last 625 and then every fifth word thereafter until 125 blanks had been formed. The tests were of equal length to minimize possibilities of bias due to test length. (See Appendices C and D for copies of the tests and instructions.) One point was scored for each space that was correctly filled in with the original word that had been deleted.
The total number of correct words filled in was the closer score.

**Experimental Procedures**

The listening laboratory, room 339 in the Liberal Arts building, University of Montana, was the location for all experimental treatments. The laboratory contained twenty listening stations and a master control which aided in controlling and standardizing procedures. Each subject was supplied a random number placement which matched one of the twenty stations (see appendix E). Each station was supplied with a cassette recording containing one of the four experimental treatments, a set of earphones and a test booklet with standardized instructions. It was hoped these conditions would help improve subjects' concentration and would prevent any artifact due to experimenter bias or demand characteristics since all treatments were administered simultaneously in the same environment.

After all the subjects had found their seats they were asked to read only the first page of the booklet, put on their earphones, and turn on the machine. The front page of instructions included the following:

- Please do not open this booklet until told to do so.
- Please place the cassette in the machine at your station, put on the earphones, turn on the power button and press the play button.

The cassette itself included the following:

**Before the Message:**

This is an experiment in listening comprehension. Please listen as carefully as possible. You will be tested over the contents of the message so please pay attention.

**After the Message:**

Please open your test booklet to page 1 and fill in each blank with the word you remember from the message. If you can't remember the word, please draw a line in the space. It is important that you do your best. Good luck. When you are finished with the test, please raise your hand.
Chapter III

ANALYSIS AND RESULTS

The results of the statistical analysis of the data collected in the experiment are presented in this chapter. The presentation of results include the mean number of correct answers from the cloze test given by subjects in the four conditions, and an analysis of variance of correct answers from the cloze test.

The subjects mean scores in the cloze test in one of four conditions, active uncompressed, passive uncompressed, active compressed, and passive compressed, are very similar. Table 1 shows these like scores:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Mean Number of Correct Answers on the Cloze Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Normal (166 wpm)</td>
<td>49.05</td>
</tr>
<tr>
<td>Compressed (236 wpm)</td>
<td>50.55</td>
</tr>
</tbody>
</table>

As can be seen, the mean score of subjects listening to the message at normal rates does not differ greatly from the mean scores of subjects listening to the message at compressed rates. Both active and passive conditions at both normal and compressed rates differ by only about three mean points. Out of a possible score of one hundred and twenty-five, the active compressed group scored a mean of 50.55 which was the highest
and the passive compressed group scored a mean of 47.00 which was the lowest. The lack of difference between scores of subjects listening at normal versus compressed rates suggested that the compression rate used in the experiment did not sufficiently approach the thought speed-speech speed differential that is so important to the experiment.

The analysis of variance is presented in Table 2. Data were analyzed within a 2x2 completely randomized factorial design using the fixed effects linear model (Kirk 1968). The Ullrich-Pitz analysis of variance program was used to compute the main effects and the interaction. The .05 level of significance was the criterion for rejecting the null hypothesis.

The analysis of variance table shows statistically that no significant F ratios were obtained.

Table 2

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal vs. Compressed (Rate of Presentation)</td>
<td>6.05</td>
<td>1</td>
<td>6.05</td>
<td>.032</td>
</tr>
<tr>
<td>Active vs. Passive (Message Type)</td>
<td>252.05</td>
<td>1</td>
<td>252.05</td>
<td>1.35</td>
</tr>
<tr>
<td>Interaction</td>
<td>2.45</td>
<td>1</td>
<td>2.45</td>
<td>.013</td>
</tr>
<tr>
<td>Within</td>
<td>14221.40</td>
<td>76</td>
<td>187.12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14481.90</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These results show a nonsignificant relationship between the rate of presentation and the type of message heard as measured by the cloze
test scores. The nonsignificant F-ratio of .013 for the interaction was insufficient to justify rejection of the null hypothesis. A discussion of the results follows in the final chapter, which will include possible explanations for these findings.
Chapter IV
DISCUSSION

In this chapter the results of the study and their implications are discussed as they relate to the experimental hypothesis. Major conclusions will also be summarized in this chapter including recommendations for further research.

The hypothesis as stated was:

There will be an interaction between message types and rate of presentation; more specifically, the difference between comprehension scores of subjects listening to active and passive messages at the compressed rate will be significantly greater than the difference between comprehension scores of subjects listening to active and passive messages at the normal (uncompressed) rate.

The results of the analysis of variance showed that the interaction was not significant, thus the null hypothesis was not rejected. Several explanations follow which may offer possible answers as to why the predicted results were not obtained. First, the compression time for this experiment, although empirically justified, may not have been sufficient to affect subjects' language processing time. Second, subjects were asked during the instruction period of the test not to guess, rather they were to cross out items they couldn't answer. This guessing elimination may have affected possible variance. Third, the laboratory environment may have over-stimulated subject performance. Fourth, changes in final empirical procedures vis-a-vis the pilot studies may have affected the final results.
Sentence vs. Messages

As discussed earlier, this empirical effort concentrated on a message-type presentation as compared to the sentence-type presentations used in previous research. The ramifications of the use of a complete message to test subjects' comprehension cannot be thoroughly clarified by this study. The possibility of unknown variables exists. Human perceivers have unmeasurable ability to cope with total message meanings. The present experiment at least suggests a more thorough investigation is needed into a puzzle of human comprehension.

Several possible arguments can be presented as to why a message-centered approach would change active-passive comparison results. First, the early sentence-centered research enabled the subject to concentrate wholly on that one sentence that was being presented. This approach would seem to enable a subject maximum concentration on presented subject matter. The present message-centered approach, however, may have diluted results in that diverse information was presented to subjects; thus total concentration on one particular train of thought became close to impossible.

Second, a message-centered approach may have caused subjects' attention spans to shorten. In past sentence-centered presentations, the subject was only given one sentence followed by an immediate recall test. The sentence type of presentation enabled subjects to use their short term memory to answer test questions. Subjects in the present study, on the other hand, had to remember the entire presentation almost verbatim to score exceptionally well. Such a task would require recall from long term memory rather than the short term memory.

Third, the sentence-centered research dealt with a test the subjects expected. In the Savin and Perchonock (1965) experiments, subjects had
all the time they needed to recall the key words before the next sentence and group of words were given. In the present message-centered methodology, however, the subjects did not know the type of test that was given until after they had heard the message.

In conclusion, the message-centered approach may have caused subjects to perform at a disadvantage on tests due to length of the message, ability of the subjects to concentrate, or time elements. Further research into the differences between message and sentence-centered approaches is needed.

Compression Time

The results of the experiment were not significant for one of several possible reasons. Compression time could have been one of the reasons. The use of 233 words per minute (w.p.m.) as an optional point of comparison may have been in error. A subjects memory, stretched to capacity, should be able to process active sentences more readily than passive sentences. The present research may have failed in that it did not present some exact empirical point at which subjects would be pressed to the edge of processing ability. That exact point, however, may not exist. Each subject's mental ability to handle aural data may be specific to that particular individual.

A possible point of compression may exist at which subjects abilities to comprehend data is severely taxed. That empirical point needs to be established for future comparisons of active-passive comprehension. It may be possible to pre-test subjects' compression abilities through a series of compressed messages and tests, each message given at a more rapid rate. By establishing the ability of each individual subject to handle compressed speech the experimenter might be able to clear a bit of the error variance that now exists in a message comparison.
In the present study every attempt was made to keep the experiment as consistent as possible. The listening laboratory was used for all subjects, with earphones and standardized directions also used. The one methodological flaw that may have occurred seemed correct at the time.

Each subject was told at the beginning of the experiment to cross out the blanks when he did not know the answer. This direction was used to keep guessing at a minimum. The pilot studies did not include this direction and were in several cases significant. Some subjects may have used the opportunity to cross out blanks to avoid the task of filling out difficult items on the test.

Further Research

Possibilities for further research seem numerous. The methodology of the present study with a few minor changes could prove significant. Suggestions for future empirical research might include:

1.) Use of a sentence-message comparison as a methodology. This rationale might include both types of experiments given to each subject with results compared for consistencies and inconsistencies. This rationale might also help to get at statistical differences between the two diverse methods.

2.) Multiple Compression Comparisons. The possibility of using several modes of compression to get at an optional point of comprehension seemed intriguing. The point at which comprehension drastically falls off could be very valuable for future experiments. Without the optional point the research seems limited.

3.) Shorter message presentation. To make the present experiment better able to tap immediate recall of material, like the
sentence experimentation, future research could vary the length of messages to test the effects of linguistic transformations on long and short term memory.

h.) Elimination of rules governing guessing. Subjects could possibly improve scores by guessing and thus should be allowed to do so. Perhaps fewer outward controls would be better. Encouragement through less control seems a viable alternative.

5.) Use of variable maturation-level subjects. The testing of grade school, junior high school, and high school subjects could give some valuable insights into the effects of maturation level on the comprehension of grammatical transformations.

Conclusions

The findings of this study are summarized as follows:

Subjects taking an active cloze test did not score significantly higher at either the normal or compressed rate than those taking the passive cloze test.

Subjects listening to messages presented at the normal rate (166 w.p.m.) did not score significantly higher than subjects listening to messages at the compressed rate (238 w.p.m.).

No significant interaction between message types and rate of presentation was found in the present experiment.

Sachs (1967) posited that human listeners comprehend and recall sentences based upon their deep structure meaning without regard to their surface structure. The fact that subjects in the present study comprehended both the active and passive versions of the message equally well would appear to support Sachs' theory since the versions differed only in surface structure and not in meaning. Further, the present study extended upon the
results of the study by Tognetti and Shellon (1975) by showing that the
negligible effect of active versus passive transformations held for the
comprehension of messages presented at compressed as well as normal
rates.


DeVito, J.A. Some Psycholinguistic Aspects of Active and Passive Sentences.


Miller, George A. "The Magical Number Seven Plus or Minus Two: Some Limits on Our Capacity for Processing Information." The Psychological Review, 1956, 63, p. 81-95.


Wood, David. CRCH Newsletter, Louisville: Center for Rate Controlled Recordings, 1, 1967, 3.

APPENDIX A

ACTIVE MESSAGE
I. Along Madison Avenue, a rumor persists that I am hostile toward advertising. Let me clear that up right now. I am.

And how! Mr. Freberg, who is an adman himself, describes today's advertising as "that enormous bulk of audio-visual rubbish spewing forth from the massed media."

Mr. Freberg doesn't talk like an adman. He certainly doesn't look or act like one, either. Striding into button-down corporate board rooms in bell-bottom dungarees, lavender shirt and chukka boots, he transfixes executives with a wild-eyed glare described by one client as "scary, almost hypnotic." Rimless, outsized yellow sunglasses and a mop of brillo-powdered hair heighten the effect.

The Freberg method is simple. He finds out what most admen are doing and takes the opposite tack. If this means poking a little fun at your clients' products in ads, fine. If it means taking a swipe at the work of your rivals in the ad game, all the better. Also, don't take too much lip from the client.

II. Stirring Strong Feelings

This approach to advertising means that ex-comic Freberg now counts his critics "on the fingers of the Mormon Tabernacle Choir" as he puts it. Broadcasting Magazine has described him as "Dennis the Menace given a giant crectet set to play havoc with." One New York agency chief calls him "that insane idiot who has given all kinds of people the wrong idea about advertising." Stan Freberg is cackling all the way to the bank.

III. Promoting Prunes
Mr. Freberg's ads for Sunsweet Prunes candidly announce that most people don't like prunes because they have ugly wrinkles and messy pits. Sunsweet then triumphantly reveals its development of a pitted prune. Next, amid stirring march music, Sunsweet vows continuing warfare on the wrinkles.

This sort of approach makes some clients nervous and other admen dubious. Admitting that people simply don't like your product is no way to sell, they maintain. This doesn't bother Freberg. "The ads work," he says flatly. "They're honest, they're discerning. They get the public sympathy." Sunsweet is more than satisfied. Its prune sales have increased four-fold since the campaign began six months ago.

Mr. Freberg, who cheerfully confesses to acute egomania, believes he is the best and most original adman alive. He challenges one and all to find a single campaign of his that was a flop. Critics immediately point to his 1966 effort for Pacific Airlines in which ads addressed to "you with the sweaty palms" assured the public that everyone, pilots included, was afraid to fly.

After only three months the campaign folded. Critics say that's because it was scaring people off the airlines and generating heavy pressure on Pacific from other carriers, who were concerned about ads that might put the safety of air travel in question. Mr. Freberg says a merger of Pacific into another carrier (now Air West) that didn't want to go along with the ads ended the campaign.

This sort of thing often seems to happen to Mr. Freberg. Many of his clients are relatively small companies that larger firms eventually swallow up, then dispose with the nettlesome Mr. Freberg. Accounts he has lost this way include Salada Tea, Contadina Tomato Paste, and Chun King Chow Mein.
IV. Barking at the Client

Still, most of the clients he has taken on have no quarrel with the results they've obtained, though personal clashes with the voluble Mr. Freberg are everyday occurrences. In making presentations, he leans heavily toward bombast; he does not persuade so much as overwhelm. Agency types usually fawn over most company chiefs, saying things like "Look, J.P., if you don't like it we can run it through again." "I bark at them like a top sergeant," he says.

Mr. Freberg also enjoys playing his clients film clips of what he thinks are the worst commercials. Hopping around the room, waving his arms and throwing objects at the screen, he will shout: "You're using up minutes of people's lives! You have an obligation to put out as little garbage as possible."

One client confesses to a sense of awed helplessness in the face of a Freberg presentation. Another, Jeno Paulucci, says, "I've had some awful bloody fights with Stan. He almost always wins."

Mr. Paulucci, who used to be the president of the company that made Chun King Chow Mein, remembers losing his cool completely when Mr. Freberg showed him ad proposals. Sample: As an announcer declares that "nine out of ten doctors prefer Chung King," the camera pans to the M.D.s. Nine are Chinese, on is a Caucasian.

The adman bet his client that the ads would boost sales 25% in six months. Mr. Paulucci took the bet. Four months later, with sales already up 40%, he paid off—trudging along Hollywood's Ls Cienega Boulevard in his $70 shoes pulling a rickshaw occupied by a shortling Stan Freberg. Mr. Paulucci now is head of Jeno's Pizza Products, and his old antagonist is still his adman.

V. Getting His Own Way
Mr. Freberg seldom compromises with any of his customers. While he respects "a game client," he keeps tight control of his campaigns. A clause in the contracts he executes with clients specifically stipulates that "what is funny is what Freberg says is funny." He retains the copyright to all his ads, and another contract clause denies clients the right to add or delete from any of his creations.

Not surprisingly, all this is just too much for some clients who invite Mr. Freberg in for a chat and then recoil in horror at his conditions and his ideas. In 1959, Plymouth executives, aghast at his suggestion that Plymouth openly name and criticize its competitors, handed him a check to pay off his contract and showed him to the door.

Some fellow admen would love to show him the way out of business, too. Many agree with Robert Wilvers, head of the Jack Tinker Partners Agency in New York, who says: "He's a very funny man, but advertising is more than making funny jokes. A joke is pointless unless it's relevant to the marketing problem. Too often it can be a substitute for an idea. You've got to go beyond Freberg; humor is his only weapon."

Mr. Freberg retorts that climbing sales curves show his ideas work in the marketplace. As for his humor, he insists it is always related to a solution of a specific company problem, or at least to the general problem of getting the viewer or reader into the stores.

Still, he admits that he gets his biggest kicks out of devising ads that spoof other ads. As a novel offset to "the preposterous and unbelievable claims that fill the airwaves, he uses the exaggeratedly modest claim." Jacobsen power lawn mowers, for example, are billed as, "Faster than sheep." A Sunsweet ad says, "Surveys prove the overwhelming majority of people prefer Sunsweet Prunes to World War III."

Says Mr. Freberg: "It's just a prune, for crying out loud, it's
not the Holy Grail. So why not entertain a little?" The consumer is so appreciative of the low-key approach, he contends, that he runs out to buy the product.

For Westinghouse Electric Corporation, Mr. Freberg has whipped up a college recruiting ad campaign that pokes fun at rival recruiting ads. In the usual non-Freberg pitch, corporations appeal to student idealism by playing up the corporate role in solving all sorts of social and economic problems; the mundane, day-to-day work any recruit must do is seldom mentioned.

But the star of Mr. Freberg's Westinghouse ads is engineering student Charlie Winfield, a man of narrow vision. Charlie puzzles recruiters; he does not want to help desalt the seas, uplift the ghetto or hurl a man into space. All he seems to care about is "toastal engineering." Says, Charlie, showing a sudden flicker of interest, "Get the raisins to keep from sticking on the little wire, and the caraway seeds will take care of themselves."
APPENDIX B

PASSIVE MESSAGE
I. That I am hostile toward advertising is a rumor persisting along Madison Avenue. Right now that will be cleared up by me. I am.

And how! Today's advertising is described as "that enormous bulk of audio-visual rubbish spewing forth from the massed media" by Mr. Preberg, who is an adman himself.

Talking like an adman isn't done by Mr. Preberg. Looking or acting like one is certainly not done, either. Executives are transfixed as striding into button-down corporate board rooms in bell-bottom dungarees, lavender shirt and chukka boots with a wild-eyed glare described by one client as "scary, almost hypnotic," is done by him. The effect is heightened by rimless, outsized yellow sunglasses and a mop of brillo-pad hair.

Simple is the method used by Freberg. What most admen are doing is found out and the opposite track is taken. If poking a little fun at your client's products in ads is meant by this, fine. If taking a swipe at the work of your rivals in the ad game is meant by it, all the better. Also, too much lip from the client is not taken.

II. Stirring Strong Feelings

That ex-comic Freberg now counts his critics "on the fingers of the Mormon Tabernacle Choir," as it was put by him, was meant by this approach to advertising. "Dennis the Menace given a giant erector set to play havoc with" was the description of him by Broadcasting Magazine. He is called "that insane idiot who has given all kinds of people the wrong idea about advertising" by one New York agency chief. Cackling all the way to the bank is Stan Preberg.

III. Promoting Prunes
That most people don't like prunes because they have ugly wrinkles and messy pits was candidly announced by Mr. Freberg's ads for Sunsweet Prunes. Its development of a pitted prune is then triumphantly revealed by Sunsweet. Next, continuing warfare on the wrinkles is vowed by Sunsweet, amid stirring march music.

Some clients are made nervous and other admen dubious by this sort of approach. It is maintained by them that admitting many people simply don't like your product is no way to sell. Freberg isn't bothered by this. "Honesty and discernment are had by them. The public's sympathy is gotten." More than satisfaction is Sunsweet's. Since the campaign began six months ago, a fourfold increase was had by its prune sales.

That he is the best and most original adman alive is believed by Mr. Freberg, who cheerfully confesses to active egomania. One and all are challenged by him to find a single campaign of his that was a flop. His 1966 effort for Pacific Airlines in which the public was assured by ads addressed to "you with the sweaty palms" that everyone, pilots included, was afraid to fly was immediately pointed to by critics.

The campaign was folded by the end of three months because people were scared off the airline by it and heavy pressure on Pacific was generated by other carriers, who were concerned about ads that might put the safety of air travel in question is the reason given by critics. It is said by Mr. Freberg the campaign was ended by a merger of Pacific into a carrier (now Air West) that didn't want to go along with the ads.

Often Mr. Freberg is happened by this sort of thing. Relatively small companies are many of his clients, that eventually are swallowed up by larger firms which the nettlesome Mr. Freberg is then dispensed from. Salada Tea, Contadina Tomato Paste and Chun King Chow Mein are

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
included in accounts lost by him this way.

IV. Barking at the Client

Still, no quarrel with the results they've obtained is had by most of the clients taken on by him, though every-day occurrences are personal clashes with the volatile Mr. Freberg. In making presentations, bombast is leaned toward heavily by him; not persuading so much as overwhelming is done. Most company chiefs are usually fawned over by agency types saying things like, "Look J.P., if liking it isn't done by you, we can run it through again." Like a top sergeant, barking is done at them by Mr. Freberg.

Also, film clips of what he thinks are the worst commercials played to his clients is enjoyed by Mr. Freberg. Hopping around the room, waving his arms and throwing objects at the screen, shouting is done by him. "Minutes of people's lives are used up by you. To put out as little garbage as possible is an obligation you have."

A sense of awed helplessness in the face of a Freberg presentation is confessed to by one client. It is said by Jeno Paulucci, "Some awful bloody fights with Stan have been had by me. Winning is almost always done by Stan."

Losing his cool completely when ad proposals were shown to him by Mr. Freberg is remembered by Mr. Paulucci, who used to be the president of the company that made Chun King Chow Mein. Sample: That "nine out of ten doctors prefer Chun King" is declared by an announcer as the M.D.s are panned by the camera. Nine are Chinese, one is Caucasian.

That the ads would boost sales by 25% in six months was bet his client by the adman. The bet was taken by Mr. Paulucci. Paying off was done four months later, with sales already up 70%--trudging along Hollywood's La Cienega Boulevard in his $10 shoes, pulling a rickshaw occupied

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
by a charting Stan Freberg. Jenio's Pizza Products is now headed by Mr. Paulucci, and his old antagonist is still his adman.

V. Getting His Own Way

Compromising with any of his customers is seldom done by Mr. Freberg. Tight control of his campaigns is kept by him, though a "good client" is respected. "What is funny is what Freberg says is funny" is specifically stipulated by a clause in the contract he executes with clients. Copyright to all his ads are retained and the right to add or delete from any of his creations is denied clients by another contract clause.

Not surprisingly for some clients too much is all this. Mr. Freberg is invited in for a chat by them and then horror at his conditions and ideas is recoiled in. A check to pay off his contract was handed to him and the way to the door shown in 1959, by Plymouth executives aghast at his suggestion that Plymouth openly name and criticize its competitors.

To show him the way out of business would be loved by some fellow admen, too. It is said by Robert Wilvers, head of Jack Tinker Partners Agency in New York, and agreed with by many, "He's a very funny man, but more than making funny jokes is advertising. Unless it's relevant to the marketing problem, pointlessness is had by the joke. A substitute for an idea is too often what it can be. Going beyond Freberg has got to be done, his only weapon is humor."

That his ideas working the marketplace is shown by climbing sales curves is retorted by Mr. Freberg. As for his humor, it is always related to a solution of a specific company problem is insisted by him, or at least to the general problem of getting the viewer or reader into the store.

Still, devising ads that spoof other ads is admitted by him as the
way he gets his biggest kicks. The exaggeratedly modest claims is used as a novel offset to "the preposterous and unbelievable claims that fill the airwaves." As "faster than sheep" are billed Jacobsen power lawn-mowers, for example. "Sunsweet Prunes are preferred to World War III by the overwhelming majority of people was proven by survey" is said by a Sunsweet ad.

It is said by Mr. Preberg: "It's just a prune, for crying out loud, it's not the Holy Grail. So why not entertain a little." It is contended by him that so much appreciation of the low-key approach is felt by the consumer that he runs out to buy the product.

For Westinghouse Electric Corporation, a college recruiting ad campaign that pokes fun at rival recruiting ads was whipped up by Mr. Preberg. In the usual non-Freberg pitch, student idealsim is appealed to by corporations by playing up the corporate role in solving all sorts of social and economic problems; seldom mentioned is the mundane, day-to-day work any recruit must do.

A Man of narrow vision, engineering student Charlie Winfield is the star of Mr. Preberg's Westinghouse ads. Recruiters are puzzled by Charlie; helping desalt the seas, uplifting the ghetto or hurling a man into space are not wanted by him. "Toastal Engineering" is all that seems to be cared about by him. A sudden flicker of interest is shown by Charlie who says, "Get the reasons to keep from sticking on the little wire, and the caraway seeds will take care of themselves."
I. Along Madison Avenue, a rumor persists ________ I am hostile toward advertising. Let ________ clear that up right now. I ________

And how: Mr. Freberg, who is ________ adman himself, describes today's advertising as "________ enormous bulk of audio-visual rubbish ________ forth from the massed media."

Mr. ________ doesn't talk like an adman. He ________ doesn't look or act like one, ________. Striding into button-down corporate board ________ in bell-bottom duncecaps, lavender shirt ________ chukka boots, he transfuses executives with ________ wiledyed flare described by one client ________ "scary, almost hypnotic." Rimless, out-sized yellow ________ and a mop of a brillo-pad hair ________ the effect.

The Freberg method is ________. He finds out what most admen ________ doing and takes the opposite tack. ________ this means poking a little fun ________ your clients' products in ads, fine. ________ it means taking a swipe at ________ work of your rivals in the ________ game, all the better. Also, don't ________ too much lip from the client.

II. Stirring Strong Feelings

__________ approach to advertising means that ex-comic ________ now counts his critics "on the ________ of the Mormon Tabernacle Choir," as ________ puts it. Broadcasting Magazine has described ________ as "Dennis the Menace given a ________ erector set to play havoc with."

__________ New York agency chief calls him "________ insane idiot who has given all ________ of people the wrong idea about ________." Stan Freberg is cackling all the ________ to the bank.
Promoting Prunes

Mr. Freberg's ads... Sunsweet Prunes candidly announces that most... don't like prunes because they have... wrinkles and n... pits. Sunsweet then... reveals its development of a pitted... Next, amid stirring march music, Sunsweet... continuing warfare on the wrinkles.

This... of approach makes some clients nervous... other admen dubious. Admitting that people... don't like your product is no... to sell, they maintain. This doesn't... Freberg. "The ads work," he says... "They're honest, they're discerning. They get... public sympathy." Sunsweet is more than... Its prune sales have increased four-fold... the campaign began six months ago.

Freberg, who cheerfully confesses to acute..., believes he is the best and... original adman alive. He challenges one... all to find a single campaign... his that was a flop. Critics... point to his 1966 effort for... Airlines in which ads addressed to... with the sweaty palms" assured the... that everyone, pilots included, was afraid... fly.

After only three months the... folded. Critics say that's because it... scaring people off the airlines and... heavy pressure on Pacific from other... who were concerned about ads that... put the safety of air travel... question. Mr. Freberg says a merger... Pacific into another carrier (now Air...) that didn't want to go along... the ads ended the campaign.
This __________ of thing often seems to happen __ _________.

Mr. Freberg. Many of his clients __________ relatively small companies that larger firms __________ swallow up, then dispense with the ___________.

Mr. Freberg. Accounts he has lost __________ way include Salada Tea, Contadina Tomato __________ and Chun King Chow Mein.  

IV. Barking at the Client

Still, __________ of the clients he has taken __________ have no quarrel with the results __________ obtained, though personal clashes with the __________ Mr. Freberg are everyday occurrences. In __________ presentations, he leans heavily toward bombast; __________ does not persuade so much as ___________. Agency types usually fawn over most __________ chiefs, saying things like "Look, J.P., __________ you don't like it we can __________ it through again." "I bark at __________ like a top sergeant," he says.

_________ Freberg also enjoys playing his clients __________ clips of what he thinks are __________ worst commercials. Hopping around the room, ______ his arms and throwing objects at ______ screen, he will shout: "You're using ________ minutes of people's lives! You have ________ obligation to put out as little ________ as possible."

One client confesses to __________ sense of awed helplessness in the __________ of a Freberg presentation. Another, Jeno __________, says, "I've had some awful bloody ________ with Stan. He almost always wins."

_________ Paulucci, who used to be the __________ of the company that made Chun ________ Chow Mein, remembers losing his cool ________ when Mr. Freberg showed him ad _________. Sample: As an announcer declares that "________ out of ten doctors prefer Chun ________."
declares that "_________ out of ten doctors prefer Chun _________."

the camera pans to the H.D.s. ________ are Chinese, one is a Cau-
casian.

_________ a-adman but his client that the ________ would boost

sales 25% in six _________. Mr. Paulucci took the bet. Four ________
later, with sales already up 40%, ________ paid off—trudging along

Hollywood's ________ Boulevard in his $70 shoes pulling ________
rickshaw occupied by a chortling Star _________. Mr. Paulucci now is

head of ________ Pizza Products, and his old antagonist ________

still his adman.

V. Getting His Own Way

Mr. Freberg seldom ________ with any of his customers. While

_________ respects "a good client," he keeps ________ control of

his campaigns. A clause ________ the contracts he executes with

clients ________ stipulates that "what is funny is ________ Fre-
berg says is funny." He retains ________ copyright to all his ads,

and ________ contract clause denies clients the right ________ add

or delete from any of ________ creations.

Not surprisingly, all this is ________ too much for some clients

who ________ Mr. Freberg in for a chat ________ then recoil in

horror at hi ________ and his ideas. In 1959, Plymouth ________

aghast at his suggestion that Plymouth ________ name and criticize

its competitors, handed ________ a check to pay off his ________ and

showed him to the door.

_________ fellow admen would love to show ________ the way out

of business, too. ________ agree with Robert Wilvers, head of ________
Jack Tinker Partners Agency in New ________, who says: "He's a very funny ________, but advertising is more than making ________ jokes. A joke is pointless unless ________ relevant to the marketing problem. ________ often it can be a substitute ________ an idea. You've got to go ________ Freberg; humor is his only weapon."

Freberg reports that climbing sales curves ________ his ideas work in the marketplace. ________ for his humor, he insists it ________ always related to a solution of ________ specific company problem, or at least ________ the general problem of getting the ________ or reader into the stores.

Still, ________ admits that he gets his biggest ________ out of devising ads that spoof ________ ads. As a novel offset to "_______ preposterous and unbelievable claims that fill ________ airwaves, he uses the exaggeratedly modest ________" Jacobsen power lawn mowers, for example, are ________ as, "Faster than sheep." A Sunsweet ________ says, "Surveys prove the overwhelming majority ________ people prefer Sunsweet Prunes to World ________ III."

Says Mr. Freberg: "It's just ________ prune, for crying out loud, it's ________ the Holy Grail. So why not ________ a little?" The consumer is so ________ of the low-key approach, he contends, ________ he runs out to buy the ________.

For Westinghouse Electric Corporation, Mr. Freberg ________ whipped up a college recruiting ad ________, that pokes fun at rival recruiting ________. In the usual non-Freberg pitch, ________ appeal to student idealism by playing ________ the corporate role in solving ________ sorts of social and economic problems; ________ mundane, day-to-day work any recruit must ________ is seldom mentioned.
But the star Mr. Freese's Westinghouse ad is engineering Charlie Winfield, a man of narrow Charlie puzzles recruiters; he does not to help desalt the seas, uplift ghetto or hurl a man into All he sees to care about "coastal engineering." Says Charlie, showing a flicker of interest, "Get the raisins keep from sticking on the little, and the caraway seeds will take of themselves."
APPENDIX D

PASSIVE TEST
I. That I am hostile toward advertising _______ a rumor persisting along Madison Avenue. _______ now that will be cleared up ______ me. I am.

And how! Today's _______ is described as "that enormous bulk _______ audio-visual rubbish spewing forth from the _______ media" by Mr. Freberg, who is _______ adman himself.

Talking like an adman _______ done by Mr. Freberg. Looking or _______ like one is certainly not done, ________. Executives are transfixed as striding into _______ corporate board rooms in bell-bottom dungarees, _______ shirt and chukka boots with a _______ glare described by one client as "_______, almost hypnotic," is done by him. _______ effect is heightened by rimless, outsized _______ sunglasses and a mop of brillo-pad _______.

Simple is the method used by _______. What most admen are doing is _______ out and the opposite tack is _______. If poking a little fun at _______ clients' products in ads is meant _______ this, fine. If taking a swipe _______ the work of your rivals in _______ ad game is meant by it, _______ the better.

Also, too much lip _______ the client is not taken.

II. Stirring Strong Feelings

That _______ Freberg now counts his critics "on _______ fingers of the Mormon Tabernacle Choir," _______ it was put by him, was _______ by this approach to advertising. "Dennis _______ Menace given a giant erector set _______ play havoc with" was the description _______ him by Broadcasting Magazine. He is _______ "that insane idiot who has given _______ kinds of people the wrong
idea "advertising" by one New York agency. Catching all the way to the ___ is Sten Freberg.

III. Promoting Prunes

That most people ___ like prunes because they have ugly ___ and messy pits was candidly announced ___ Mr. Freberg's ads for Sunsweet ___. Its development of a pitted prune ___ then triumphantly revealed by Sunsweet. Next, ___ warfare on the wrinkles is vowed by _______, said stirring march music.

Some clients ___ made nervous and other admen dubious ___ this sort of approach. It is ___ by them that admitting many people ___ don't like your product is no ___ to sell. Freberg isn't bothered by ____. "The job is done by the ___" is flatly said by him. "Honesty ___ discernment are had by them. The ___ sympathy is gotten." More than satisfaction ___ Sunsweet's. Since the campaign began six months ____, a four-fold increase was had by ___ prune sales.

That he is the ___ and most original adman alive is ___ by Mr. Freberg, who cheerfully confesses ___ acute egomania. One and all are ___ by him to find a single ___ of his that was a flop. ___ 1966 effort for Pacific Airlines in ____ the public was assured by ads ___ to "you with the sweaty palms" everyone, pilots included, was afraid to ___, was immediately pointed to by critics.

_______ campaign was folded by the end ___ three months because people were scared ___ the airline by it and heavy ___ on Pacific was generated by other ____, who were con-
cerned about ads that ________ put the safety of air travel ________ question is the reason given by _________. It is said by Mr. Freberg ________ campaign was ended by a merger _________ Pacific into another carrier (now Air ________) that didn't want to go along _________.

Often Mr. Freberg is ________ by this sort of thing. Relatively ________ companies are many of his clients, ________ eventually are swallowed up by larger _________ which the nettlesome Mr. Freberg is ________ dispensed from. Salada Tea, Contadina Tomato ________ and Chun King Chow Mein are ________ in accounts lost by him this _________.

IV. Barking at the Client

Still, no quarrel with the results ________ obtained is had by most of ________ clients taken on by him, though ________ occurrences are personal clashes with the ________ Mr. Freberg. In making presentations, bombast ________ leaned toward heavily by him; not ________ so much as overwhelming is done. ________ company chiefs are usually famed over ________ agency types saying things like, "Look, J.P., if liking it isn't done by ________, we can run it through again." ________ a top sergeant, barking is done ________ then by Mr. Freberg.

Also, film ________ of what he thinks are the ________ commercials played to his clients is ________ by Mr. Freberg. Kipping around the ________, waving his arms and throwing objects ________ the screen, shouting is done by ________. "Minutes of people's lives are used ________ by you. To put out as ________ garbage as possible
is an obligation have."

A sense of awed helplessness the face of a Freber: presentation confessed to by one client. It said by Jeno Paulucci, "Some awful fights with Stan have been had me. Winning is almost always done Stan."

Losing his cool completely when proposals were shown to him by Freberg is remembered by Mr. Paulucci, used to be the president of company that made Chun King Chow. Sample: That "nine out of ten prefer Chun King" is declared by announcer as the M.D.s are panned the camera. Nine are Chinese, Caucasian.

That the ads would boost sales 25% in six months was bet client by the adman. The bet taken by Mr. Paulucci. Paying off done four months later, with sales up 40%—trudging along Hollywood's La Cienega in his $70 shoes, pulling a occupied by a shortling Stan Freberg. Pizza Products is now headed by Paulucci, and his old antagonist is his adman.

V. Getting His Own Way

Compromising with any of his customers seldom done by Mr. Freberg. Tight of his campaigns is kept by, though a "game client" is respected. "is funny is what Freberg says funny" is specifically stipulated by a in the contracts he executes with. Copyright to all his ads are and the right to add or from any of his

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
creations is _______ clients by another contract clause.

Not _______ for some clients too much is _______ this.

Mr. Freberg is invited in _______ a chat by them and then _______
at his conditions and ideas is _______ in. A check to pay off _______.contract was handed to him and _______ way to the door shown in _______, by Plymouth executives agast at his _______
that Plymouth openly name and criticize _______ competitors.

To show him the way _______ of business would be loved by
_______ fellow admen, too. It is said _______ Robert Wilvers, head
of the Jack _______ Partners Agency in New York, and _______ with
by many, "He's a very _______ man, but more than making funny _______ is advertising. Unless it's relevant to _______ marketing problem,
pointlessness is had by _______ joke. A substitute for an idea
________ too often what it can be. _______ beyond Freberg has got
to be _______; his only weapon is humor."

That _______ ideas work in the marketplace is _______ by
climbing sales curves is retorted _______ Mr. Freberg. As for his
humor, _______ is always related to a solution _______ a specific
company problem is insisted _______ him, or at least to the _______
problem of getting the viewer or reader into the store.

Still, devising ads _______ spoof other ads is admitted by him
as _______ way he gets his _______ kicks. The exaggeratedly
modest _______ is used as a _______ offset to "the preposterous
_______ unbelievable claims that fill _______ airwaves." As "faster
than _______" are billed Jacobsen power _______, for example.
"Sunsweet Prunes _______ preferred to World War _______ by the
overwhelming majority _______ people was proven by _______
" is
said by a _________ ad.

It is said _________ Mr. Freberg: "It's just _________ prune, for crying out _________, it's not the Holy __________. So why not entertain _________ little." It is contended _________ him that so much _________ of the low-key approach _________ felt by the consumer _________ he runs out to _________ the product.

For Westinghouse _________ Corporation, a college recruiting _________ campaign that pokes fun _________ rival recruiting ads was _________ up by Mr. Freberg. _________ the usual non-Freberg pitch, _________ idealism is appealed to _________ corporations by playing up _________ corporate role in solving _________ sorts of social and _________ problems; seldom mentioned is _________ mundane, day-to-day work any _________ must do.

A man _________ narrow vision, engineering student _________ Winfield is the star _________ Mr. Freberg's Westinghouse ads. _________ are puzzled by Charlie; _________ desalt the seas, uplifting _________ ghetto or hurling a _________ into space are not _________ by him. "Toastal Engineering" _________ all that seems to _________ cared about by him. _________ sudden flicker of interest _________ shown by Charlie who _________, "Get the raisins to _________ from sticking on the _________ wire, and the caraway _________ will take care of _________."
APPENDIX E

RELATED PILOT STUDIES
Related Pilot Studies

Two related pilot studies were carried out before this thesis was attempted. The pilots were used for a dual purpose. First, the pilots would, it was hoped, minimize test and procedural flaws. Second, the pilots' results would be used as a part of the thesis rationale to determine whether test type should be included as a control variable in the study.

The first pilot study was actually an extension of the Tognetti and Shellen (1973) design discussed earlier. The only differences were that this first pilot study had no control group (i.e. subjects who did not hear the message before taking the test) and compared three rather than two independent variables: test type (active versus passive), message type (active versus passive), and rate of presentation (normal versus compressed). It was hoped that an analysis of these three dependent variables would indicate whether or not subjects hearing the active version would score higher on the active cloze test, while subjects hearing the passive versions would score higher on the passive cloze test. It was also hoped that the compression variable would cause the desired difference in cloze scores between active and passive subjects. Finally it was hoped that subjects' scores would give some indication of the overall reliability of the experimental procedure.

First Pilot Study Method

The subjects were volunteers from Introduction to Public Speaking classes during winter quarter, 1975, at the University of Montana. Forty-eight volunteer subjects were assigned to one of eight treatment groups, six in each group:

1. Cell A subjects heard an active message at the normal rate of 166 WPM and took an active cloze test.
2. Cell B subjects heard an active message at the normal rate of 166 WPM and took a passive cloze test.

3. Cell C subjects heard a passive message at the normal rate of 166 WPM and took an active cloze test.

4. Cell D subjects heard a passive message at a normal rate of 166 WPM and took a passive cloze test.

5. Cell E heard an active message at compressed rates of 230 WPM and took an active cloze test.

6. Cell F heard an active message at the compressed rate of 230 WPM and took a passive cloze test.

7. Cell G heard a passive message at compressed rates of 230 WPM and took an active cloze test.

8. Cell H heard a passive message at compressed rates of 230 WPM and took a passive cloze test.

The materials in the first pilot study consisted of active and passive messages and the active and passive tests.

The active and passive messages for the pilot studies were the same as those described previously for the main experiment.

The tests for these early studies also followed the cloze procedure rationale. These tests randomly eliminated one of the first seven words of the message and then every seventh word of the message thereafter. The active cloze test contained a possible one hundred and sixty-four correct answers; the passive cloze test contained a possible one hundred and eighty-seven correct answers. Subjects were given a maximum of forty minutes to hear the message and complete the test. Subjects hearing the compressed version had slightly more time to complete the test since their messages took less playing time.

The subjects were randomly assigned to one of four classrooms where they heard an open-air tape recording of one of the four possible messages—active at normal rate, passive at normal rate, active at compressed rate, or passive at compressed rate. After hearing the message,
subjects in each of the classrooms were randomly assigned to complete the active or passive tests. All monitoring of the test situations was handled by a room proctor who also gave basic oral instructions for the test.

Before the Message:
This is an experiment in listening comprehension. Please listen as carefully as possible. You will be tested over the contents of the message so please pay attention.

After the Message:
Please open your test booklet to page 1 and fill in each blank with the word you remember from the message. It is important that you do your best. Good luck. When you are finished with the test, please raise your hand.

Results of the First Pilot Study

The data from the pilot experiment were analyzed using a 2X2X2 completely randomized factorial design using the Ullrich-Pitz analysis of variance. The dependent variables were message type, test type and rate of presentation. The .05 level of significance was the criterion for rejecting the null hypothesis in each statistical test. Both a table of means for each possible cell configuration and an analysis of variance table will be presented. The mean scores are presented in Table 3. The analysis of variance will be presented in Table 4.
TABLE 3

Mean Correct Scores for the First Pilot Study

<table>
<thead>
<tr>
<th></th>
<th>Normal (uncompressed)</th>
<th>Compressed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active Message</td>
<td>Passive Message</td>
</tr>
<tr>
<td>Active Test</td>
<td>30.00</td>
<td>27.00</td>
</tr>
<tr>
<td></td>
<td>(A)</td>
<td>(C)</td>
</tr>
<tr>
<td>Passive Test</td>
<td>27.33</td>
<td>33.67</td>
</tr>
<tr>
<td></td>
<td>(B)</td>
<td>(D)</td>
</tr>
</tbody>
</table>

The analysis of variance (presented in Table 4) showed that the only significant difference was that subjects hearing the compressed messages scored lower than subjects hearing the message at the normal rate. The type of message and the type of test were not found to be significant in the first pilot study.

TABLE 4

Analysis of Variance of Scores from the First Pilot Study

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>114.19</td>
<td>1</td>
<td>114.19</td>
<td>.89</td>
</tr>
<tr>
<td>Message type</td>
<td>0.19</td>
<td>1</td>
<td>0.19</td>
<td>.00</td>
</tr>
<tr>
<td>Test type</td>
<td>3.52</td>
<td>1</td>
<td>3.52</td>
<td>.07</td>
</tr>
<tr>
<td>Rate X Message</td>
<td>38.52</td>
<td>1</td>
<td>38.52</td>
<td>.73</td>
</tr>
<tr>
<td>Rate X Test</td>
<td>25.52</td>
<td>1</td>
<td>25.52</td>
<td>.49</td>
</tr>
<tr>
<td>Message X Test</td>
<td>143.52</td>
<td>1</td>
<td>143.52</td>
<td>2.70</td>
</tr>
<tr>
<td>Rate X Message X Test</td>
<td>17.52</td>
<td>1</td>
<td>17.52</td>
<td>.33</td>
</tr>
<tr>
<td>Within</td>
<td>2098.83</td>
<td>40</td>
<td>52.47</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2741.81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P < .05

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
As can be seen then, the first pilot study is supportive of several important assertions. First, subjects who hear either an active or passive version of the message performed no differently whether the test version (active or passive) was the same or different from the message version (active or passive) they heard. Second, subjects hearing the messages at compressed rates score significantly higher than those subjects hearing the messages at compressed rates. Finally, the pilot helped to eliminate minor procedural flaws for future test circumstances.

The analysis of variance scores suggest two important conclusions. First, as expected the rate of the message made a significant difference in performance on the test; the subjects doing much better when given a normal presentation. Second, subjects scores were not significantly affected because of message type or test type at either rates of presentation.

Second Pilot Study

The second pilot study was in message, test, and procedure like the first pilot study. A group of one hundred and twenty-eight volunteers were used, however, to increase the sample size and resultant power of the second pilot study.

The data from the second pilot study were also analyzed using a 2X2X2 completely randomized factorial design. The dependant variables like those in the first study were: rate of presentation, message type and test type. The .05 level of significance was the criterion for rejecting the null hypothesis in each statistical test.

The design format and mean scores of the one hundred and twenty-eight subjects are presented in Table 5. The analysis of variance is presented in Table 6.
TABLE 5
Mean Scores for the Second Pilot Study

<table>
<thead>
<tr>
<th></th>
<th>Normal (uncompressed)</th>
<th></th>
<th>Compressed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Passive</td>
<td>Active</td>
</tr>
<tr>
<td>Active</td>
<td>33.07</td>
<td>25.27</td>
<td>27.46</td>
</tr>
<tr>
<td></td>
<td>(A)</td>
<td>(C)</td>
<td>(E)</td>
</tr>
<tr>
<td>Passive</td>
<td>28.83</td>
<td>33.30</td>
<td>23.00</td>
</tr>
<tr>
<td></td>
<td>(B)</td>
<td>(D)</td>
<td>(F)</td>
</tr>
</tbody>
</table>

Several important comparisons also appeared in this second pilot study. As can be seen above, those hearing the active version of the message seemed to prefer the passive test. (Cells G and H being nearly equal suggested no difference in preference). Besides a test preference, a rate preference appeared with subjects hearing normal versions of the messages scoring higher than subjects hearing compressed versions.

The analysis of variance table for the second pilot study indicated several interesting comparisons.

TABLE 6
Analysis of Variance of Scores on the Cloze Tests for the Second Pilot Study

<table>
<thead>
<tr>
<th></th>
<th>Rate</th>
<th>1</th>
<th>738.99</th>
<th>14.183*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message</td>
<td>240.87</td>
<td>1</td>
<td>240.87</td>
<td>4.62*</td>
</tr>
<tr>
<td>Test</td>
<td>5.94</td>
<td>1</td>
<td>5.94</td>
<td>.11h</td>
</tr>
<tr>
<td>Rate X Message</td>
<td>-33.57</td>
<td>1</td>
<td>-33.57</td>
<td>-0.644</td>
</tr>
<tr>
<td>Rate X Test</td>
<td>137.00</td>
<td>1</td>
<td>137.00</td>
<td>2.63</td>
</tr>
<tr>
<td>Message X Test</td>
<td>201.27</td>
<td>1</td>
<td>201.27</td>
<td>3.86</td>
</tr>
<tr>
<td>Rate X Message</td>
<td>257.37</td>
<td>1</td>
<td>257.37</td>
<td>4.94*</td>
</tr>
<tr>
<td>X Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>1272.59</td>
<td>82</td>
<td>52.11</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5820.46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05
The second pilot study, like the first, indicates that subjects who hear the compressed version of the message score significantly lower than those who hear the normal uncompressed version. Second, this pilot study, unlike the first, suggested that the subjects performed significantly better when hearing the active version of the message. Third, the second pilot suggested that the interaction of rate, message and test was significant. This meant the difference in test scores between subjects hearing a normal active message and taking an active test as compared to a normal passive message and taking a passive test was significantly greater than those subjects hearing a compressed active message and taking an active test as compared to a compressed passive message and taking a passive test. Finally, subjects scores were again nonsignificant because of the type of tests they were given but the direction of the scores suggested that subjects performed somewhat better when given a test (active or passive) corresponding to the message version they heard, (active or passive).

Conclusions of the Pilot Studies

Several basic findings of the pilot studies may be summarized as follows:

1. Subjects scored significantly better on cloze tests at the normal (uncompressed) rates than did subjects who took the same cloze test and heard a compressed message version.

2. In the second pilot study, those subjects hearing the active version of the message scored significantly higher at both the normal and compressed rates than subjects hearing a passive version of the message.

3. In the second pilot study, there was a significant interaction