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I am submitting herewith a thesis written by Vicki Lynn Kiger entitled "Time-Compression: Can It Revolutionize Political Radio Advertising?" I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Communications.


Dan D. Nimmo, Major Professor

We have read this thesis
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TIME-COMPRESSION: CAN IT REVOLUTIONIZE
POLITICAL RADIO ADVERTISING?

A Thesis
Presented for the
Master of Science
Degree
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Vicki Lynn Kiger

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DEDICATION

This thesis is dedicated to my parents,
Herman and Nancy Kiger,
for their love, patience,
financial support, and understanding.

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ABSTRACT

Political candidates who choose radio as a campaign tool face problems such as high media costs and cluttered air time. This study attempted to examine the merits of an electronic editing technique called time-compression as a means of mitigating these problems. Time-compression involves increasing the rate of information flow per unit-of-time, while maintaining a normal pitch.

The time-compression innovation was studied in relation to four 30-second political radio commercials from Howard Baker's 1978 Senate campaign. The instrument used to compress each commercial was a Variable Speech Controller (VSC). A total of 56 subjects was randomly divided into two groups of 28 subjects each. A rotational design was used so that one group acted as the control group, hearing the commercial at normal speed, while the other group acted as its counterpart, hearing the commercial at a 30% compressed speed. The data-gathering process involved two kinds of questionnaires--the first administered after hearing each of the four commercials, the second administered two days after the initial testing.

Results indicated an inverse correlation between increasing the speed of a political radio advertisement and favorable perception of that advertisement. The hypotheses concerning candidate image, interest in the message,

immediate recall and speed awareness, were rejected. One hypothesis--recall after a two-day period--was accepted.

The study was limited by the subpar audio quality of the tapes, the atypical subjects, and the artificial laboratory environment. Despite these limitations, this study provided insight into the potential merits of time-compressed political radio advertisements.

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CHAPTER I

INTRODUCTION: TIME-COMPRESSION AND POLITICAL RADIO ADVERTISING

During the 1970's political candidates embraced the broadcast media with a fervor unmatched in modern campaigning. Never was this more true than in the 1976 Presidential contest between Gerald Ford and Jimmy Carter. Under the Federal Election Campaign Act of 1972, each major party Presidential nominee received \$21.8 million from the federal treasury for campaigning in the general election (Federal Election Commission, 1978, pp. 1 and 5). Each camp budgeted about half the federal subsidy for the broadcast media, pouring 70% into television advertising and 15% into radio advertising. This new campaign finance law took the Presidential hoopla off the traditional campaign trail and put it in the television and radio sets of America in proportions unparalleled in political campaign history (Witcover, 1977, pp. 14-15).

The infatuation that candidates seem to have with the broadcast media is not limited to Presidential contests. Candidates for just about every office also depend upon it to give them direct communication with the voters. Minow, Martin and Mitchell (1973) contended that the broadcast media have come to play a significant role in politics,

largely because they are the most effective communicators of ideas and images that political man has yet developed (p. 5). Witcover (1977) observed that for most voters, the 1976 Presidential campaign "was what they saw on television, . . . especially at the end [when] the paid broadcast commercials cascaded down on them" (p. 15).

The average American household watches close to seven hours of television a day and listens to the radio just over three hours a day; consequently, candidates funnel the bulk of campaign dollars into the broadcast media (Zeigler and Howard, 1978, p. 11A). Napolitan, in The Election Game (1972), noted:

I keep reminding candidates that more voters will see them on one prime-time television spot than they can possibly see or meet in person during the entire campaign (p. 97).

The impressive reach that Napolitan alludes to includes the realm of radio advertising as well. On a local level, a single radio commercial has a potential reach of 500-500,000 listeners (Agranoff, 1976, p. 309). Shadegg (1972) emphasized that "there is always somebody, somewhere, listening to radio" (p. 163). Radio's available audience is vast since it includes individuals in radio-equipped automobiles, and those with portable receivers, as well as persons who are at home. The average American household now has between five and six radios. In addition, radio may be found in 95% of the nation's automobiles (Zeigler and Howard, 1978, pp. 118 and 124).

Radio offers several advantages which make it an attractive outlet for the political candidate. First, it is an effective vehicle to reach "an audience missed by television, particularly commuters, older people conditioned in the radio era, busy housewives, or the younger generation" (Agranoff, 1976, p. 336). Radio serves as a companion medium for these and other groups of people. It does not demand its listeners' full attention in the same way television claims its audience. Second, it is a much more segmented medium than television. Its audiences can be broken down by station and program listeners. There are stations which appeal to every income level, race and age group. Third, radio is much lower in cost than television. A candidate is able to purchase about four radio spots for the cost of one television spot. This makes radio advertising extremely attractive to the candidate with a tight budget. Fourth, radio is the most flexible medium. It requires very little lead time to place an ad. It also offers relative speed and ease in production. With the aid of only a tape recorder, the candidate can quickly turn his ideas into scripts, which can be recorded for immediate replay. Radio can thus capitalize on instant information, making it possible to respond to an event, offer a solution to a late-breaking crisis, or answer a charge from the opposition (Agranoff, 1976, p. 391). The candidate for public office should not overlook the

advantages which radio can offer his campaign. As Agranoff observed, "Its potential for fitting into the setting and strategy of the average candidate is considerable" (p. 394).

Statement of the Problem

The candidate who chooses the radio medium in future elections will have to grapple with three concerns. The foremost concern appears to be the rising cost of radio advertising. Deardourff (cited in "Year of the Loner," 1978, p. 35) estimated that costs for advertising time have escalated 50% in the past four years. Radio's cost range is vast, with the most expensive prices normally around the drive and news times. A one-minute spot in a large market like New York now costs a candidate at least \$100 (Agranoff, 1976, p. 392). Although this may seem relatively low, it adds up when spent to cover a whole city or state.

The second concern facing the political aspirant is the difficulty of attracting attention during the barrage of political advertisements which accompany elections. Each candidates' advertisements compete not only with those of his opponent(s), but with the candidates for other offices as well. Many candidates tackle this problem by inserting a distinctive effect, such as an alarm clock, or train whistle, to cue the listener to the spot. These effects are often repeated with different copy as a link to identifying the candidate (Agranoff, 1976, p. 392). However, as more and

more campaigns are featuring these special effects, candidates will need some other technique to increase the impact of their commercials.

The third concern the candidate faces is the inadequate amount of time he has to deliver his commercial message. Most candidates rely on the 30-second and 60-second commercials, as the two basic units in their radio advertising campaigns (Zeigler and Howard, 1978, p. 15). These short formats, known as "spot" announcements, have come under heavy attack in recent campaigns. Critics accuse these as being oversimplified to the extent that the voter is either given no information, or worse, misleading information (Lower and Becker, cited in Patterson and McClure, 1976, p. 109). Others have accused these short formats as encouraging shallow imagery and shoddy logic (O'Toole, cited in Weiss, 1973, p. 35). Rafshoon (1976) described the 30-second spot as "trying to cram an inordinate amount of information into an inordinate amount of time" (p. 12). Hess (1974) acknowledged that while the short spots were adequate for allowing the candidate to state a position, they were inadequate for allowing the position to be explained thoroughly (p. 65). When a commercial addressing a complex topic like SALT II is trimmed to fill 30 seconds, a great deal of substance ends up on the cutting-room floor. Consequently, candidates need more time to ensure adequate development of their messages. The 30-second spot hardly

gives them time to speak more than 80 words. How can they be expected to give their solutions to the energy crisis, inflation, or the nuclear arms race in only 30 seconds?

Political candidates who choose radio in the 1980's face higher media costs, cluttered air time, and inadequate commercial lengths. Something needs to be done to allow the candidate the most for every ad dollar spent. This study examines a technique which may alleviate these concerns. This technique, known as time-compression, allows for an increase in the rate of information flow per unit-of-time. The recorded speech is compressed into a shorter time frame. The instrument used for this purpose was the Variable Speech Controller, or VSC. The VSC electronically discards portions of redundant speech by several specially developed integrated circuits ("A6 Speech Controller," p. 1). For example, if a 30-second radio commercial is compressed by 30%, it will require only 22 seconds, instead of the normal 30 seconds, to play. Thus, compression allows eight additional seconds within a 30-second time frame, making it a 38-second commercial. Consider the gains of other commercial lengths, when compressed by 30%:

A 10-second commercial allows for an additional
three seconds within the 10-second time frame.

A 20-second commercial allows for an additional
six seconds within the 20-second time frame.

A 60-second commercial allows for an additional 18 seconds within the 60-second time frame.

A five-minute commercial allows for an additional one minute and 15 seconds within the five-minute time frame.

Ordinarily, if a recorded speech, such as a radio commercial is accelerated, it becomes distorted and high pitched, acquiring a "Donald Duck" effect. Playing the commercial back on the VSC; however, allows compression with good fidelity and without an annoying pitch change ("A6 Speech Controller," p. 1).

Purpose and Significance of the Study

This study attempts to examine the merits of time-compression in relation to four 30-second political radio advertisements. These were taken from the 1978 Howard Baker Senate campaign. Baker, a moderate Republican from Tennessee, is currently the Senate Minority Leader and a Presidential contender. The four commercials chosen address the issues of energy, national defense, federal spending and retirement, respectively.

This research problem is timely, in that the 1980 elections are fast approaching and positive results of the study could be employed in campaigns immediately. The study will also begin to contribute toward solving the dilemmas of high costs, cluttered air time and inadequate commercial lengths of political radio commercials.

Finally, the study helps to fill a research gap because it appears to be the initial effort to unite time-compression with advertising in the political realm.

This research determines the correlation between rate of information flow and:

1. The candidate's image
2. Interest in the message
3. Recall
4. Speed awareness.

A critical look at each of these objectives will aid in evaluating the potential of time-compressed political radio advertisements.

Terms and Definitions

Any research effort must define terms pertinent to the study in such a manner as to remove ambiguity. Therefore, this study relies on the following operational definitions:

Time-Compression. A condition wherein existing informational communications, such as political radio commercials, are presented to the receiver at a rate of information flow greater than the rate of information flow at which it was originally recorded. The pitch remains intact, as do the other essential characteristics of the informational communication (Compressed Time, Inc., p. 446).

Variable Speech Controller. A high-quality, lightweight, easily transportable cassette tape recorder/player with a speed range that may be varied from one-half to three times normal speed, without pitch distortion ("A6 Speech Controller," p. 1).

Broadcast Media. Television and radio.

Hypotheses

In order to critically evaluate time-compressed political radio advertisements, it is necessary to examine the effects of time-compression on the voters' perception of the message. For purposes of this experiment, the independent variable is speed of the commercial. This variable was manipulated with the help of the VSC. The presumed results of this variation in speed, the dependent variables, include: image of the candidate, interest in the commercial, recall of the commercial, and speed of the commercial. These dependent variables were measured quantitatively by the responses to two sets of questionnaires. In conjunction with these variables, this experiment tests the following five hypotheses:

1. The compressed political messages will evoke a more favorable candidate image.
2. The compressed political messages will be more interesting.
3. The compressed political messages will result

in heightened recall of message content immediately after the commercial is heard.

4. The compressed political messages will result in heightened recall of message content after a two-day period.
5. Subjects will be unaware of a speed increase in commercial presentation.

Limitations

This study attempts to precisely measure the effects of compressing a 30-second political radio commercial. However, as in any experimental situation, there are limitations. First, the experiment took place in an artificial, unnatural setting in which real-life conditions were sacrificed in order to achieve a high degree of control over the variables. The absence of these real-life conditions carries with it a loss of external validity; therefore, there is a limited generalizability of the results to a larger population (Haskins, 1977, p. 16). Second, the tape recorded political commercials used in this research were not up to broadcast quality. The VSC caused the compressed tapes to give off a "burbles" effect that resulted in some minor acoustic problems for the subjects. Third, the students who participated in this study did not represent the true adult population. They tended to be atypical in terms of age, education and intelligence;

consequently, they were not a representative sample (Haskins, 1968, p. 37). Finally, this experiment compared one treatment, the normal commercial, with an alternative treatment, the compressed commercial. It measured comparative change between these two treatments, but did not reveal absolute effect of either, when considered alone (Haskins, 1977, p. 18). In summary, despite these limitations, this study can provide valuable insight into the potential merits of time-compressed political radio advertisements. The limitations do not make it impossible to investigate the objectives or hypotheses put forth in this study.

CHAPTER II

THE EMERGENCE OF TIME-COMPRESSSION:

A REVIEW OF LITERATURE

What makes the concept of time-compression so appealing to political broadcast advertising? The answer lies in an analysis of relevant time-compressed studies-- studies which examined the areas of psychology, comprehension and intelligibility, persuasion, advertising, and technical aspects of time-compression.

Psychological Aspects of Time-Compression

The foundation for understanding time-compression may be found in the literature on cognitive psychology. Nichols (cited in Duker, 1974) concluded that a "listener's thought processes were able to operate much more rapidly than speech produced by a human's vocal chords" (p. xviii). The wide difference between rate of absorption of information and rate of presentation gives the mind ample opportunity to wander while listening. For example, a recent study by Cameron, Frank, Lifter and Morrissey (cited in MacLachlan and LaBarbera, 1978) of student attention during a lecture, "revealed that 60% of the time students were not listening--even though the lecturer was very good" (p. 14). The students absorbed the lecture information and still had time to daydream. LaBarbera and MacLachlan

(1979) concluded that "attention commonly oscillates to distractive thoughts which limit attention to the message and reduce learning" (p. 32). In conjunction with this idea, a study of political television spots in Wisconsin and Colorado revealed that only 28% of the exposed voters paid close attention to the political ads, 42% paid some attention and 29% paid little attention. In this study, subjects' attention processes wandered considerably (Agranoff, 1976, p. 320).

Several researchers have suggested that distracting thoughts set in when the pace of information in a communication falls below the individual's optimum level of information intake. The slow rate of presentation affects the individual's listening ability. Consequently, he shifts his attention to distractive thoughts to increase his level of mental involvement (Berlyne, cited in MacLachlan and LaBarbera, 1978, p. 14; Goodman-Malamuth, 1956, p. 169). Recent efforts have sought to examine time-compression's usefulness in increasing interest in a commercial with a slow rate of information flow (Duker, 1974; MacLachlan and LaBarbera, 1978).

Technical Aspects of Time-Compression

The research of the late 1940's was responsible for developing a means of changing the rate of speed of recorded materials without a corresponding shift in

frequency (Duker, 1974, p. xix). The basic principles of this early time-compression research are still evident in the Variable Speech Controller used in this experiment. The VSC proportionately changed all frequency components of the four radio commercials. This process produced an annoying and unintelligible pitch change. To correct this distortion, the VSC restored the speech signal waveform to its original shape and duration by compressing it into a shorter time frame. Redundant portions of the waveform were then successively deleted by several integrated circuits to make room for the stretched remaining pieces. Fortunately, the great deal of redundancy and sufficient duration in the basic speech sound allowed the remaining pieces, properly joined, to present a relatively smooth, normal sounding speeded playback. The key to this time-compression process centered on the deletion of portions short enough to avoid significant loss of auditory continuity ("VSC Unlocks Time-Sampling," 1974, pp. 88 and 90).

Comprehension of Time-Compressed Messages

The rate at which recorded materials can be speeded up without seriously affecting intelligibility has been the subject of numerous studies. Goldstein (cited in Duker, 1974), who was responsible for some of the earliest work on alteration of speech rates, adjusted the "rate of

aural material by means of a combination of rapid speaking and playback at a rate more rapid than the recording rate" (p. 45). Garvey's (cited in Sticht and Foulke, 1974) development of the technique of abutting in 1949 consisted of chopping portions of a tape at the beginning of each word. He reasoned that if the gaps that had been periodically interrupted were spliced together, the result would be time-compressed intelligible speech without distortion in vocal pitch (p. 480).

Fairbanks, considered the pioneer in the field of time-compression, joined forces in 1954 with Everitt and Jaeger to develop the first electromechanical apparatus capable of compressing a recorded tape (cited in Sticht and Foulke, 1974, p. 480). Fairbanks, Guttman and Miron (1957b) employed this instrument in an experiment which found that listeners could assimilate recorded speech at twice (200%) the normal rate with virtually no loss in learning. They used two relatively long technical messages on the subject of meteorology as stimulus materials. The messages were written specifically for the experiment and consisted of straightforward expositions of factual information. They were read at a normal rate of 141 words per minute by an experienced male speaker.

Comprehension of the messages was sampled by means of two tests, each consisting of 30 five-alternative multiple-choice items confined to the factual content.

The experimental procedure involved assignment of independent groups of 36 subjects to five message-test conditions corresponding to time-compressions of 0, 30, 50, 60 and 70%, and an additional test-only, or 100% compression condition which involved 44 subjects. At each message presentation session the procedures were as follows: standardized, extemporaneous instructions; a two-minute sample of a similar message appropriately compressed (considered to cover adaptation to the particular speeded-up rate); first message; first test; second message; second test.

Results indicated that comprehension was almost independent of the rate of speed until the rate was twice as fast as normal. The rate of learning, that is the number of questions correctly answered divided by the time needed to present the message, revealed that maximum learning per unit of time was reached when the message was presented at twice its normal speed. The data appeared to justify the conclusion that acceleration of message presentation beyond rates ordinarily practiced effects given amount of learning in a given time (pp. 10-19).

A second Fairbanks, Guttman and Miron (1957a) experiment found that "subjects who heard a message compressed by 50%, or at a rate of 282 words per minute, yielded a mean score approximately 90% of that for subjects who heard the original version at 141 words per minute"

(p. 20). A 1969 study by Orr found that subjects preferred a speed 150% of normal when they were allowed to choose their own rate of presentation (p. 39). In yet another study of optimum time-compression, Cain and Lass (1974, pp. 674-678) found 175 words per minute as the most preferred rate of presentation among 100 college students. Additional preferences for rate of presentation are ranked in Table 1.

Persuasive Effects of Time-Compression

In a study in 1971, Wheelless attempted to test the hypothesis that a persuasive speech delivered at a normal rate was more persuasive than the same speech when time-compressed (p. 416). Of 238 college student subjects who participated in the study, 30 were randomly assigned to a

TABLE 1
LISTENING RATE PREFERENCES OF ADULTS

Rank	Words Per Minute
1	175
2	200
3	150
4	225
5	250
6	125
7	275
8	300
9	100

control group, while 208 were assigned to eight experimental groups. A taped presentation, designed to secure purchase orders for a "how-to-study" booklet, was the treatment for the eight experimental groups. The normal rate recording was 145 words per minute, while the compressed rates used were 50% (296 words per minute), 40% (239 words per minute) and 30% (204 words per minute).

A comparison of the control group (no message condition) with normal rate experimental groups validated the effect of the message. Frequency of purchase orders and attitude means were significantly higher for normal-rate experimental groups than for the control group. No significant differences in frequencies of purchase were observed for rate (p. 418).

Wheless concluded that "as much persuasive effect on attitudes toward a message and frequencies of purchase may be obtained with a recorded speech that is time-compressed by 50%" (p. 418).

Time-Compression and Radio Advertisements

LaBarbera and MacLachlan (1979) were the first researchers to correlate the concept of time-compression with product advertising. Their studies consisted of three experiments. The first experiment attempted to determine rate preference for a message typical of radio broadcasting. The message selected was Alistair Cooke's commentary on "The Non-Assassination of John F. Kennedy." It was recorded, then transcribed at rates varying from 50% of

normal (twice as slow as normal), to 225% of normal (over twice as fast as normal). Speed was increased at increments of 25% with the Lexicon Varispeech II. Subjects were then asked to make paired comparison choices as to their preferred rate of speed (p. 33). The results indicated subject preference for the speed 130% of normal (or 30% faster than normal). The second experiment involved a talk show recording from a major radio station. The material was compressed at speeds of 125%, 133%, and 150%. Forty-three student subjects were asked to make paired comparison judgments. The results indicated a preferred rate of speech of 130% (p. 33).

The third LaBarbera and MacLachlan experiment served as the basis for this thesis. Six radio commercials were selected from a sample of 18. These six commercials were chosen because "they contained little or no music, relied upon the spoken word for their effectiveness, and had a normal, general pace" (p. 33). The treatment commercials were compressed 30% by a Lexicon Varispeech II. The effect was so subtle, that in response to a later inquiry, not one subject indicated an awareness of the increased rate of speed.

The objectives of the experiment were to determine:

1. If the listeners would find the normal speed or 130% the more interesting.

2. Which speed would result in greatest brand recall two hours later.
3. Which speed would result in the greatest demonstrated recall using the widely accepted Burke-type measure (p. 33).

The experimental design used 41 undergraduate students randomly divided into two groups. A rotational design, as presented in Table 2, was used so that for each commercial:

. . . one group acted as a control group, hearing the commercial at normal speed, while the other group served as the treatment group, hearing the commercial at 130% of normal speed (pp. 33-34).

Each group served as the control group three times and as the treatment group three times.

The students were told the following before the experiment began:

We are going to play six radio commercials for you and we would like to know how interesting you find each commercial. That is, if you were listening to your radio, how likely is it that you would give this commercial your attention? Please rate each commercial on the eight-point scale from "dull" to "interesting" after you have heard the commercial (p. 33).

Two hours later, without advance notice, the students were asked which brands they could remember from the six commercials. Then for three commercials, a Burke-type recall question of the following form was asked:

Do you remember hearing a commercial for (brand name) product? If so, please write down everything you can recall about that commercial (p. 33).

TABLE 2
LABARBERA AND MACLACHLAN ROTATIONAL DESIGN

Commercial	Group One	Group Two
1. Sports Illustrated	Normal	Fast
2. McDonald's Hamburgers	Fast	Normal
3. 10:30 Candybar	Normal	Fast
4. Time Magazine	Fast	Normal
5. Pizza	Normal	Fast
6. Plumber	Fast	Normal

When the results were scored, those students who correctly played back on paper a recognizable portion of the commercial were counted as having demonstrated recall. The results indicated:

1. That in the five instances where subjects were asked how interesting they found a commercial to be, in every case the faster commercial was rated more interesting. In two cases, the McDonald's ad and the Pizza ad, the level of statistical significance was extremely high.
2. That in evaluation of brand recall after two hours, all five instances reflected a higher recall for the faster commercials.

3. For the three commercials, where a Burke-type recall measure was obtained, the demonstrated recall was higher in all cases (p. 34).

LaBarbera and MacLachlan concluded that:

. . . all results in this experiment were in the direction of the hypothesis that faster presentations would be more interesting and would result in heightened recall. The magnitude of the differences was substantial and levels of statistical significance were high (p. 34).

Time-Compression and the Political Radio Advertisement

How might the technique of time-compression benefit political radio advertising? Wheelless (1971) suggested that "shortening the playback time of recordings could significantly reduce the cost of advertising and political campaigning" (p. 450). Sticht (1969) found that time-compression would allow new information to be presented in the time saved by the compression process (p. 795).

LaBarbera and MacLachlan (1979) suggested that an increase in information flow would escalate both attention and learning (p. 32).

Fairbanks, Guttman and Miron (1974) used the time saved, resulting from 30% compression (201 words per minute) of a message, to reiterate certain portions of the message. The general idea of their study was to "regard time-compression as a reduction of 'temporal redundancy' and to trade this reduction for an increase in 'verbal redundancy'" (p. 204). Their results indicated that

reinforcement of certain parts of the selection did increase the comprehension of the emphasized materials.

Implicit in such studies is the hypothesis that time-compression can benefit political broadcast advertising. If one is able to transform the standard 30-second political spot into a 38-second spot without altering the time dimension, the combined benefits of lowering costs while holding voter attention would be a boon to campaigning.

CHAPTER III

IMPLEMENTATION OF THE TIME-COMPRESSED STUDY

The procedures followed in this experiment were based on the 1979 LaBarbera and MacLachlan study, "Time-Compressed Speech in Radio Advertising." This research examined the time-compression factor on political radio advertisements and sought to confirm a positive relationship between increased rate of presentation and favorable candidate image, greater commercial interest, heightened recall and subtleness of speed. The methodology used in this study is presented in subsections: subjects, materials, design and procedure.

Subjects

Subjects were drawn from three undergraduate classes at The University of Tennessee, Knoxville, in August of 1979. These classes included "Marketing Communications," "Editing" and "Mass Media and Society." The majority of subjects were junior or seniors, approximately 21 years of age. A total of 56 subjects were randomly divided into two groups of 28 each. Five subjects were not present for the follow-up aspect of the experiment.

Materials

The four political radio advertisements used in this experiment were actual commercials from the 1978 re-election

campaign of Senator Howard Baker. The ads dealt with energy, national defense, federal spending and retirement. Each commercial was 30 seconds long. Time-compressed recordings were produced by the Variable Speech Controller-A6 model, manufactured by The Variable Speech Control Company in San Francisco ("Model VSC-A6," p. 5).

Specifications of the VSC relevant to this study included:

1. A tape playback speed of $9/8''/\text{sec.}$ to $4-11.16''/\text{sec.}$, infinitely variable over the range.
2. A single slide level which changed the playback speed and automatically corrected the pitch from 60%-250% of normal speed.
3. Speed deviation within $\pm 1\%$.

The four ads were compressed at a speed approximately 30% faster than normal, yielding a words per minute rate of 192. Normal recordings reflected a 148 words per minute rate. The 30% increase allowed 44 extra words to be spoken within the 30-second time frame.

The data-gathering process used in this experiment involved two kinds of questionnaires. Questionnaire 1, the commercial evaluation questionnaire (Appendix A), was constructed in three parts. The first part required an evaluation of the candidate's image, or as Nimmo (1970) described, "the conceptions of qualities that people associate with certain individuals" (p. 144). A seven-point semantic differential scale, adapted from the Blumler

and McQuail (1968, p. 25) Leader-Rating Scale, was used to measure candidate image. The semantic scale is considered an effective method of attitude and image measurement (Haskins, 1974, p. 68). The 14 opposed pairs of adjectival qualities permitted subjects to assess the candidate's strengths and weaknesses. The second part of the commercial evaluation questionnaire, the recall aspect, attempted to measure the subject's general understanding, as well as specific recall of the commercial message. The third part of the questionnaire sought to determine the subject's interest in the commercial and perceived speed of the commercial. The seven-point semantic scale was again the measurement.

Questionnaire 2, the follow-up questionnaire (Appendix B), attempted to measure differences in retention of the compressed commercial, as opposed to the normal commercial, two days after the initial testing. This questionnaire was similar to the content recall aspect of the commercial evaluation questionnaire. But, it only sought to measure recall of two of the four commercials-- the federal spending commercial and the retirement commercial.

Design

According to the Haskins notational system (1977), this research design may be described as a comparative

treatments lab experiment, post-test only (p. 17). This particular design was chosen because it seemed the best measure of comparative change in two treatments (Figure 1). The process of randomization was conducted by assigning every third subject to the alternative treatment until each treatment had an equal number. After the process was completed, the two groups were moved to separate rooms.

Procedure

Each group received the following instructions before hearing the first advertisement:

You're going to hear four political radio advertisements. You'll be asked to fill out a questionnaire following each commercial. If at any time the volume needs adjusting, please raise your hand and indicate which way you wish it to be adjusted.

The commercials were then played in a rotational sequence adapted from the LaBarbera and MacLachlan study (1979). This sequence is described in Table 3. This design allowed one group to act as the control group, hearing the commercial at normal speed, while the other group acted as its counterpart, hearing the commercial at the compressed speed, thus enabling a direct comparison for each commercial. Each group alternated as the control group three times and as the treatment group three times.

After hearing each commercial, the subjects were instructed to fill out the commercial evaluation questionnaire as completely as they could. These instructions

	t1	t2	t3	t4
P1a	--	T1 (fx)	M1	M2
P1b	--	T2 (fn)	M1	M2

P1 = All students in pre-selected classes.

P1a = Randomized sub-sample of students who heard the 30% compressed commercial.

P1b = Randomized sub-sample of students who heard the normal speed commercial.

T1 (fx) = Forced exposure to the compressed commercial

T2 (fn) = Forced non-exposure to the compressed commercial.

M1 = Self-administered questionnaire.

M2 = Self-administered questionnaire.

t1,t2,t3 = August 14 and 15, 1979.

t4 = August 16 and 17, two days after the initial experiment.

Figure 1. Notational Design

TABLE 3
ROTATIONAL DESIGN OF FOUR POLITICAL
RADIO COMMERCIALS

Commercial	Group One	Group Two
1. Energy	Normal	Fast ^a
2. National defense	Fast	Normal
3. Federal spending	Normal	Fast
4. Retirement	Fast	Normal

^aThe commercial was played at a speed compressed by 30%. It actually took only 21 seconds to play.

were particularly emphasized in relation to the fill-in-the-blank questions and the one open-ended question. If the subjects were unable to respond to a question, they were told to guess. Each questionnaire was collected before playing the next commercial, so as not to influence any response. Two days later, with no advance notice given, subjects were asked to fill out the follow-up questionnaire as completely as they could, even if it required guessing at an answer.

Results were tabulated by the experimenter. The semantic differential results were analyzed using t-tests to determine statistical significance. The alpha level required for significance was .05. The grading of the

content items was done judgmentally. Results of the open-ended question were ranked according to five levels for the commercial evaluation questionnaire and four levels for the follow-up questionnaire. Chi-square tests were used to determine statistical significance for each recall item. The alpha level required for statistical significance was .05.

The subjects, materials, design and procedure of this experiment were all constructed to allow for careful evaluation of time-compressed political radio commercials. The basic design of this experiment followed closely the procedures of the LaBarbera and MacLachlan study. Since this research focused on political advertising, it attempted to measure the effect time-compression has on a candidate's image, as well as the effect it has on recall, interest and speed awareness.

CHAPTER IV

THE IMPACT OF THE TIME-COMPRESSED POLITICAL RADIO COMMERCIAL

The requisite data for an analysis of the five hypotheses put forth in this thesis appear in this chapter. Each hypothesis is discussed, accepted or rejected. T-tests were calculated to determine statistical significance of semantic differential results. Chi-square tests were calculated to determine significance of the recall data. The findings of this study confirm only one of the five hypotheses. The compressed commercials were superior to the normal speed commercials only in terms of heightened recall after a two-day period. Otherwise, the faster rate of presentation bowed to the normal speed commercials in favorable image of the candidate, greater interest in the message, and heightened recall immediately after the message was heard.

Hypothesis One

The compressed political messages will evoke a more favorable candidate image.

The mean scores for the 14 qualities that comprise the semantic differential were compared for each group, using a t-test. The results of the four commercials are illustrated in Tables 4, 5, 6, and 7, respectively.

TABLE 4
SEMANTIC DIFFERENTIAL MEASURES FOR ENERGY
COMMERCIAL, NORMAL VERSUS FAST

Semantic Differential Qualities 1. . . 7	Group	Mean Level of Image	t Probability Level
Persuasive. . . Unpersuasive	Normal	3.79	.02**
	Fast	4.89	
Weak. . . Strong	Normal	4.71	.02**
	Fast	3.50	
Likeable. . . Disagreeable	Normal	3.28	.05*
	Fast	4.10	
Democrat. . . Republican	Normal	4.92	.4
	Fast	4.50	
Inspiring. . . Uninspiring	Normal	3.79	.05*
	Fast	4.82	
Unsure. . . Confident	Normal	5.14	.3
	Fast	4.67	
Able. . . Incompetent	Normal	3.64	.4
	Fast	4.00	
Insincere. . . Sincere	Normal	4.85	.2
	Fast	4.25	
Conceited. . . Unassuming	Normal	4.17	.1
	Fast	3.60	
Fair. . . Unfair	Normal	3.42	.05*
	Fast	4.14	
Conservative. . . Liberal	Normal	3.32	.6
	Fast	3.53	
Hardworking. . . Lazy	Normal	3.21	.5
	Fast	2.96	
Straightforward. . . Two-faced	Normal	3.07	.7
	Fast	3.21	
Kindly. . . Inhumane	Normal	3.03	.2
	Fast	3.46	

*Significant at the .05 level.

**Significant at the .02 level.

TABLE 5

SEMANTIC DIFFERENTIAL MEASURES FOR NATIONAL
DEFENSE COMMERCIAL, NORMAL VERSUS FAST

Semantic Differential Qualities 1. . . 7		Group	Mean Level of Image	t Probability Level
Persuasive. . . Unpersuasive		Normal	3.32	.001***
		Fast	5.32	
Weak. . . Strong		Normal	5.17	.001***
		Fast	3.03	
Likeable. . . Disagreeable		Normal	3.14	.001***
		Fast	5.03	
Democrat. . . Republican		Normal	5.60	.1
		Fast	4.71	
Inspiring. . . Uninspiring		Normal	3.50	.001***
		Fast	5.60	
Unsure. . . Confident		Normal	5.67	.001***
		Fast	3.96	
Able. . . Incompetent		Normal	3.17	.001***
		Fast	4.89	
Insincere. . . Sincere		Normal	5.07	.001***
		Fast	3.57	
Conceited. . . Unassuming		Normal	3.85	.2
		Fast	3.35	
Fair. . . Unfair		Normal	3.35	.001***
		Fast	4.57	
Conservative. . . Liberal		Normal	2.57	.1
		Fast	3.42	
Hardworking. . . Lazy		Normal	2.71	.02*
		Fast	3.71	
Straightforward. . . Two-faced		Normal	2.71	.01**
		Fast	3.89	
Kindly. . . Inhumane		Normal	3.28	.001***
		Fast	4.42	

*Significant at the .02 level.

**Significant at the .01 level.

***Significant at the .001 level.

TABLE 6

SEMANTIC DIFFERENTIAL MEASURES FOR FEDERAL
SPENDING COMMERCIAL, NORMAL VERSUS FAST

Semantic Differential Qualities 1. . . 7	Group	Mean Level of Image	t Probability Level
Persuasive. . . Unpersuasive	Normal	3.21	.4
	Fast	3.67	
Weak. . . Strong	Normal	5.03	.9
	Fast	4.96	
Likeable. . . Disagreeable	Normal	3.17	.5
	Fast	3.46	
Democrat. . . Republican	Normal	6.32	.8
	Fast	6.17	
Inspiring. . . Uninspiring	Normal	3.46	.7
	Fast	3.67	
Unsure. . . Confident	Normal	5.42	.9
	Fast	5.32	
Able. . . Incompetent	Normal	2.92	.5
	Fast	3.25	
Insincere. . . Sincere	Normal	5.03	.9
	Fast	5.10	
Conceited. . . Unassuming	Normal	3.50	.3
	Fast	3.92	
Fair. . . Unfair	Normal	3.17	.6
	Fast	3.39	
Conservative. . . Liberal	Normal	2.46	.6
	Fast	2.14	
Hardworking. . . Lazy	Normal	2.60	.6
	Fast	2.85	
Straightforward. . . Two-faced	Normal	2.71	.8
	Fast	2.60	
Kindly. . . Inhumane	Normal	4.42	.01*
	Fast	3.46	

*Significant at the .01 level.

TABLE 7

SEMANTIC DIFFERENTIAL MEASURES FOR RETIREMENT
COMMERCIAL, NORMAL VERSUS FAST

Semantic Differential Qualities 1. . . 7	Group	Mean Level of Image	t Probability Level
Persuasive. . . Unpersuasive	Normal	3.07	.01***
	Fast	4.46	
Weak. . . Strong	Normal	5.28	.02**
	Fast	4.00	
Likeable. . . Disagreeable	Normal	2.89	.1
	Fast	3.85	
Democrat. . . Republican	Normal	6.50	.6
	Fast	6.14	
Inspiring. . . Uninspiring	Normal	3.35	.02**
	Fast	4.46	
Unsure. . . Confident	Normal	6.14	.02**
	Fast	4.82	
Able. . . Incompetent	Normal	2.71	.05*
	Fast	3.67	
Insincere. . . Sincere	Normal	5.53	.05*
	Fast	4.57	
Conceited. . . Unassuming	Normal	3.96	.4
	Fast	3.64	
Fair. . . Unfair	Normal	3.28	.7
	Fast	3.46	
Conservative. . . Liberal	Normal	3.10	0
	Fast	3.10	
Hardworking. . . Lazy	Normal	2.67	.4
	Fast	3.03	
Straightforward. . . Two-faced	Normal	2.28	.2
	Fast	2.96	
Kindly. . . Inhumane	Normal	2.57	.1
	Fast	3.21	

*Significant at the .05 level.

**Significant at the .02 level.

***Significant at the .01 level.

Conclusions are based on these results. Table 4 shows that those who listened to the compressed energy commercial rate the candidate superior only in terms of two of the 14 semantic differential qualities. In each of these cases, the differences between the fast and normal means show not more than a .25 difference; consequently, neither of the two are statistically significant. On the other hand, those who listened to the normal speed energy commercial rate the candidate more positively on the remaining 12 qualities. Differences are statistically significant in five of these 12 cases.

Table 5, which gives the results of the national defense commercial, shows a significant relationship between normal rate of presentation for 11 of the 14 qualities. In nine of these 11 cases, the level of statistical significance is extremely high. Only the conservative/liberal quality results in a more positive mean score for the faster rate of presentation, but it was not significant.

Table 6 shows only one statistically significant difference in mean scores. In this case, subjects who listened to the faster version of the federal spending commercial perceive the candidate to be more kindly. The candidate is also evaluated more favorably in the faster commercial for three other qualities; but, none are at significant levels. The normal version of the commercial is rated more positively on all remaining qualities, but

none are significant. The image of the candidate in the retirement commercial is more positively evaluated in 13 of the 14 qualities by those who heard the normal rate of presentation. Table 7 shows that in six of these 13 cases, the results are statistically significant. In conclusion, the data shows that the image of the candidate is consistently rated better by those who heard the commercial at a normal speed.

Hypothesis Two

The compressed political messages will be more interesting.

Table 8 presents a comparison of the normal and fast groups' level of interest in each of the four Baker commercials. Subjects indicate a higher level of interest in the normal rate of presentation for three of the four commercials. In one of these cases, the national defense commercial, the level of statistical significance is extremely high. The federal spending commercial is the only one rated more interesting when presented at the compressed speed. The mean difference, however, is not significant. The results reflect a lower level of interest in each of the four compressed commercial versions. Therefore, the hypothesis is rejected.

TABLE 8
LEVEL OF INTEREST IN POLITICAL RADIO COMMERCIALS,
NORMAL VERSUS FAST

Commercial	Group	Mean Level of Interest	t Probability Level
Energy	Normal ^a	4.39 ^b	.1
	Fast	3.60	
National defense	Normal	4.60	.001*
	Fast	2.53	
Federal spending	Normal	4.67	.1
	Fast	5.46	
Retirement	Normal	4.78	.1
	Fast	3.85	

^aN = 28 for each normal and fast group, respectively.

^bThe lower the mean, the duller the perception of, or interest in, the commercial.

*Significant at the .001 level.

Hypothesis Three

The compressed political messages will result in heightened recall immediately after the commercial is heard.

The recall portion of the questionnaire was divided into two parts. The first part dealt with a simple identification of the topic and candidate of each message. The second part sought to measure recall of specifics. The results are presented in Tables 9 and 10, respectively. Table 9 demonstrates that subjects who heard the compressed commercial have a harder time identifying the topic correctly in all four cases. However, none of the results are significant. In only the retirement commercial are the percentages correctly identifying the topic even close to being equal. In this instance, the majority of subjects in both conditions incorrectly identify the topic.

The results of Table 10 show both groups able to correctly identify Senator Baker as the candidate in the retirement commercial. In addition, correct recall is almost equal for the federal spending commercial. However, in two instances, the normal version of the commercial is clearly superior in terms of correct identification. In one of these two instances, the difference in recall is significantly in favor of the normal group. In over half of the cases where a wrong answer is given in the first two commercials, the subject simply left the answer blank.

TABLE 9
IMMEDIATE RECALL OF TOPIC,
NORMAL VERSUS FAST

Commercial	Group	Number Correctly Recalling Topic	Percentage Correctly Recalling Topic	Chi- Square Probability Level
Energy	Normal ^a	22	79	.10
	Fast	16	57	
National defense	Normal	15	54	.70
	Fast	12	43	
Federal spending	Normal	24	86	.20
	Fast	19	68	
Retirement	Normal	13	46	.70
	Fast	11	39	

^aN = 28 for each normal and fast group, respectively.

TABLE 10
IMMEDIATE RECALL OF CANDIDATE,
NORMAL VERSUS FAST

Commercial	Group	Number Correctly Recalling Candidate ^a	Percentage Correctly Recalling Candidate	Chi- Square Probability Level
Energy	Normal ^b	13	46	.05*
	Fast	5	18	
National defense	Normal	18	64	.20
	Fast	12	43	
Federal spending	Normal	28	100	.50
	Fast	26	93	
Retirement	Normal	28	100	0
	Fast	28	100	

^aThe candidate was not identified until the last two commercials.

^bN = 28 for each normal and fast group, respectively.

*Significant at the .05 level.

The remaining subjects identified the candidate incorrectly. The most frequent wrong answers were Tennessee politicians Jake Butcher, Keith Bissell, and Lamar Alexander. After Senator Baker was identified for the first time in the federal spending commercial, the number of incorrect responses dropped to two.

The open-ended question was used to determine recall of specifics immediately after the commercial was over. Responses are grouped in Table 11 according to five levels. A comparison of the two groups shows significant difference in levels of recall for all four of the commercials. In two of these four instances, a larger percentage of those who heard the faster version is able to recall specifics at the highest level. However, subjects who heard the normal commercial are able to recall specifics at the second level in greater numbers. Recall by the fast group is concentrated in the three weakest categories: levels 2, 1, and 0. Particularly important are the larger percentages of "no answer/wrong answer" for the faster commercials.

In conclusion, subjects who heard the fast version of the commercials are able to recall specifics at only the lowest levels. In addition, these subjects exhibit poorer topic and candidate recall. Consequently, this hypothesis is rejected.

TABLE 11

IMMEDIATE RECALL OF MESSAGE SPECIFICS,
NORMAL VERSUS FAST

Commercial	Group	Levels of Recall (N/%)					Chi-Square Probability Level
		High 4 ^a	3	2	1	Low 0	
Energy	Normal ^b	0/0	10/36	15/54	1/4	2/7	.01***
	Fast	1/4	7/25	6/21	7/25	7/25	
National defense	Normal	3/11	11/39	3/11	6/21	5/18	.02**
	Fast	0/0	3/11	4/14	9/32	12/43	
Federal spending	Normal	7/25	14/50	4/14	3/11	0/0	.02**
	Fast	10/36	5/18	8/29	1/4	4/14	
Retirement	Normal	10/36	9/32	4/14	4/14	1/4	.05*
	Fast	3/11	5/18	11/39	5/18	4/14	

^aLevel 4 indicates approximately 100% recall.

Level 3 indicates recall of some specifics.

Level 2 indicates recall of topic idea only.

Level 1 indicates recall of key words only.

Level 0 indicates no answer or a wrong answer.

^bN = 29 for each normal and fast group, respectively.

*Significant at the .05 level.

**Significant at the .02 level.

***Significant at the .01 level.

Hypothesis Four

The compressed political messages will result in heightened recall of message content after a two-day period.

The follow-up questionnaire, administered two days after the initial testing, attempted to determine recall of two of the four commercials: federal spending and retirement. The first item on the follow-up questionnaire involved remembrance of actually hearing these commercials two days earlier. Table 12 shows identical recall of the federal spending commercial for both the normal and fast group. Results of the retirement commercial shows a greater degree of recall for those who heard the faster version. Neither of the two comparisons are significant. Table 13 shows the follow-up results of candidate recall, the second item on the questionnaire. The group which heard the faster version of each of the two commercials is able to correctly recall Senator Baker either equally as well, or better than the group which heard the normal commercial. However, neither results are significant.

Table 14 presents the open-ended aspect of the follow-up questionnaire. Subjects who heard the compressed retirement commercial are able to recall specifics at the highest levels significantly more than those who heard the normal commercial. Recall of specifics for the federal spending commercial favors the normal group.

TABLE 12
 RECALL OF TOPIC TWO DAYS LATER,
 NORMAL VERSUS FAST

Commercial	Group	Number Correctly Recalling Topic	Percentage Correctly Recalling Topic	Chi - Square Probability Level
Federal spending	Fast - A ^a	24	96	.50
	Normal - B	25	96	
Retirement	Normal - A	21	84	.20
	Fast - B	24	92	

^aN = 25 in each "A" group.

N = 26 in each "B" group.

TABLE 13
 RECALL OF CANDIDATE TWO DAYS LATER,
 NORMAL VERSUS FAST

Commercial	Group	Number Correctly Recalling Topic	Percentage Correctly Recalling Topic	Chi- Square Probability Level
Federal spending	Fast - A ^a	22	88	.95
	Normal - B	22	85	
Retirement	Normal - A	21	84	.70
	Fast - B	24	92	

^aN = 25 in each "A" group.

N = 26 in each "B" group.

TABLE 14
 RECALL OF MESSAGE SPECIFICS TWO DAYS LATER,
 NORMAL VERSUS FAST

Commercial	Group	Levels of Recall (N/%)				Chi-Square Probability Level
		High 3 ^a	2	1	Low 0	
Federal spending	Fast - A ^b	12/48	2/8	4/16	7/28	.30
	Normal - B	12/46	6/23	5/19	3/12	
Retirement	Normal - A	2/8	9/36	7/28	7/28	.02*
	Fast - B	11/43	5/19	4/15	6/23	

^aLevel 3 indicates recall of specifics.

Level 2 indicates general recall with some specifics.

Level 1 indicates recall of topic idea only.

Level 0 indicates no answer or a wrong answer.

^bN = 25 in each "A" group.

N = 26 in each "B" group.

*Significant at the .02 level.

In conclusion, it appears from the results of the follow-up questionnaire, that remembrance of actually hearing a commercial, as well as recall of candidate and recall of specifics, is superior for the faster version of the two commercials. Consequently, the findings in this case support the hypothesis.

Hypothesis Five

Subjects will be unaware of a speed increase in commercial presentation.

Table 15 displays subjects' perception of speed. Results indicate in all cases that subjects are aware of a rate increase. These results are statistically significant for all four commercials; therefore, the effect of increasing the speed of the commercials was not subtle. Consequently, the hypothesis is rejected.

Summary of Findings

Results of this experiment point to negative evaluation of political commercials compressed by 30%. The only time the faster rate of presentation is rated superior to the normal rate of presentation is in recall of message content after two days. Subjects are able to recall hearing the particular commercial, correctly identify the candidate in that commercial, and relate message specifics of that commercial to a higher degree for the faster rate of presentation. In every other test, the normal commercial

TABLE 15
PERCEPTION OF SPEED OF COMMERCIAL,
NORMAL VERSUS FAST

Commercial	Group	Mean Level of Speed	t Probability Level
Energy	Normal	3.07 ^a	.02*
	Fast	1.64	
National defense	Normal	3.71	.001***
	Fast	1.71	
Federal spending	Normal	3.92	.01**
	Fast	2.78	
Retirement	Normal	4.60	.001***
	Fast	1.46	

^aThe lower the mean, the faster the perception of the commercial.

*Significant at the .02 level.

**Significant at the .01 level.

***Significant at the .001 level.

version prevails. The positive image qualities on the semantic differential scale are almost always associated with the normal speed. In addition, the normal version is found to be more interesting for all four political commercials. Recall of message specifics--immediately after hearing the message--is clearly superior for those who heard the normal version. And finally, the effect of increasing the speed is by no means subtle. Therefore, it may be suggested that the commercials presented at the compressed speed of 30% lag behind the performance of the same commercials when presented at a normal speed.

CHAPTER V

THE POTENTIAL OF TIME-COMPRESSED POLITICAL RADIO

ADVERTISING: REFLECTIONS OF THE STUDY

The findings of this study indicate an inverse correlation between increasing the speed of a political radio advertisement and favorable perception of that advertisement. This conclusion emerges from rejection of four of the five original hypotheses. Those rejected concern the candidate's image, interest in the message, immediate recall and speed awareness. The lone hypothesis confirmed by the findings pertains to recall after a two-day period. Before using these results to pass judgment on the future of time-compressed political radio advertisements, there is a need to evaluate and interpret their implications. In addition, recommendations will be offered for anyone interested in pursuing the ideas of this study.

Interpretation of Findings

Subjects in this study evaluated the object of the two types of political messages contrary to what was hypothesized. They associated negative qualities, such as weak, unsure and insincere, with the candidate presented at the compressed rate of speed. On the other hand, they assessed the candidate in the normal speed commercials as persuasive, likeable, inspiring and able. Consequently,

rate of speed was the determining factor of the candidate's image.

There appears to be a connection between evaluation of the candidate and interest in the message. In each of the three cases where subjects rated the candidate in the normal speed version more positively, they also rated the commercial more interesting. In the one case where the candidate was rated relatively equal for both speeds, the subjects expressed a greater degree of interest in the faster version. In these situations, as well as in any similar situation, listeners tend to tune the poorer candidate out. Instead, they focus their attention on the stronger, more dynamic candidate.

Results also indicated a decline in recall by subjects who heard the compressed commercials. These findings suggest that the increased rate of presentation was not conducive to memorability. Since subjects' perception of the faster speed was statistically significant in each of the four commercials, it seems probable that the pace of the advertisements surpassed what Berlyne (cited in MacLachlan and LaBarbera, 1978, p. 14) described as the "individual's optimum level of information intake." Consequently, the subjects had difficulty assimilating the communication. This difficulty interfered with their ability to remember what they had heard.

Informal comments by many of the subjects suggested

that the faster speed prevented absorption of anything more than the general theme of each commercial. Results of the recall of topic and message specifics confirm that the faster rate of presentation was consistently inferior to that of its counterpart. The same trend continued with recall of the candidate. Results of the first and second commercials in the rotational design showed the normal group able to identify Senator Baker as the candidate in each commercial, to a greater degree than the fast group. Neither of these commercials identified Baker as the candidate. It was not until the third commercial in the rotation that a plug identifying Baker was incorporated. Consequently, correct recall zoomed for both groups. The normal group exhibited perfect recall for the final two commercials, while the fast group was only slightly less perfect. Candidate recall was not appreciably different for the two groups, once Senator Baker was identified.

The most surprising conclusion surfaced in analyzing the follow-up questionnaire data. Considering that the hypothesis regarding recall immediately after each commercial was rejected, it would follow that a hypothesis addressing recall after a two-day period would also be rejected. This was not the case. Subjects who heard the compressed commercial versions showed slightly greater performance for each of the three recall items two days after the initial testing, than they had immediately after hearing the commercials.

One explanation for this unexpected outcome may lie in the procedure for scoring responses to each of the recall items. Since this portion of the questionnaire required development of an answer, categories had to be created which would allow for distinguishable degrees of recall. Once these categories were devised, scoring was done judgmentally by the experimenter; therefore, it lacked the quantitative precision that other measurements would usually have. A second explanation involves the particular commercials chosen for the follow-up questionnaire. The federal spending and retirement commercials seemed more conducive to recall, since they were positioned third and fourth in the rotational design. Informal comments by some of the students suggested that they had become somewhat adjusted to the speed increase by this time; therefore, they were able to remember more about that particular commercial. Finally, the two-day period left ample opportunity for discussion between classmates about the nature of the experiment. Even though a request was made not to confer about the experiment, it should be assumed that discussion did take place.

In conclusion, the rejection of four of the five original hypotheses suggest that time-compression was an ineffective tool for enhancing the political radio advertisement. Findings showed that subjects negatively rated the candidate in the compressed version of each commercial

consistently more than they did the same candidate in each normal version. Subjects were also less interested in the compressed commercials, were unable to exhibit greater recall from the compressed versions, and were completely aware of the speed increase. Since this appears to be the initial endeavor into adjusting the rate of information flow within political broadcast advertising, additional studies are necessary.

The Nature of Political Advertising

There is a direct contradiction between the findings of this study and those of the parent LaBarbera and MacLachlan study. The accelerated presentation did not improve overall perception of the commercials used in this study as it did for the commercials employed in their study. However, LaBarbera and MacLachlan researched the effects of compressing product-oriented commercials, such as hamburger, candybars, pizza and magazines; whereas, this study examined the effects of compressing politically-oriented commercials. The differences between these two concepts may be the key to the converse findings.

Product advertising promotes the sale of goods or services to the consumer (Nimmo, 1978, p. 111). It is the buyer's guide to those products which satisfy his needs and desires. Political advertising, by contrast, seeks to promote to the voter the virtues of a person,

in the guise of a candidate. Its appeals are directed at strengthening the office-seeker's reputation, while informing the audience of his qualifications, experience, background and personality (Nimmo, 1978, p. 111). The consumer in the political situation receives his satisfaction in programs and policies which bear on the conduct of his everyday life.

Candidates are not like bars of soap which can be purchased and discarded in a matter of minutes. Instead, the politician once elected, may hold powerful office for four years or longer (Zeigler and Howard, 1978, p. 108). Consequently, political commercials focus on personal attributes and issues which are not readily conducive to the gimmicks employed in the "soap-selling" product commercials. Political commercials also lean toward tradition; whereas, product commercials are inclined to be more dynamic and progressive. Finally, there are the differences in the manner of delivery. Commercials designed to hail the virtues of a product tend to use professionally trained announcers, actors and actresses; thus, the mode of delivery is highly perfected. In contrast, commercials which endeavor to hail the virtues of a candidate depend upon the ability of someone usually untrained in professional delivery. The candidate may also find himself the victim of factors, such as a slow rate of delivery, a thick regional accent, and anxiety--all of which affect his delivery.

In summary, it may be that the nature of political advertising dictates a rate of presentation slower than that of its product counterpart. The 30% compression may have exceeded the listener's maximum level of political information intake. Consequently, the compressed commercials did not fare as well when compared with the normal presentation.

Future Research

Due to some of the negative findings of this pilot study, the technique of time-compression demands more study. Its potential seems too substantial not to warrant a closer examination. Efforts should be made to repeat the experiment presented here, as well as initiating new designs. The knowledge gained from this study offers the following recommendations for the benefit of any prospective researcher.

The foremost recommendation urges the development of a compression instrument capable of meeting the fidelity standards of broadcasting. Neither the Variable Speech Controller used in this experiment, nor the Lexicon Vari-speech II used in the LaBarbera and MacLachlan (1978) experiment, satisfied these standards. LaBarbera and MacLachlan contend that there are "no technical reasons why an improved studio quality version of [either of these instruments] could not be produced if sufficiently sophisticated circuitry were employed" (p. 35).

The second recommendation addresses the specific rate of presentation of the political messages. The nature of political radio advertising demands that several factors be taken into account when determining the degree of compression. These factors include the speaking ability of the candidate, the content of the message, the conditions of listening, and the region the message is delivered in. The negative responses associated with each compressed commercial, as well as the absolute awareness of speed increase, suggests that the 30% rate was too accelerated. Orr (1974) cautioned that "material compressed for popular consumption be compressed only moderately, so as to take advantage of the efficiencies of the process without creating comprehension difficulties" (p. 39). Future researchers should consider varying the rate of presentation until an ideal can be determined.

The third recommendation concerns the subjects used in the experiment. Student subjects tend to be atypical in terms of age, education and intelligence; therefore, they do not truly provide a representative sample (Haskins, 1968, p. 37). Researchers in future studies should make every effort to select subjects from the average working class population. These are the citizens who operate in the so-called "real world," and for whom the promises of a candidate have greater significance.

In summary, these recommendations may aid prospective

researchers in designing a study capable of enhancing the candidate's image, the interest in the message, and the content recall, without distracting attention to the faster rate of presentation. A positive correlation between the concept of time-compression and perception of the message could revolutionize political radio advertising. The candidate who is adventurous enough to take a chance on time-compression may find himself a step ahead in the election game. Time-compression may be the tool that allows him to tackle the potential problems of future campaigns more effectively than his opponent. This study only scratches the surface of the time-compressed political radio advertisement. Future research is the key to a full assessment of its possibilities.

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APPENDIXES

APPENDIX A

COMMERCIAL EVALUATION QUESTIONNAIRE

Commercial # _____

INSTRUCTIONS: Please place a ✓ on one of the seven spaces on each line below that best represents your image of the candidate who delivered this message. (Please do not omit any.)

Persuasive ____:____:____:____:____:____:____ Unpersuasive

Weak ____:____:____:____:____:____:____ Strong

Likeable ____:____:____:____:____:____:____ Disagreeable

Democrat ____:____:____:____:____:____:____ Republican

Inspiring ____:____:____:____:____:____:____ Uninspiring

Unsure ____:____:____:____:____:____:____ Confident

Able ____:____:____:____:____:____:____ Incompetent

Insincere ____:____:____:____:____:____:____ Sincere

Conceited ____:____:____:____:____:____:____ Unassuming

Fair ____:____:____:____:____:____:____ Unfair

Conservative ____:____:____:____:____:____:____ Liberal

Hardworking ____:____:____:____:____:____:____ Lazy

Straightforward ____:____:____:____:____:____:____ Two-faced

Kindly ____:____:____:____:____:____:____ Inhumane

INSTRUCTIONS: Please identify in one or two words:

1. The topic this message was addressed to _____.

2. The candidate who delivered this message _____.

INSTRUCTIONS: Please write down as much as you can recall about this message, being as specific as possible.

INSTRUCTIONS: Please place a ✓ on one of the seven spaces below that best represents your interest in this message.

Dull ____:____:____:____:____:____:____ Interesting

INSTRUCTIONS: Please place a ✓ on one of the seven spaces below that best represents the speed of this message.

Fast ____:____:____:____:____:____:____ Slow

APPENDIX B

FOLLOW-UP QUESTIONNAIRE

Group _____

Do you remember hearing a political commercial about federal spending or a constitutional amendment?

Yes or No

If the answer is yes, please:

1. Identify the candidate who delivered the message.
2. Write down everything you can recall about the message, being as specific as possible.

Do you remember hearing a political commercial about retired citizens?

Yes or No

If the answer is yes, please:

1. Identify the candidate who delivered the message.
2. Write down everything you can recall about the message, being as specific as possible.

VITA

Vicki Lynn Kiger was born in Augusta, Georgia on August 10, 1955. She attended elementary and junior high school in Richmond, Virginia and was graduated from Meadowbrook High School in that city in June 1973. In August of 1973 she entered Longwood College, and in August of 1975 she transferred to North Carolina State University. She was selected into the Honors program in her senior year and in May 1977 she graduated with High Honors, receiving a Bachelor of Arts degree in Speech Communications.

She entered The Graduate School of The University of Tennessee, Knoxville, in March 1978. She received the Master of Science degree with a major in Communications in December 1979.