ABSTRACT

THE EFFECTS OF TRANSFORMATIONAL COMPLEXITY AND LANGUAGE INTENSITY ON RECEIVER COMPREHENSION AND ATTITUDE CHANGE

by John R. Baseheart

The present study investigated the effects of transformational complexity and language intensity on the level of comprehension and amount of attitude change demonstrated by message recipients.

Ninety-five subjects were administered a pretest attitude questionnaire and a pretest comprehension examination. Subjects were then stratified on the basis of their pretest comprehension exam scores and assigned randomly to one of four experimental treatment conditions. In the posttest session, each subject first read one of four experimental messages, each of which differed in the combination of level of transformational complexity and language intensity, after which they completed attitude ratings of the message topic and the alleged message source, as well as ratings of various message characteristics and the perceived intensity level of the experimental message.

Transformational complexity and language intensity were dichotomized into high and low levels. High transformationally complex messages were operationalized by the use of passive, self-embedded, and nominalized syntactic constructions, while low transformationally complex messages were constructed using active, non-embedded, and non-nominalized active verb-forms. High language intensity messages were operationalized by the insertion of 175 lexical items (adverbs, adjectives, and verbs) of known high intensity ratings into the messages at various appropriate locations. The same procedure was

employed, using lexical items of low intensity ratings, for the manipulation of the low language intensity messages.

Evaluation of the effects of the two independent language variables on the dependent measure of comprehension was assessed by the use of thirty-eight multiple choice-type examination items, the number of questions answered correctly being the criterion measure employed for purposes of analysis. Receiver attitude change, the second dependent measure employed, was measured by use of subjects' pre-test to posttest attitude change ratings of the topic on five, evaluative dimension, semantic differential-type scales.

Subjects also rated the perceived intensity level of the experimental messages, the perceived credibility level of the alleged message source, and the experimental messages on the four message characteristic dimensions of logic, quality, readability, and clarity.

Two interaction hypotheses were tested in the investigation. These hypotheses stated that both comprehension and attitude change would be significantly inhibited by messages high in transformational complexity, particularly when messages were also high in language intensity; conversely, that comprehension and attitude change would be significantly facilitated by low transformationally complex messages, particularly when such messages were low in language intensity. The primary analyses failed to support either of these hypotheses. Neither transformational complexity nor language intensity in connected discourse significantly influenced receiver comprehension or attitude change.

The two desired levels of message intensity were successfully manipulated as evidenced by the subjects' ratings of the high intensity messages as significantly more strong, certain, and emphatic than subjects' ratings of the low intensity messages.

The two manipulated language variables produced no significant effect on the credibility ratings of the alleged message source in terms of his perceived justness, fairness, qualification, or information level. However, messages containing high intensity lexical items produced significantly higher ratings of the source in terms of his aggressiveness and emphatic qualities than did messages containing low intensity lexical items.

The ratings by the subjects of the experimental messages on the four message characteristics of logic, quality, readability, and clarity also reflected no significant differences among the groups processing the different experimental messages. Thus, all messages, regardless of level of complexity or language intensity, were perceived as being equally logical, good, readable, and clear.

In an effort to ferret out possible relationships that may have been obscured by the partial failure in the manipulation of the two levels of message complexity, supplemental analyses of the subjects' comprehension, attitude change, and credibility rating scores were performed, using only those individuals' scores who perceived the message complexity manipulations as intended.

Some minimal support for the major hypotheses was derived from these analyses. The analysis of subjects' comprehension scores revealed that individuals receiving a low intensity message attained significantly higher comprehension scores than did individuals receiving a high intensity message. Also, the supplemental analysis of receiver attitude change scores yielded results for the transformational complexity variable which, although not significant at the prescribed level of significance, nevertheless approached significance $(p < .10)$ Thus, somewhat greater attitude change occurred under conditions of low message complexity than under conditions of high message complexity.

Supplemental analyses of the source credibility ratings yielded significant message complexity effects for both the Safety and Qualification dimensions of

credibility. The alleged source of the low complexity messages was perceived as significantly more just, fair, qualified, and informed than was the source of the high complexity messages. For the credibility dimension of Dynamism, the results indicated that the alleged source of the high intensity message was perceived as significantly more aggressive and emphatic than was the source of the low intensity message.

Finally, a correlation analysis of comprehension and attitude change scores yielded a significant negative correlation between these variables for the combined groups of subjects: as level of comprehension increased, the amount of attitude change demonstrated by subjects decreased.

A number of research extensions, suggested by the findings of the investigation, were discussed.

Accepted by the faculty of the Department of Communication,

College of Communication Arts, Michigan State University, in partial

fulfillment of the requirements for the Doctor of Philosophy degree.

G. R. Miller
Director of Thesis

Guidance Committee: _G. R. Miller_ , Chairman

Erwin P. Bettinghaus

Clessen Martin

THE EFFECTS OF TRANSFORMATIONAL COMPLEXITY AND LANGUAGE INTENSITY

ON RECEIVER COMPREHENSION AND ATTITUDE CHANGE

by

John R. Baseheart

A THESIS

Submitted to
Michigan State University
In partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Communication

1969

TABLE OF CONTENTS

LIST OF TABLES

TABLE

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

For the most part, persuasion researchers have concentrated on the effects of various personality and message variables on the amount of receiver attitude formation and change toward various topics and message sources (for example, see Rosnow and Robinson, 1967, Chapters 1, 2, and 3). Minimal research has focused on the possible effects of various language variables on receiver attitude change. The research that has thus far been conducted has focused primarily on the influence of language intensity on recipient attitude change. The purpose of the present investigation was to investigate the possible effects of two language variables (transformational complexity of language and language intensity) on recipient comprehension level and degree of attitude change.

Transformational Complexity

The effects of transformational complexity of language on language users has been attended to almost exclusively by linguists and psycholinguists, with the majority of the research concerned with the effects of syntactic structure on recall and comprehension of information. Undoubtedly the work of Chomsky (1957) in transformational generative grammar has stimulated the most pervasive interest in this area.

As proposed by Chomsky, a transformational generative grammar is a finite grammar which specifies a minimum set of rules for generating an infinitely

large number of grammatical sentences, while avoiding the formulation of any non-grammatical sentences; and which can assign a structural description to each sentence. This type of grammar consists of three major components: a syntactic component, a phonological component, and a semantic component. The syntactic component specifies the deep structure of a sentence, for which the semantic interpretation is specified, and via transformations, the surface structure, for which a phonetic interpretation is determined by the phonetic component. It is the semantic component that assigns an interpretation to the deep structure underlying a sentence, whereas the phonological component assigns a phonetic interpretation to the surface structure. If the only transformational rules applied in generating a sentence are those designated as obligatory (e.g., transformations determining the proper ordering of affixes and auxiliaries) a simple declarative, active sentence, with simple noun and verb phrases is generated (i.e., the kernel sentence). On the other hand, application of optional transformations to the strings underlying such sentences results in such derived syntactic forms as the passive, negative, queries, and so on. The greater the number of optional transformations required to transform a kernel sentence into some other syntactic form, the greater the complexity of the particular transformed construction. For example, whereas the active to passive transformation requires the application of one rule of transformation, the active to negative-passive transformation requires the application of two, and thus is transformationally more complex than the active to negative or active to passive transformations.

The appearance of the transformational grammar approach in the late 1950's stimulated a great deal of research concerned primarily with the relationship of a number of syntactic structures, either singly or conjointly,

to information processing as indexed by comprehension and recall of information. However, amount of attitude change produced as a function of variations in the transformational complexity of language structure within a persuasive message has been totally neglected by persuasion researchers. The present investigation was, then, an attempt to provide some answers to questions concerning the relationship of transformational complexity to recipient attitude change.

Language Intensity

A second area of concern in the investigation was that of language (message) intensity and its possible effects on comprehension and attitude change. To date minimal attention has been given to language intensity in persuasion research, and the reported research findings are too equivocal to allow for meaningful generalization. Whereas the above mentioned linguistic research concerned with transformational complexity has totally neglected the possible persuasive effects of various linguistic structures, language intensity research has totally neglected the possible effects of language intensity on the comprehension of information. Perhaps the equivocal findings concerning attitude change and language intensity are a consequence of deficiencies in the comprehension of the persuasive messages. If so, and if the assumption of Hovland, Janis, and Kelly (Insko, 1967) that comprehension is an important variable in the acquisition of new opinions is tenable, then such comprehension deficiencies may provide an explanation for the conflicting findings of investigations concerned with these variables.

Language intensity has been conceptualized and operationalized in at least two ways. First, Bowers (1963) states that language intensity can be conceptualized as:

the quality of language which indicates the degree to which
the speaker's attitude toward a concept deviates from
neutrality. High intensity, thus, is characterized by
emotionalism and extremity.

This conceptualization was operationalized as follows: Bowers had subjects rate

the perceived intensity level of either three or four lexical items that would

be inserted into a particular position or location within a message (such anchors

as "slightly intense," "quite intense," and "extremely intense" were employed in

rating the lexical items). These items were rated within the context of the

messages themselves by the subjects, which amounted essentially to a process of

the subjects making comparative judgments of all the lexical items associated

with any specific location in the message. The items typically rated for in-

tensity level were adverbs, adjectives, and verbs. The lexical items receiving

the highest mean intensity ratings were inserted into messages, these messages

being designated as high intensity messages. The same procedure was followed

for the construction of the low intensity messages (see Bowers, 1963, for a

complete description of the methodology).

A second method for manipulating language intensity in messages is one

in which various lexical items of known intensity levels (usually adverbs,

adjectives, and verbs) are inserted into persuasive messages. The intensity

values for these lexical items have previously been established empirically,

usually via various scaling methods or procedures, and thus have numerical

intensity values assigned to them (see, for example, Howe , 1962; 1966; Cliff,

1959; Dixon and Dixon, 1964; and Osgood, Saporta, and Nunnally, 1956). The

high and low intensity persuasive communications are then constructed by

selecting items with either high or low known intensity values and inserting them

into the messages at appropriate points.

Relevant Research

<u>Transformational Complexity</u>

In the present investigation, transformational complexity was defined by the use of variations within messages of three syntactic structures. The particular syntactic structures manipulated were active-passive voice, self-embeddedness versus non-embeddedness, and active verb forms versus nominalizations of these forms. Justification for consideration of various of these constructions as more complex than others will shortly become evident.

<u>Active-Passive</u>. Of all the syntactical constructions investigated in the study of linguistic behavior, the active-passive voice construction has produced the most consistent results in terms of the effects of these constructions on receiver recall and comprehension.

One of the earliest investigations employing this construction is reported by McKean, Slobin, and Miller (1962). These investigators assumed that the more complicated the grammatical transformation, the longer it would take subjects to perform it. They gave subjects the task of pairing two sentences of differing syntactic types (e.g., a kernel and a passive or a passive and a negative, and so on) in a given length of time. The results indicated that passive constructions took longer to transform than kernel (active) sentences.

In terms of correct recall of words in active and passive constructions, Epstein (1967) employed both structurally anomalous sentences and unstructured series of words in active and passive construction forms. He found that words in active constructions were recalled significantly better than those contained in passive constructions. Coleman (1965) obtained similar results using words,

word sets, and complete sentences as response units. Also, as length of response units increased from words to word sets to sentences, the differences in recall between the transformation became more pronounced.

When sentence recall is used as the dependent measure, the findings of a number of investigations demonstrate the generally greater facility of recalling active over passive constructions. Mehler (1963), in a prompted sentence recall task, found that kernel sentences were recalled significantly better than any other syntactic form, including the passive form. Savin and Perchonoch (1965), were concerned with a measure of the amount of immediate memory that is occupied by each of eleven different grammatical constructions, among which were kernel and passive constructions. Capacity for immediate memory for each of the grammatical types was operationalized as the total number of words recalled correctly after perfect recall of the designated sentence. In terms of the mean number of words correctly recalled after correct recall of the sentence types, significantly more words were recalled after a kernel sentence than after a passive sentence. Thus, it was posited that active sentences occupy less space in immediate memory than passive ones, due to the lesser degree of transformational complexity of the active construction. Finally, Turner and Rommetveit (1968) manipulated the voice in which children recalled sentences by varying the child's focus of attention (on the actor or acted-upon object) at the time of sentence storage and retrieval. The finding of primary significance here is that children recalled active voice sentences significantly more frequently than passive voice ones.

Comprehension as a dependent measure in the processing of active and passive constructions has generally taken the form of either multiple-choice tests or verification tasks. On a verification task, the subject is presented

with a sentence of specific grammatical type (e.g., passive-negative), followed by a stimulus (generally a picture) depicting events which confirm or falsify the sentence. The amount of time it takes subjects to decide upon the truth or falsity of the sentence with respect to the picture is the dependent measure assumed to reflect speed of comprehension or understanding.

Coleman (1964) used two long prose passages which were simplified by applying three transformations to them, one of which was the transformation of passive verb constructions to their active verb counterparts. Significantly more multiple-choice questions about the simplified version (the version containing the active verbs) were correctly answered than about the original version (the version containing passive verbs). Interpretation favoring the greater complexity of the passive construction must be tempered, however, due to the fact that two other grammatical transformations were also manipulated in these passages.

Gough (1965) employed a verification task using active and passive constructions. Active sentences were verified more rapidly than passives, again suggesting greater ease of comprehension of active sentences over passives. In a follow-up investigation, Gough (1966) conducted two experiments. The first one delayed the presentation of evidence confirming or disconfirming a sentence by three seconds after sentence presentation, and the second experiment controlled for differing lengths of active and passive sentences by deleting the agent phrase from the passive sentences. In both experiments, active statements were verified more rapidly than passive ones.

Slobin (1966) employed a sentence verification task with kernels, passives, negatives, and passive-negatives, in which the pictures used as stimuli were either reversible or non-reversible (e.g., reversible, a boy hitting a girl;

non-reversible, a dog biting a man). He found that when reversible sentences were used, active sentences were verified faster than passives, but when non-reversible sentences were used, differences between active and passive construction essentially disappeared. Turner and Rommetveit (1967) also employed reversible and non-reversible stimuli in investigating the ability of children to imitate, comprehend, and produce active and passive sentences. They found that active sentences were correctly responded to more frequently than passives, and non-reversibles more frequently than reversible sentences. However, the effect of sentence voice was found to be stronger than the effect of reversibility. The order of comprehension difficulty from least to most difficult was: non-reversible active < reversible, active < non-reversible, passive < reversible, passive.

Huttenlocher, Eisenberg, and Strauss (1968) report an investigation using time to perform a motor task as a dependent measure of the comprehensibility of active and passive sentence constructions. Subjects were required to place one toy truck relative to a second truck (which was fixed in place), the instruction for placement being in either the active or passive voice. In all cases it took significantly longer to place the movable truck when passive constructions were used, suggesting the greater difficulty in processing passive constructions.

From the results of these investigations, it is apparent that active sentences are more easily processed, recalled, and comprehended by language users than are passive constructions.

Self-embeddedness. Far less evidence concerned with the effects of self-embeddedness on information processing is available. A few investigations concerned with self-embeddedness and language processing are, however, available.

Operationally, a construction is said to be self-embedded when one linguistic construction is inserted into the middle of another construction, with

the inserted construction being of the same grammatical form as the construction into which it has been inserted. For example, the sentence "The boy that the man saw stole the car" is an example of embedded sentence with one degree of self-embeddedness. In terms of the speaker-hearer's ability to process these types of constructions, Miller (1962) suggests that self-embedded constructions in language are more diffficult to process and to understand than either left- or right-recursive constructions since the self-embedded constructions:

> by their very nature place heavier demands on the temporary
> storage capacity of any device that attempts to cope with it--
> far heavier than do either left-recursive or right-recursive
> constructions. And since our temporary memory is quite limited
> (see Miller, 1956), we can experience great difficulty following
> grammatical rules in this type of syntactic structure.

Miller (1962) reports example of the difficulties subjects encounter when endeavoring to process and produce replications of multiple embedded sentences. Formalizing these early observations, Miller and Isard (1964) performed an investigation in which they employed sentences with zero, one, two, three, and four degrees of self-embeddedness, and random strings of words. Sentence recall was the dependent measure of concern, and was defined as the number of words recalled in the original sentence order. It was found that self-embedding made sentences more difficult to learn; that on every trial, with the exception of one, the number of recall errors increased as the degree of self-embeddedness increased.

In an investigation concerned with less highly embedded sentences such as one would expect to encounter more often in prose material, Coleman (1965) investigated self-embedded sentences containing only one degree of self-embeddedness. For example, the non-embedded sentence, "I gave the ball to the boy who lives here," had as its self-embedded counterpart the sentence, "I gave the boy who lives here the ball." (Coleman, 1965). The number of words correctly inserted

into the sentences using a cloze procedure technique was used as the dependent measure. It was found that significantly more words were correctly inserted into the non-self-embedded sentences than into the self-embedded sentences.

Blumenthal (1966), using both errors and introspective data from subjects to understand how individuals process and comprehend multiple self-embedded sentences, employed sentences with three degrees of self-embeddedness in a comprehension task. Subjects rewrote or paraphrased sentences so as to make them more comprehensible or acceptable. The results indicated that in multiple self-embedded sentences, when subjects encounter successive noun phrases introduced by relative pronouns, these noun phrases are referred back to the original noun-subject rather than to each preceding noun. Thus, it was suggested that difficulty with the processing of multiple self-embedded sentence was with the assignment of grammatical relations to various sentence constituents. Further, the subjects actually perceived the multiple embedded sentences as ungrammatical approximations to sentences with only one embedding.

Fodor and Garrett (1967) conducted five related experiments concerned with various aspects of self-embeddedness and language processing. Their stimulus sentences were all double embedded constructions. The general experiment employed one list of sentences containing two relative pronouns per sentence used to introduce the two embedded noun phrases. A second list of sentences containing no relative pronouns before the embedded noun phrases and a third list of sentences containing adjectives to introduce the noun phrases (with the relative pronouns absent) were also used. The task of the subjects' was to paraphrase what they heard or saw. Performance was assessed on the basis of the mean number of grammatical relations (i.e., subject-object relations) correctly recovered per second cf response delay. The results of primary interest here are

that the presence of the relative pronouns introducing the self-embedded noun phrases made sentences significantly easier to understand than when these pronouns were absent.

These investigations reflect the consistent finding that self-embeddedness in language structure makes information processing significantly more difficult than language not containing self-embedded constructions.

Nominalizations. A final class of syntactic transformations to be reviewed is that of the nominalization of active verb constructions: the grammatical area of English in which new nouns are created by the application of transformational rules to active verb forms. For example, the sentence, "He explained the design," is the active verb construction of the nominalized form, "His explanation of the design." Although somewhat scanty, the relevant research nevertheless presents rather consistent results concerning the effect of nominalizations on recall and comprehension of information (see Lees, 1960 for a complete discussion of nominalizations).

Coleman and Blumenfeld (1963) reported an investigation in which nominalized sentences were compared by means of a cloze test to their grammatical transformations using active verbs. It was found that the mean number of content words correctly filled in for nominalized sentences was significantly lower than for active verb sentences.

Coleman (1964) conducted a series of experiments concerned with the comprehensibility of different grammatical transformations in a passage. In two experiments in which difficult prose material was simplified by transforming nominalizations, adjectivalizations, and passive verbs to their active verb forms, Coleman found that the active verb transforms were significantly easier to comprehend than the original versions. In two other experiments concerned exclusively

with the effects on sentence recall of transformations of nominalizations to

their active verb constructions, active verb transforms were recalled signifi-

cantly better and took fewer trials to learn than nominalizations.

Coleman (1965) further investigated the effects of nominalizations on

recall by comparing ten different kinds of nominalized sentences to their de-

transformed versions using active verbs, each kind of nominalization being

represented by several sentences. He found, as before, that active verb trans-

fo·mations were significantly easier to recall than their nominalizations。

Epstein (1967) investigated the effect of active, passive, and nominalized

sentences in recall。 Using six anomolous and six unstructured series of words,

he found that the mean number of words correctly recalled was significantly poorer

for nominalized sentences than for either active or passive sentences。

A final investigation is of particular relevance, since it incorporated

a combination of four of these syntactic constructions and their transformations

into prose passages and assessed their effects on recall and comprehension of

prose material. Okatcha (1968) constructed high and low difficulty versions of

prose messages and presented these versions to individuals under conditions of

massed, distributed, and slow one-trial modes of presentation. Of particular

interest here is the operationalization of the high and low difficulty messages。

In the high difficulty messages, whenever possible, active sentences were changed

to passives, non-embedded constructions were transformed to embedded versions,

active verb sentence forms were transformed into various nominalized counter-

parts, and noun clauses were included in the messages. Also, wherever possible,

these transformed versions were combined into long complex sentences. The low

difficulty versions thus contained active voice, non-embedded, simple sentence

constructions. The results of the investigation indicated that significantly

poorer recall and comprehension was produced by prose material containing more complex grammatical constructions (i.e., the high difficulty messages). Also, the slow one-trial presentation method facilitated recall and comprehension of the grammatically complex material.

The results of the investigations reviewed above indicate the justification for the definition of levels of transformational complexity employed in the study.

Language Intensity

As mentioned above, the literature dealing with the effects of language intensity has dealt primarily with attitude formation and change and has produced results that do not allow for the formulation of any consistant and reliable conclusions. Comprehension and recall as dependent measures of language intensity research have not been attended to by persuasion researchers.

Bowers (1963; 1964) and his associate (Bowers and Osborn, 1966) have shown the greatest interest to date in the effects of language intensity on receiver attitude change. Operationalizing the concept of language intensity as described above, Bowers (1963) investigated the relationship between language intensity, social introversion, and attitude change. He hypothesized that high intensity messages would produce greater attitude change toward both the concept and the speakers than would low intensity messages. The data failed to support either of these hypotheses. Bowers did obtain a significant language intensity by direction of attempted influence interaction, indicating that intensity had a differential effect on speakers arguing in favor of, or opposed to, an issue. It was found that low intensity anti- messages were significantly more effective in changing attitudes than were the corresponding high intensity messages -- a reversal of the expected relationship between these variables. Bowers' explanation for this

phenomenon was that perhaps the extremity of word choice produced a "boomerang" effect, and that the various highly loaded constructions may have produced a credibility gap toward the speaker, thus adversely affecting receiver's attitudes.

Bowers (1964) endeavored to isolate some correlates of language intensity so that ultimately one might be able to predict the intensity level of a lexical item from various other attributes of that item. Using correlational analyses, Bowers found: (1) a significant but low correlation (r_b = .10) between intensity and item length in syllables; (2) a moderate correlation (r_b = .59) between how obscure a term was judged to be and intensity level; (3) a high correlation (r_b = .89) between the presence of qualifying terms and intensity, and (4) a high correlation (r_b = .83) between language intensity and metaphorical quality of two types of metaphors (i.e., a death and a sex metaphor).

The findings of the apparent strong relationship between language intensity and metaphorical quality led Bowers and Osborn (1966) to conduct an investigation of the effects of concluding metaphors on receiver attitudes toward the messages and the credibility of the sources. Two metaphors were employed: a sex metaphor and an extended death metaphor. These messages were attributed to either an economics or a science professor. The results indicated that, for both speeches, more attitude change was produced in the intended direction by intense metaphorical conclusions than by literal conclusions. The hypothesized relationship between intense metaphorical quality and the credibility of the source was confirmed, although the relationship was more complex than was expected for the various credibility dimensions used.

A final investigation which employed Bowers' operationalization of language intensity was reported by Carmichael and Cronkhite (1965). These authors took a suggestion from Bowers' (1963) investigation that the unexpected findings that

intense language produced <u>less</u> attitude change than non-intense language may

have been produced by the inadvertent frustration of experimental subjects by

the experimental manipulations. Thus, these authors hypothesized that frustrated

subjects would show a greater tendency to agree with speakers using low intensity

language than with speakers using high intensity language, whereas this pattern

would not occur for the non-frustrated subjects. Frustration was conceptualized

as the blocking of behavior directed toward the attainment of some desired goal.

That is, frustration was assumed to be produced in the presence of two criteria:

(1) the existence of a desired goal response for the subject, and (2) the block-

ing of this response (for a discussion of this position, see Dollard, J., <u>et al</u>,

1939). The major hypothesis was confirmed: frustrated subjects who heard

messages containing low intensity language were more favorable toward the topic

of the speech than were frustrated subjects who heard high intensity speeches.

This pattern, as predicted, did not occur for the non-frustrated subjects. The

results of this investigation are relevant to the discussion of theoretic con-

siderations of language intensity and transformational complexity presented

later in this discussion.

A final investigation of relevance is reported by Kochevar (1967). This

investigation attempted to measure the effects of varying the levels of message

intensity on receiver's attitude toward the message, the topic, and the source

of the message. Message intensity was operationalized by the second method

mentioned earlier; that is, Kochevar constructed his messages using previously

rated high and low intensity adverbs, adjectives, and verbs. The results clearly

indicated that the attempt to manipulate varying levels of message intensity was

successful; however, none of the main hypotheses was confirmed. When compared

to low intensity messages, high intensity messages did not produce greater

attitude change toward the topic, source, or message characteristics. In

general, then, high and low intensity messages did not differentially affect

receiver attitudes.

The conflicting findings of these message intensity investigations point

out the present impossibility of formulating any low-level generalizations con-

cerning the isolated effects of varying levels of language intensity on receiver

attitude change. Perhaps, as Bowers has suggested: "... language intensity ...

must be regarded as a complex variable which is subject to interactions with many

other variables." (Bowers, p. 352, 1963). To date, only Carmichael and Cronkhite

have attempted to explicate the possible interactive effects of language intensity

with other variables.

Thus, the intent of the present investigation was to investigate the

effects of language intensity somewhat further, this time as it may interact

significantly with message complexity to influence the level of recipient

information comprehension and amount of attitude change.

Hypotheses

Consistent with the above remarks of Bowers, and particularly in light

of the findings reported by Carmichael and Cronkhite concerning the interactive

effects of frustration and language intensity on receivers' agreement with an

advocated position, an interactive relationship between language intensity and

transformational complexity of language was hypothesized in this study:

> H1: When message complexity is high, subjects' informa-
> tion comprehension will be low, especially when
> message intensity is also high; when message complexity
> is low, however, subjects' information comprehension
> will be high, particularly when message intensity is low.

This hypothesis specified an interaction between level of message intensity and degree of transformational complexity. The rationale for this hypothesis was as follows: Given the transformational complexity findings and recalling the Carmichael and Cronkhite investigation concerned with the effects of frustration on receiver's attitudes, it can be suggested that messages of high transformational complexity will produce some increment in frustration (in the Carmichael and Cronkhite sense) experienced by subjects. For since highly complex messages are significantly more difficult to process and to comprehend, the desired goal of achieving a maximum comprehension score is to some extent blocked. The blocking of this goal should in turn increase the individual's frustration level. If this increased frustration does occur, then individuals receiving a highly complex message should comprehend more information under conditions of low message intensity than high message intensity. This conclusion is supported by the Carmichael and Cronkhite investigation in which high frustration produced a decrement in performance when coupled with high message intensity and an increment in performance when coupled with low message intensity. However, for low complexity messages, greater comprehension should occur under conditions of low rather than high message intensity. This relationship is suggested by the findings that in certain instances, low intense messages are more effective in modifying behavior than high intense messages. Further, low complexity messages should significantly facilitate comprehension over that produced by high complexity messages, regardless of level of message intensity.

Following from Hypothesis 1, if as suggested earlier, the relationship between comprehension and attitude change is a positive one (an assumption which, although somewhat debatable, draws some support from investigations by Greenberg, 1964; Insko, 1964; and Watts and McGuire, 1964), it would be expected that amount

of attitude change produced as a function of transformational complexity and

language intensity would follow the same pattern as delineated for comprehension.

Thus, Hypothesis 2 stated:

> H2: When message complexity is high, subjects will
> change their attitudes toward the message topic
> less, especially when message intensity is also
> high; when message complexity is low, however,
> subjects will change their attitudes toward the
> message topic more, particularly when message
> intensity is low.

The rank ordering of the complexity by message intensity conditions

(from least to most comprehension and attitude change) would thus be as follows:

high complexity, high intensity < high complexity, low intensity < low complexity,

high intensity < low complexity, low intensity.

Three additional relationships were also investigated in the present in-

vestigation, although these analyses were of only tangential concern to the two

major hypotheses. First, a manipulation check was run to determine whether, in

fact, the message intensity manipulations were effective.

Second, the preceived credibility level of the alleged message source was

evaluated to determine if any difference appeared in the perceived credibility

ratings of this source. Preliminary results of a study by McEwen (in press)

suggested, for example, that message sources coupled with high intensity messages

were perceived as significantly more dynamic than sources associated with low

intensity messages. This relationship, however, did not appear to hold for the

credibility dimensions of safety and qualification. Moreover, if it can be

assumed that complex sentence constructions in messages are an indicant of a

source's high scholarly ability and competence, one might expect to find that a

high complexity message associated with a relatively neutral source would enhance

the perceived qualification, and perhaps safety ratings of that source.

If, in fact, credibility ratings of high message complexity sources do increase, one might speculate that there would be a low relationship between comprehension and persuasibility for high complexity messages. That is, individuals receiving high complexity persuasive messages may not comprehend much of what is proposed in the message, and hence report low comprehension scores, but nevertheless change their attitudes significantly more than individual receiving low complexity messages, merely as a function of the greater persuasibility typically associated with highly credible message sources. At this point, this possibility is highly speculative, but nevertheless a conceivable occurrence.

One further analysis involved a comparison of receiver's ratings of the message characteristics of clarity, logic, readability, and quality. McEwen (in press) found that messages of high intensity were perceived as having greater clarity than low intensity messages, whereas there was no such difference in terms of message quality and logic. How the preceived message characteristics ratings of various message intensity levels may relate to, or interact with messages of high and low transformational complexity was an empirical question to be answered.

CHAPTER II

METHOD

Overview

Ss' attitudes toward a number of current topics were pretested and the topic toward which the majority of Ss responded favorably was chosen. Ss also completed a comprehension examination to determine their ability to read and understand prose material. Approximately one month after administration of the pretest materials, Ss read one of four versions of a counterattitudinal persuasive message. After reading the appropriate message, the Ss responded to both a set of multiple choice-type questions designed to assess their comprehension of the material and to five semantic differential-type scales designed to measure their attitudes toward the message topic. Ss' attitudes toward the alleged source of the message were also measured, using six semantic differential-type scales. Various other rating scales were employed to evaluate the perceived intensity level of the messages by Ss and also to evaluate the effect of the messages on the ratings of the message characteristics.

Pretests

Comprehension. In order to test their ability to read and understand connected discourse, all Ss read a 411 word prose passage taken from the preface of George Bernard Shaw's Androcles and the Lion. Twenty-two multiple choice-type questions were originally employed to test for comprehension of the passage. However, the brevity of available pretest administration time necessitated

the reduction of the number of questions used to assess comprehension level of Ss

to fifteen. A split-half (odd-even) reliability check of the comprehension

questions yielded a correlation of .39. Although the reliability of this exam

was somewhat low, it was felt that some degree of precision could be added to

the investigation by controlling, to some extent at least, for individual

differences in Ss' ability to process information by stratifying the assignment

of Ss to the four treatment groups on the basis of their pretest comprehension

exam scores.

Attitudes. Ss responded to six topics dealing with various national and

local issues which were assumed to be relevant and at least somewhat ego-involving

to college students. Their attitudes toward these topics were measured by use

of five, seven-interval semantic differential-type scales: good-bad, honest-

dishonest, fair-unfair, wise-foolish, and favorable-unfavorable. The topic

chosen for use in the investigation was the establishment of a national popular-

vote primary as a method for choosing Presidential candidates. As indicated

above, most of the Ss expressed favorable attitudes toward this topic.

Independent Variables.

Two independent variables were manipulated in the investigation.

1. Level of transformational complexity within messages. A number of

syntactic variations were introduced into the messages such that sentence con-

struction within the messages differed for the differing message complexity

levels. Transformational complexity was dichotomized into high and low com-

plexity.

2. Message (language) intensity. This variable was manipulated by

inserting various adverbs, adjectives, and verbs of differing perceived intensity

levels into the persuasive messages. The lexical items of differing intensity levels were selected from sources such as Osgood, Saporta, and Nunnally (1956), Dodd and Gerbrick (1960), Howe (1962; 1966), Cliff (1959). Two versions containing message intensity manipulations were produced: one high intensity and one low intensity message version.

Four different versions of the same basic message were utilized in the investigation. The topic, evidence, number, and content of the arguments for all message versions were held constant. The major arguments and other materials contained in the basic message were obtained from Polsby and Wildavsky (1964). Message versions differed only in terms of the message complexity and language intensity manipulations.

For the message complexity manipulations, high and low complexity messages were constructed by using three classes of grammatical transformations. Messages defined as highly complex contained as many passive voice, self-embedded, and nominalized constructions as possible. An effort was made to construct these messages to make them appear to be normal newspaper editorials. This excluded the use of such grammatical transformations as doubly and triply embedded constructions in the high complexity messages. The high complexity message versions thus contained approximately 64% passive voice sentence constructions, 26% self-embedded constructions, and 16% nominalized constructions.

Compounding sentences within the high complexity message versions was minimized in an effort to control for confounding of transformational complexity with structural complexity (structural complexity being defined here as the formulation of compound, complex sentences composed of two or more independent phrases or sentence constructions). However, it was necessary at times to compound a few sentences in the high complexity versions when formulating various self-

embedded sentence constructions from two or more independent sentences. When
compared to the low complexity messages, this decreased the number of total
sentences in the high complexity message versions by nine.

For the low transformationally complex message versions, sentences con-
taining only active voice, non-embedded, active verb forms were employed. Al-
though nine sentences longer, these versions were approximately equal in length
to the high complexity versions in total number of words.

The high and low complexity message versions were subjected to further
modification by the insertion of either high or low intensity modifiers and verbs
in the messages wherever possible and appropriate. There were 175 manipulated
language intensity insertions in each of the high and low intensity message
versions. This produced messages which contained one intense modifier or verb
(high or low) for approximately every seven non-intense lexical items.

Examples of the high and low intensity modifiers employed in the two
message versions are given below.

HIGH INTENSITY		LOW INTENSITY	
extremely (extreme)	doubtlessly	slightly	seemingly
very	absolutely	somewhat	even
unusually (unusual)	obviously	partially	occasionally
decidedly (decided)	proven	some	sometimes
adamantly (adamant)	all	a few	infrequently
totally (total)	none	several	eventually
completely (complete)	every	possibly	subsequently
entirely (entire)	no one	doubtfully	ultimately
unquestionably	repeatedly	supposedly	
undeniably (undeniable)	always	perhaps	
definitely	never	probably	
certainly	perpetually	maybe	
positively		conceivably	

Verb forms of differing intensity levels were manipulated according to the
following guidelines taken, essentially, from Osgood, Saporta, and Nunnally (1955):

HIGH INTENSITY

    1. All unqualified indicative mood verb forms without modal verbs.

       e.g., I go, He says, You have, etc.

       a) But not: used to go, tried to help, has found, was opposed to, etc.

    2. All imperative mood verb forms.

       e.g., look out, beware, etc.

    3. All obligatory modal verb forms and obligatory verbs.

       e.g., must, have to, cannot, require, demand, insist, etc.

LOW INTENSITY

    1. All conditional and subjunctive verb forms and modal forms.

       e.g., can, could, might, may, seems, appears, tries, attempts to, etc.

    2. All verbs of the form: suggest, propose, etc.

    3. All verbs in clauses preceded by if.

Table 1 presents data pertaining to the structure and content of the four versions of the experimental messages.

Table 1. Message data for the four experimental message versions

Message Condition	Number of words/message	Number of Sentences/ Message	Number of Intensity Insertions	Flesch Score
High Complexity, High Intensity	1217	57	175	7.8
High Complexity, Low Intensity	1228	57	175	7.5
Low Complexity, High Intensity	1225	66	175	7.7
Low Complexity, Low Intensity	1216	66	175	7.2

Through pretesting, it was determined that the average length of time required to read a message of approximately 100 less words than the experimental message versions was just less than seven minutes. Therefore, $\underline{Ss}$ in the present investigation were given sixteen minutes to read the experimental messages and to respond to the various attitude, intensity, and message characteristic items. Questioning of the $\underline{Ss}$ upon completion of the experimental session confirmed that this was adequate time to read the message carefully and to complete the questionnaire items.

$\underline{Ss}$ were informed that the source of the message they were to read was a newspaper editorial staff writer. Pretesting the $\underline{Ss}$' attitudes toward this source revealed that the mean attitude ratings of this source were essentially neutral on five, seven-interval semantic differential-type scales (good-bad, honest-dishonest, fair-unfair, wise-foolish, and favorable-unfavorable).

Dependent Variables

Four dependent variables were measured in the present investigation.

1. Amount of attitude change toward the message topic was defined as the difference between a $\underline{S}$'s pretest to posttest score on the message topic. The same five evaluative scales (Osgood, Suci, and Tannenbaum, 1957) employed in the pretest were used to assess the $\underline{Ss}$' posttest attitudes toward the particular topic.

2. Comprehension of message material was measured by use of 38 multiple choice-type questions concerned with message content. The unmanipulated persuasive message (which had a Flesch readability score putting it in a bracket of periodicals with $\underline{Harpers}$ and $\underline{Atlantic\ Monthly}$), and accompanying questions were administered to four different groups of students prior to use in the final

investigation. The questions were subjected to four item analyses in an effort
to develop a reliable comprehension instrument. Of an original total of forty-
four questions, the final comprehension examination consisted of thirty-eight
multiple choice-type questions. A split-half (odd-even) reliability check, using
the Spearman-Brown correction for length, yielded a reliability coefficient of .91.
The total number of questions answered correctly by each S was the basic compre-
hension score employed in the analyses.

    3. Ss' attitudes toward the source of the persuasive message were assessed
by the use of six semantic differential-type scales from the three source credibility
dimensions of Safety, Qualification, and Dynamism (Berlo, Lemert, and Mertz, 1964).
Safety scales employed were just-unjust and fair-unfair; Qualification scales
employed were qualified-unqualified and informed-uninformed, and Dynamism scales
employed were aggressive-meak and hesitant-emphatic.

    4. The four versions of the experimental message were rated by Ss on
four message characteristic dimensions, two of which tended to reflect stylistic
and two content aspects of the message. Ss responded to the following questions
concerning these message characteristics on seven-interval, semantic differential-
type scales, the scales using anchors of very, quite, slightly, and neutral:

    1. How would you rate the <u>logic</u> of the arguments presented?

    2. How would you rate the <u>quality</u> of the information in this article?

    3. How would you rate the <u>readability</u> of the editorial?

    4. How would you rate the <u>clearness</u> of writing of this editorial?

Message Intensity Manipulation Check

    To determine the success of the message intensity experimental manipulation,
Ss were asked to respond to three items which had previously been shown to be
effective in differentiating perceived levels of message intensity (McEwen, in press).

Ss responded to the following question on seven-point, semantic differential-type scales with very, quite, slightly, and neutral as anchors:

1. How strong or weak was the general tone of the writer's statements?

2. How certain or uncertain was the writer about what he was saying?

3. How emphatic or hesitant was the language that the writer used?

Each S's summed score across the three scales was used to determine the success of the manipulation.

Subjects

Ss were ninety-five undergraduate students from undergraduate communication courses at Michigan State University. Ss were stratified according to pretest comprehension test scores, after which they were assigned randomly to the various experimental treatment conditions. Ss were stratified by pretest comprehension scores before assignment to conditions to ensure, as far as possible, that ability of Ss to process and comprehend information was approximately equal for all of the experimental treatment groups.

Procedures

Ss' attitudes toward a number of contemporary problems were pretested. On the basis of their responses to these items, one issue was selected to be used as the experimental message topic in the investigation. Concurrent with the pre-testing of their attitudes toward various problems, Ss also read a brief passage of prose material, after which they responded to a number of multiple choice-type questions concerning the passage content.

On the basis of their pretest comprehension scores, Ss were stratified into groups, and then randomly assigned to one of the four experimental treatment conditions. Approximately one month after pretesting, all Ss read one of the four

versions of the experimental message. After reading the message, they immediately completed the same five rating scales designed to tap their attitude toward the issue as employed in the pretest. They then completed the various other sets of rating scales for the message intensity manipulation, the rating of the message source, and the rating of the message characteristics. Sixteen minutes were allowed for completion of this part of the experiment, after which time all messages and attitude questionnaires were collected from the Ss.

The Ss were then furnished with the thirty-eight item multiple choice-type examination used to test for comprehension of message material. They were allowed a maximum of thirty minutes to complete the comprehension items, this time interval proving very adequate for Ss to answer all of the questions. They were not allowed to make reference to the message while answering the comprehension test questions. Upon completion of the comprehension examination, all materials were collected from the Ss and they were dismissed.

CHAPTER III

RESULTS

Pretest

Comprehension. In order to allow for stratification in the assignment
of subjects to treatment groups in an effort to ensure, as far as possible,
equal distribution of subject ability to process and comprehend information,
all subjects were administered a fifteen item comprehension pretest examination
(see Chapter II for description). Scores on the examination for the ninety-
five subjects used in the investigation ranged from one to fourteen correct,
with a mean of 9.29 items correct, and a standard deviation of 2.30.

Attitudes. Simple analysis of variance was performed on the four ex-
perimental groups' pretest attitude means to ensure that no significant
differences existed among the pretest ratings. The analysis (Table 2) re-
vealed that the groups were not significantly different in their pretest
attitudes toward the topic.

Table 2.   Summary table of means, standard deviations, and analysis of variance of pretest attitude scores.

		Language Intensity	
		High	Low
Message Complexity	High	11.33* 4.20**	11.17 3.27
	Low	10.04 3.56	8.87 3.06

Group	SS	df	MS	F	
Between	91.63	3	30.54	2.41	n.s.
Within	1152.21	91	12.66		
Total	1243.83	94			

*Group mean   **Group standard deviation

29

Test of the Hypotheses

The major hypotheses of the investigation were tested by use of 2 x 2 factorial analyses of variance. For Hypothesis 1, which was concerned with the level of comprehension achieved by the subjects, the mean number of correct responses to the comprehension test items were the data used for analysis. For Hypothesis 2, which predicted differential amounts of receiver attitude change, the mean pretest to posttest attitude change scores for each treatment group were the data employed in the analyses. To avoid negative change scores, a constant value of ten was added to all attitude change scores.

Hypothesis 1. This hypothesis, which was concerned with comprehension level as a function of the two independent variables, stated:

> When message complexity is high, subjects' information
> comprehension will be low, especially when message intensity
> is also high; when message complexity is low, however,
> subjects' information comprehension will be high, particularly
> when message intensity is low.

Thus, the hypothesis stipulates an interaction between level of message complexity and message intensity on amount of message comprehension.

A 2 x 2 factorial analysis of variance (Table 3) indicated that neither level of message complexity or language intensity had a significant effect on comprehension level, although the differences were all in the predicted direction.

Table 3. Summary table of means, standard deviations, and analysis of variance of comprehension test items correctly answered by the four groups.

| | | Language Intensity | |
		High	Low
Message Complexity	High	15.25 4.52	16.61 4.88
	Low	16.56 3.96	17.96 4.22

Source	SS	df	MS	F	
Complexity	1.77	1	1.77	2.08	n.s.
Intensity	1.90	1	1.90	2.23	n.s.
Interaction	.00	1	.00	<1	n.s.
Error		91	.85		

Hypothesis 2. This hypothesis, which was concerned with amount of attitude change as a function of the two independent variables, stated:

> When message complexity is high, subjects will change their attitudes toward the message topic less, especially when message intensity is also high; when message complexity is low, however, subjects will change their attitudes toward the message topic more, particularly when message intensity is low.

Thus, Hypothesis 2 also stipulates an interaction between level of message complexity and message intensity, this time for the amount of attitude change produced.

Table 4 presents the means and standard deviations for the attitude change scores for the four treatment groups. A 2 x 2 factorial analysis of variance

(Table 4) revealed that neither level of message complexity nor language intensity had a significant effect on degree of receiver attitude change.

Table 4. Summary table of means, standard deviations, and analysis of variance for receiver attitude change scores.

		Language Intensity				
		High		Low		
Message Complexity	High	18.54 6.63		18.35 6.82		
	Low	20.76 5.95		19.17 5.88		

Source	SS	df	MS	F	
Complexity	2.32	1	2.32	1.32	n.s.
Intensity	.79	1	.79	$<$ 1	n.s.
Interaction	.48	1	.48	$<$ 1	n.s.
Error		91	1.76		

Thus, the results of these two analyses fail to support the two major hypotheses of the investigation. It appears that neither transformational complexity nor language intensity has any significant effect either on the ability of individuals to comprehend prose material or on the amount of attitude change produced by the means.

Message Intensity Manipulation Analyses

To determine whether individuals in the four treatment conditions perceived

the message intensity manipulations as intended (i.e., as either high or low

in intensity level), the mean intensity ratings for the four groups across the

three summed scales were subjected to a two-way analysis of variance. Table 5

presents the means and standard deviations for the intensity ratings for the

groups. The analysis (Table 5) yielded a significant F of 30.06 for the main

effect for Intensity.

Table 5. Summary table of means, standard deviations, and analysis of variance
of perceived message intensity ratings.

		Language Intensity			
		High		Low	
	High	6.29* 2.95		9.78 2.77	
Message Complexity	Low	6.68 3.04		11.65 5.40	
	Source	SS	df	MS	F
	Complexity	1.27	1	1.27	2.14 n.s.
	Intensity	17.90	1	17.90	30.06**
	Interaction	.55	1	.55	<1 n.s.
	Error		91	.60	

*Since scales were scored where 1 = very intense and 7 = very non-intense, the
 lower the mean, the higher the preceived intensity level.
**Significant beyond the .001 level.

Table 6 summarizes the t-tests between all pairs of mean intensity ratings. The comparisons revealed that the two messages in the high intensity conditions were perceived as significantly more intense than were the messages in the low intensity conditions. Thus, the findings indicate that manipulation of the two levels of message intensity was successful.

Table 6. Differences between pairs of means for the message intensity ratings.

Condition		HC,HI*	HC,LI	LC,HI	LC,LI
	Means	6.29	9.78	6.68	11.65
HC,HI	6.29	--	4.10**	.44	4.16**
HC,LI	9.78		--	3.61**	1.45
LC,HI	6.68			--	3.89**
LC,LI	11.65				--

*HC,HI = High Complexity, High Intensity
 HC,LI = High Complexity, Low Intensity
 LC,HI = Low Complexity, High Intensity
 LC,LI = Low Complexity, Low Intensity
**$p < .05$

Source Credibility Ratings

Subjects rated the preceived credibility of the message source on two scales for each of the credibility dimensions of Safety, Qualification, and Dynamism (Berlo, Lemert, and Mertz, 1964). The data used in the analyses of these ratings were the summed mean rating scores for subjects across each pair

of credibility dimension scales. This analysis sought to determine if message complexity and language intensity differentially influenced the ratings of source credibility. Table 7 presents the means and standard deviations for ratings on the three credibility dimensions.

Table 7. Mean ratings and standard deviations for the source credibility dimensions of Safety, Qualification, and Dynamism.*

Group	Credibility Dimension		
	Safety	Qualification	Dynamism
High Complexity, High Intensity	9.21**	7.29	3.71
	2.58	2.35	1.30
High Complexity, Low Intensity	8.26	7.43	6.87
	1.57	2.04	1.92
Low Complexity, High Intensity	8.56	6.68	4.28
	2.71	2.98	2.27
Low Complexity, Low Intensity	7.83	7.57	7.87
	2.60	2.75	2.79

* Since scales were scored so that 1 = positive evaluation and 7 = negative evaluation, the lower the mean, the higher the credibility ratings.
**Upper number = the mean; Low number = the standard deviation.

Two way analyses of variance (Tables 8 and 9) revealed that neither the Safety nor Qualification dimensions of credibility was significantly effected by the variables of message complexity or language intensity.

Table 8. Analysis of variance summary table of mean Safety dimension ratings.

Source	SS	df	MS	F	
Complexity	.29	1	.29	1.14	n.s.
Intensity	.71	1	.71	2.75	n.s.
Interaction	.01	1	.01	< 1	n.s.
Error		91	.26		

Table 9. Analysis of variance summary table of mean Qualification dimension ratings.

Source	SS	df	MS	F	
Complexity	.06	1	.06	< 1	n.s.
Intensity	.26	1	.26	< 1	n.s.
Interaction	.14	1	.14	< 1	n.s.
Error		91	.29		

A two way analysis of variance of treatment group means for the Dynamism dimension of credibility (Table 10) yielded a significant F of 56.85 for the Intensity effect. Table 11 summarizes the t-tests between all pairs of treatment means. These comparisons revealed that the alleged source of the high intensity messages was perceived as significantly more dynamic than the alleged

source of the low intensity messages. Thus, while the variables of message complexity and language intensity do not effect perceived Safety or Qualification, high intensity messages result in significantly higher ratings of the source's dynamism.

Table 10. Analysis of variance summary table of mean Dynamism dimension ratings.

Source	SS	df	MS	F	
Complexity	.62	1	.62	3.08	n.s.
Intensity	11.39	1	11.39	56.85*	
Interaction	.05	1	.05	< 1	n.s.
Error		91	.20		

Table 11. Differences between pairs of means for the Dynamism dimension of source credibility.

Condition		HC,HI*	HC,LI	LC,HI	LC,LI
	Means	3.71	6.87	4.28	7.87
HC,HI	3.71	---	6.49**	1.05	6.46**
HC,LI	6.87		---	4.16**	1.39
LC,HI	4.28			---	4.81**
LC,LI					---

* HC,HI = High Complexity, High Intensity
  HC,LI = High Complexity, Low Intensity
  LC,HI = Low Complexity, High Intensity
  LC,LI = Low Complexity, Low Intensity
**p < .05

Message Characteristics Analyses

Subjects rated the persuasive messages they received along four message characteristic dimensions. Two of these dimensions dealt primarily with stylistic aspects of the messages (specifically, the readability of the article and the clarity of the writing of the article), and two dealt with content aspects of the messages (specifically, the logic of the arguments presented and the quality of the information in the messages). The data used in the analyses of the message characteristic ratings were the mean ratings for a particular characteristic for the four treatment groups. Table 12 presents the means and standard deviations for the message characteristic ratings.

Table 12. Mean ratings and standard deviations for the message characteristic dimensions of logic, quality, readability, and clarity.*

Group	Message Characteristic Dimension			
	Logic	Quality	Readability	Clarity
High Complexity, High Intensity	4.04**	4.30	3.38	3.13
	1.79	1.43	1.78	1.69
High Complexity, Low Intensity	3.43	4.30	3.87	3.96
	1.35	1.23	1.54	1.55
Low Complexity, High Intensity	3.68	4.16	3.84	3.56
	1.97	1.85	2.15	1.83
Low Complexity, Low Intensity	3.96	4.22	3.83	4.00
	1.78	1.56	1.97	1.72

* Since scales were scored such that 1 = positive evaluation and 7 = negative evaluation, the lower the mean, the more positive the evaluation of the message characteristic.
**Upper number = the means; lower numbers = the standard deviations.

Two-way analyses of variance were performed on each of the four message characteristics (Tables 13, 14, 15, and 16). The results of these analyses revealed that none of the message characteristic dimensions was significantly effected by the variables of message complexity or language intensity.

Table 13. Analysis of variance summary table of mean rating for the logical-illogical message characteristic.

Source	SS	df	MS	F	
Complexity	.01	1	.01	< 1	n.s.
Intensity	.03	1	.03	< 1	n.s.
Interaction	.20	1	.20	1.46	n.s.
Error		91	.14		

Table 14. Analysis of variance summary table of mean ratings for the Quality message characteristic.

Source	SS	df	MS	F	
Complexity	.01	1	.01	< 1	n.s.
Intensity	.001	1	.001	< 1	n.s.
Interaction	.001	1	.001	< 1	n.s.
Error		91	.11		

Table 15.   Analysis of variance summary table of mean ratings for the readability message characteristic.

Source	SS	df	MS	F	
Complexity	.04	1	.04	< 1	n.s.
Intensity	.06	1	.06	< 1	n.s.
Interaction	.06	1	.06	< 1	n.s.
Error		91	.15		

Table 16.   Analysis of variance summary table of mean ratings for the clear-vague message characteristic.

Source	SS	df	MS	F	
Complexity	.06	1	.06	< 1	n.s.
Intensity	.40	1	.40	3.17	n.s.
Interaction	.04	1	.04	< 1	n.s.
Error		91	.13		

Thus, the analysis for the four message characteristics revealed that neither message complexity nor language intensity had any appreciable effect on the perceived logic, quality, readability, or clarity of the persuasive messages.

Correlation of attitude change and comprehension scores for the four treatment group

Correlation analyses were performed between each subject's comprehension score and his attitude change score to investigate the relationship between these measures as a function of the independent variables manipulated. Table 17 presents the results of individual correlational analyses for each treatment group separately, as well as for the combined groups. In the two instances where significant correlations were obtained, the relationship between comprehension and attitude change was negative.

Table 17. Correlation between comprehension scores and attitude change scores.

Group	r	P
High Complexity, High Intensity	-0.13	n.s.
High Complexity, Low Intensity	-0.49	$<.05$
Low Complexity, High Intensity	.02	n.s.
Low Complexity, Low Intensity	-0.30	n.s.
Combined treatment groups	-0.22	$<.05$

Supplemental Analyses

Supplemental analyses were performed for those individuals in the four treatment groups who perceived the message complexity manipulation as intended. That is, analyses were performed for those subjects in the high message complexity condition who, in fact, rated the messages as less readable and less

clear -- the assumption being, of course, that messages of high complexity

levels should be perceived as more vague and unreadable than low complexity

messages.

Analyses were also performed on the data for subjects in the low message

complexity conditions who, in fact, rated the messages as more readable and

more clear. Data for only these two message characteristic dimensions were

used because it was assumed that they most accurately reflected transforma-

tional or stylistic variations in the messages.

Individuals having a summed score of two to seven across these two

messages characteristic dimensions were considered to have perceived the

messages as low in complexity (i.e., as more readable and more clear), while

subjects having a summed score of eight to fourteen were considered to have

perceived the messages as high in complexity (i.e., as less readable and less

clear).

Post hoc analyses were performed, then, for comprehension, attitude

change, and credibility ratings for these subgroups in an effort to clarify

possible relationships between these dependent measures and the independent

variables of message complexity and language intensity.

Pretest comprehension scores

Table 18 presents the means and standard deviations of the pretest compre-

hension scores for subjects used in the supplemental analysis. A one-way

analysis of variance (Table 18) revealed that the four treatment subgroups

did not differ significantly in their pretest comprehension scores. This lack

of differences is encouraging, for it militates against the possibility that

subjects who rated the messages as less readable and less clear did so because of lower comprehension ability. Thus, differences in ratings appear to result from variations in the manipulated complexity level and not from initial discrepancies in the comprehension ability of subjects.

Table 18. Means, standard deviations, and analysis of variance summary for pretest comprehension scores: supplemental analysis.

		Language Intensity				
		High			Low	
Message Complexity	High	9.30* 2.54**			10.00 2.54	
	Low	8.83 2.48			9.60 1.96	
	Group	SS	df	MS	F	
	Between	9.25	3	3.08	<1	n.s.
	Within	244.17	42	5.81		
	Total	253.41	45			

* Group mean   **Group standard deviation

Tests of the Hypotheses: Supplemental Analyses

Comprehension of message content. An analysis was performed on the treatment subgroups' comprehension scores for the particular experimental

message to which each was exposed. The mean number of correct responses were the data used for analysis. Table 19 summarizes the means and standard deviations for the subgroups' comprehension scores. A two-way analysis of variance of subgroup comprehension scores (Table 19) yielded a significant main effect for the language intensity variable. Message complexity failed to reach the required level of significance.

Table 19. Means, standard deviations, and analysis of variance summary for treatment subgroup comprehension scores: Supplemental analysis.

Message Complexity	Language Intensity		
		High	Low
	High	13.50	17.21
		4.53	5.48
	Low	15.42	18.90
		4.23	4.51

Source	SS	df	MS	F	
Complexity	3.26	1	3.26	1.62	n.s.
Intensity	12.92	1	12.92	6.42*	
Interaction	.01	1	.01	< 1	n.s.
Error		42	2.01		

*p < .05

Since a significant effect was found for language intensity, the means were compared by use of t-tests in order to determine the locus of these differences. Table 20 summarizes the tests between various pairs of subgroup means. The only significant mean difference occurred between the High Complexity, High Intensity treatment subgroup mean of 13.50 and the Low Complexity, Low Intensity treatment mean of 18.90. No other mean difference comparisons reached the required level of significance. Again, however, all subgroup means were in the predicted direction.

Table 20. Summary table of differences between pairs of means for subgroup comprehension scores.

Condition		HC,HI	HC,LI	LC,HI	LC,LI
	Mean	13.50	17.29	15.42	18.90
HC,HI	13.50	---	1.75	1.03	2.67*
HC,LI	17.21		---	.92	.80
LC,HI	15.42			---	1.87
LC,LI	18.90				---

*p <.05

Attitude Change. A two-way analysis of variance was performed on the treatment subgroup means for receiver attitude change. Table 21 presents a summary of the means and standard deviations for the subgroup attitude change

scores. The data used were the subjects' pretest to posttest change score with a constant of ten added to each score. The results of the analysis of variance (Table 21) revealed that subjects in the treatment subgroups did not differ significantly in their pretest to posttest attitudes toward the topic. It is worth noting, however, that the F for message complexity approached significance (p $<$ .10). Inspection of the means in Table 21 reveals that more attitude change occurred under conditions of low message complexity, particularly when the message was highly intense. There was a tendency, although not significant at the prescribed level of significance, for message complexity to interact with language intensity in their effect on amount of recipient attitude change.

Table 21. Means, standard deviations, and analysis of variance summary for subgroup attitude change scores: Supplemental analysis

| | | Language Intensity | |
		High	Low
Message Complexity	High	14.80 5.27	17.00 7.14
	Low	21.08 5.07	17.20 4.59

Source	SS	df	MS	F	
Complexity	10.50	1	10.50	3.60	n.s.
Intensity	.71	1	.71	$<$ 1	n.s.
Interaction	9.24	1	9.24	3.17	n.s.
Error		42	2.92		

Source Credibility

Subjects' ratings of the preceived credibility of the message source were analyzed, using the summed mean rating scores across each pair of credibility dimension scales. Table 22 summarizes the means and standard deviations for the ratings on the three credibility dimensions of Safety, Qualification, and Dynamism for subjects in the four subgroups.

Table 22. Mean ratings and standard deviations for the source credibility dimensions of Safety, Qualification, and Dynamism: Supplemental analysis.*

Group	Credibility Dimension		
	Safety	Qualification	Dynamism
High Complexity, High Intensity	9.90**	8.70	4.10
	2.28	1.70	1.45
High Complexity, Low Intensity	8.57	7.71	7.36
	1.45	2.05	2.10
Low Complexity, High Intensity	7.83	5.25	3.67
	2.98	2.13	1.61
Low Complexity, Low Intensity	6.60	5.90	7.40
	3.13	2.51	3.03

* Since 1 = positive evaluation and 7 = negative evaluation, the lower the mean, the higher the credibility rating.
**Upper number = mean; Lower number = standard deviation.

Table 23 summarizes the results of a two-way analysis of variance of the treatment subgroup means for the credibility dimension of Safety. The analysis revealed a significant main effect for message complexity. No other effects reached the required level of significance.

Table 23. Analysis of variance summary table for mean Safety dimension ratings.

Source	SS	df	MS	F	
Complexity	4.08	1	4.08	7.43*	
Intensity	1.64	1	1.64	2.98	n.s.
Interaction	.003	1	.003	< 1	n.s.
Error		42	.55		

*p < .05

In order to determine the locus of the significant message complexity effect, t-tests (Table 24) of the various treatment means were conducted. These comparisons revealed that the alleged source of the low complex messages was perceived as more just and fair (the Safety dimension scales) than was the alleged source of the high complexity messages, particularly when the low complex message was also low in language intensity.

Table 24. Analysis of differences between pairs of means for Safety dimension.

Condition		HC,HI	HC,LI	LC,HI	LC,LI
	Mean	9.90	8.57	7.83	6.60
HC,HI	9.90	---	---	1.80	2.69*
HC,LI	8.57		---	---	2.08*
LC,HI	7.83			---	---
LC,LI	6.60				---

*p < .05

Table 25 summarizes the results of a two-way analysis of variance of the treatment subgroup means for the credibility dimension of Qualification. The analysis revealed a significant main effect for message complexity. No other effects reached the required level of significance.

Table 25. Analysis of variance summary table for mean Qualification dimension ratings.

Source	SS	df	MS	F	
Complexity	6.92	1	6.92	17.43*	
Intensity	.03	1	.03	< 1	n.s.
Interaction	.67	1	.67	1.69	n.s.
Error		42	.40		

*p <.001

In order to ascertain the locus of the significant message complexity effect, t-tests (Table 26) of the various treatment means were conducted. These comparisons revealed that the alleged source of the low complexity messages was perceived as more qualified and more informed (the Qualification dimension scales) than was the alleged source of the high complexity messages.

Table 26. Analysis of differences between pairs of means for the Qualification dimension.

Condition		HC,HI	HC,LI	LC,HI	LC,LI
	Mean	8.70	7.71	5.25	5.90
HC,HI	8.70	---	---	4.12*	2.92*
HC,LI	7.71		---	2.99*	1.94
LC,HI	5.25			---	---
LC,LI	5.90				---

*p .05

Table 27 summarizes the results of a two-way analysis of variance of the treatment subgroup means for the credibility dimension of Dynamism. The analysis revealed a significant main effect for language intensity. No other effects reached the required level of significance.

Table 27. Analysis of variance summary table for mean Dynamism dimension ratings.

Source	SS	df	MS	F	
Complexity	.04	1	.04	< 1	n.s.
Intensity	12.22	1	12.22	30.94*	
Interaction	.06	1	.06	< 1	n.s.
Error		42	.39		

*p < .001

In order to determine the locus of the significant language intensity effect, $\underline{t}$-tests (Table 28) of the various treatment means were conducted. These comparisons revealed that the alleged source of the high intensity messages was perceived as significantly more aggressive and emphatic (the Dynamism dimension scales) than was the alleged source of the low intensity messages.

Table 28. Analysis of differences between pairs of means for the Dynamism dimension.

Condition		HC,HI	HC,LI	LC,HI	LC,LI
	Mean	4.10	7.36	3.67	7.40
HC,HI	4.10	---	4.23*	.66	3.11*
HC,LI	7.36		---	4.96*	---
LC,HI				---	3.70*
LC,LI					---

*p < .05

CHAPTER IV

CONCLUSIONS, DISCUSSION, AND IMPLICATIONS
FOR FURTHER RESEARCH

Conclusions

Primary Analyses. The present study investigated the effects of trans-
formational complexity and language intensity on the amount of comprehension
and attitude change demonstrated by message recipients. The two major
hypotheses of the investigation, both of which stipulated an interaction
between level of transformational complexity and level of language intensity
on comprehension and attitude change, were not confirmed. It had been
hypothesized that high transformationally complex messages would produce
low levels of message comprehension and attitude change, particularly when
the level of language intensity employed in the messages was high; and
conversely, that low transformationally complex messages would produce high
message comprehension and attitude change, particularly when the level of
language intensity of various lexical items employed in the messages was low.
As indicated above, the data failed to confirm either hypothesis. Thus, trans-
formational complexity and language intensity, at least for the levels of
complexity and intensity employed here, do not significantly influence either
the ability of individuals to process information or their attitudes toward
the issue.

The manipulation of message intensity was accomplished by the insertion
of previously rated high and low intensity modifiers and verbs into the persuasive

messages. That this manipulation was successful was evidenced by those

messages containing previously rated high intensity lexical items being, in

fact, perceived as such by the message recipients, as well as those messages

containing low intensity items being rated as such by the receivers.

The experimental manipulation of message complexity, operationalized

by the manipulation within messages of either active or passive, non-embedded

or embedded, and non-nominalized or nominalized constructions was apparently

largely unsuccessful for the messages failed to produce significantly different

ratings of the four message characteristic dimensions. As pointed out in

Chapter 3, persons receiving the high complexity messages did not perceive them

as any more or less clear, readable, logical, or bad than did individuals

receiving the low complexity messages.

Post hoc analyses were performed on the perceived source credibility

ratings of the alleged message source. The analyses indicated that the

treatment group subjects did not differ significantly in their perceptions of

the alleged message source's justness, fairness, qualification, and infor-

mation level. The groups did, however, differ significantly in their ratings

of the dynamic qualities of the source. Individuals who received the highly

intense messages perceived the alleged source as significantly more aggressive

and emphatic than did those individuals receiving the low intensity messages.

Thus, level of message complexity and language intensity significantly in-

fluenced the perception of the message source, but only with respect to

producing differing perceptions of the source's dynamic qualities.

Supplemental Analyses. In an effort to ferret out possible relationships

that may have been obscured by the partial failure of the message complexity

manipulations, supplemental analyses of subjects' comprehension, attitude change, and credibility rating scores were performed, using only those individuals' scores who perceived the message complexity manipulations as intended. In other words, analyses were performed on the comprehension scores, attitude change scores, and credibility rating scores of subjects in the high message complexity conditions who, in fact, rated the messages as highly complex (i.e., as low in readability and clarity). Similarly, analyses were performed for those individuals in the low message complexity conditions who, in fact, rated the messages as low in complexity (i.e., as high in readability and clarity).

As suggested earlier, these findings should be interpreted cautiously, since they are based on post hoc analyses of a selected sample of individuals. However, the results provide some additional insights into the functions of the variables of transformational complexity and language intensity which were not apparent in the primary analyses.

These supplemental analyses yielded some support for the major hypotheses of the investigation. The analysis of subjects' comprehension scores revealed that individuals receiving a low intensity message attained significantly higher comprehension scores than did those individuals receiving a high intensity message. Thus, comprehension of information appears to be somewhat facilitated by messages containing low intense lexical items, and somewhat inhibited by messages containing highly intense lexical items. These findings lend some support to the earlier formulations concerning the effects of language intensity on information comprehension.

While the supplemental analysis of attitude change scores was not significant at the prescribed level, the message complexity effect approached significance

at less than .10. Somewhat greater amounts of attitude change occurred under conditions of low message complexity than under conditions of high message complexity. Thus, the finding lends some minimal support to the original hypothesis which stipulated, in part, that low complexity messages would produce greater amounts of attitude change than high complexity messages.

When supplemental analyses were performed on the source credibility data, significant message complexity effects were found for both the Safety and Qualification dimensions, and a significant language intensity effect was again found for the Dynamism dimension. Comparison of means for the Safety and Qualification dimensions indicated that the alleged source of the low complexity messages was perceived to be significantly more just, fair, qualified, and informed than was the source of the high complexity messages. Comparisons of the Dynamism dimension mean ratings revealed that, as was found in the primary analysis, the alleged source of the high intensity message was perceived as significantly more aggressive and emphatic than was the source of the low intensity message.

Finally, correlation analyses between each individual's comprehension and attitude change score were performed for each of the four treatment group conditions, as well as for the combined groups. With the exception of one analysis, all correlations were negative. Only two correlation coefficients -- the correlation for the high complexity, low intensity treatment condition, and the combined treatment groups analysis -- were significant. Both of these correlation coefficients were negative, indicating that as comprehension increased, attitude change decreased.

Discussion

Comprehension. Although the primary analysis yielded no significant effects on recipient comprehension level, the trends of the comprehension score means are somewhat encouraging. Inspection of group mean comparisons for both the primary and supplemental analyses (Tables 3 and 19) reveal that, as theorized, messages of high transformational complexity coupled with high language intensity produced the lowest level of information comprehension, whereas information comprehension was highest for individuals processing messages low in transformational complexity and language intensity.

The failure of the transformational complexity variable to produce results consistent with theoretic expectations and prior empirical results leads to speculation concerning possible differences in the nature of comprehension of isolated sentences and of connected discourse. Typically, stimulus materials employed in investigations concerned with effects of transformational complexity on recipient comprehension level have been isolated sentences, unrelated to each other in semantic content. Results produced by these investigations have generally led to the conclusion that high transformational complexity produces decrements in the comprehension of the stimulus materials, whereas low transformational complexity does not. This is a rather consistent finding. Minimal data are available concerning the effects of transformational complexity on comprehension of connected discourse material.

The investigation by Okatcha (1968), reviewed earlier, dealt with comprehension of prose material as a function of differing levels of transformational complexity. As indicated, Okatcha found that highly difficult messages (analogous to the high complexity messages in the present investigation) produced

recall and comprehension significantly inferior to that produced by low difficulty messages.

Okatcha's finding conflicts with the present results, even though the operationalization of message complexity in the present investigation closely modeled that employed in the earlier study. One difference in operationalization that may help explain the different findings of these two investigations is Okatcha's confounding of transformational complexity with structural complexity in operationalizing his high and low difficulty messages. That is, Okatcha not only manipulated various grammatical structures within sentences (i.e., actives versus passives, etc.), he also combined sentences and clauses whenever possible. Thus, many sentences in the high difficulty message versions were longer (in terms of number of words) and structurally more complex than were the sentences in the low difficulty messages.

As a result, an alternative explanation for the significant differences in comprehension and recall produced by the high and low difficulty messages in the Okatcha investigation might be couched in terms of differing levels of message readability. Readability measures are generally presented as a ratio of the total number of words per sentence to some other measures such as syllables per 100 words (Flesch, 1949), or percentage of monosyllables (Farr, Jenkins, and Paterson, 1949). Okatcha's high and low difficulty messages undoubtedly differed in terms of their readability levels, for the high difficulty message contained approximately one-half as many sentences as the low difficulty messages, while containing approximately the same number of total words per message.

It is interesting to note here that the ordering of the mean comprehension scores for the various treatment groups for both the primary and supplemental analyses correspond relatively well to the ordering of the Flesch readability scores reported above in Table 1. This correspondence is perfect for the primary analysis scores, and differs only slightly for the supplemental analysis (see Table 29). These findings further reinforce the possibility that it is not the level of transformational complexity that facilitates or inhibits comprehension, but rather the level of structural complexity.

Table 29. Summary table of Flesch readability scores and comprehension scores for the primary and supplemental analyses.

Group	Readability Scores	Mean Comprehension Scores Primary Analysis	Supplemental Analysis
High Complexity, High Intensity	7.8*	15.25	13.50
High Complexity, Low Intensity	7.5	16.61	17.21
Low Complexity, High Intensity	7.7	16.56	15.42
Low Complexity, Low Intensity	7.2	17.96	18.90

*The higher the readability score, the more difficult the material is considered to be to read.

That transformational complexity failed to produce the expected results may simply be an indication that when individuals process meaningful connected

discourse to "get the sense" out of the material (i.e., for comprehension),
theoretic differences in the levels of difficulty of different grammatical or
syntactic structures may produce no practical differences in ability to process
information. This speculation, of course, must be tempered, since it is likely
that extreme transformational complexity within a message would impair compre-
hension, even in connected discourse. For example, messages containing large
numbers of doubly and triply embedded constructions (such as, for example,
"The pen the author the editor liked used was new" [Fodor and Garrett, 1967])
should produce significant differences in ability to comprehend this information.
However, up to some optimum point in ability of the speaker-hearer to comprehend
and process information, differences in transformational complexity may not
make a practical difference.

One further result concerned with message comprehension is the significant
effect of language intensity on comprehension level found in the supplemental
analysis. When compared with high intensity messages, low intensity messages
significantly facilitated message comprehension, resulting in greater infor-
mation gain. This result is consistent with Carmichael and Cronkhite's (1965)
finding that under increased frustration, greater agreement with a topic
occurred for individuals receiving a low intensity message.

Carmichael and Cronkhite discuss their findings in terms of an activation
theory proposed by Fiske and Maddi (1961), and this theory may assist in inter-
pretation of the present findings. Fiske and Maddi propose that the level of
activation of an individual is, in part, a function of the nature of the task
at hand, and that individuals in a state of high activation will tend to reject
stimuli that would further increase their activation level. Hence, in the
present investigation, one can speculate that reception of a message strongly
advocating a counterattitudinal position places the individual initially into

a state of heightened activation. Subsequent additional stimulation in the form of high intensity language contained in the messages may lead the individual to reject, or fail to adequately attend to the information contained in the message. This, in turn, might significantly lower the level of information comprehension by individuals receiving the high intensity messages below that of individuals receiving the low intensity messages.

Attitude Change. The results of the primary analysis, which failed to support the second major hypothesis of the investigation, indicated that neither transformational complexity nor language intensity had any significant influence on receivers' attitudes toward the message topic. The supplemental analysis, however, did yield a result that approached significance, indicating that individuals who received low complexity messages changed their attitudes more than individuals exposed to high complexity messages. This finding lends minimal support to the earlier prediction that persons receiving messages low in transformational complexity would report greater attitude change than persons exposed to messages high in transformational complexity.

However, the reasons for this finding are not clear. It was suggested above that message comprehension would be greater under conditions of low message complexity, and that if comprehension and attitude change were positively correlated, then the greater the amount of comprehension of message information, the greater the amount of recipient attitude change. Confirmation of this positive relationship would provide an explanation of the reported results concerning attitude change and message complexity.

However, the present findings indicate that level of message complexity had no significant differential effect on message comprehension. Also, as reported above, attitude change and comprehension level were negatively related. These two findings militate against invoking greater comprehension of low

complex messages as an explanation for the finding that greater attitude change occurred under conditions of low message complexity.

There is another possibility that may account for this finding. As reported in Chapter III, the supplemental analyses for source credibility ratings indicated that the alleged source of the low complexity message was perceived as generally more credible than was the source of the high complexity message. Since high credible sources generally produce more attitude change than low credible sources, the perception of the alleged source of the low complexity messages as significantly more safe and qualified than his high complexity counterpart may have produced the greater amount of receiver attitude change among individuals receiving the low complexity messages.

Source Credibility

For both the primary and supplemental analyses of credibility, the alleged source of the high intensity message was perceived as significantly more aggressive and emphatic than was the alleged source of the low intensity message. This finding is consistent with the earlier reported findings of McEwen (in press). The result is not particularly startling, since the act of appearing very certain and adamant concerning some stimulus object is often associated with vigorous, dynamic individuals. Thus, a source employing such high intense lexical items as "certainly," "without doubt," "completely," and "adamantly" should be perceived as more dynamic than someone employing less intense lexical items.

In the primary analyses, ratings of the source's qualification and safety did not differ for any of the treatment groups. For the supplemental analyses a significant message complexity effect was found for both safety and quali-fication. It thus appears that the credibility of a message source may be enhanced by messages low in transformational complexity. This finding is

contrary to the expectation that complex sentence constructions, which can serve as indicants of a source's scholarly abilities and competence, will enhance perceived qualification and safety.

Reasons why a high complexity message source should appear less credible than a low complexity message source are unclear. Perhaps recipients of the high complexity messages perceive the source's primary purpose as one of confusing them on the issue by use of a complex-appearing sentence constructions in the hope of attaining the desired attitude change effects merely on the basis of the more "intellectual" high complexity message.

Attitude Change versus Comprehension

On the surface, the significant negative correlation between attitude change and message comprehension in the primary analysis was puzzling. It is initially assumed that amount of attitude change and level of comprehension would be positively related, so that an increase in the level of one variable would be accompanied by a corresponding increase in the level of the other. This, of course, did not occur.

Sherif and Hovland's theory of assimilation and contrast may help to clarify the obtained negative relationship between attitude change and comprehension level. The theory states that: "If the communication advocates a position that is highly discrepant from that held by the communication recipient, contrast will result; i.e., the individual will perceive the communication as advocating a more extreme position, will unfavorably evaluate the communication, and will be either minimally positively or negatively influenced." (Insko, 1967, p. 67).

In the present study, all subjects heard and reacted to counterattitudinal messages. Perhaps as the subjects received and comprehended greater amounts

of the belief discrepant information, greater contrasting occurred, with the individual perceiving the communication as advocating a position more and more extreme from his own. If so, subjects might be expected to evaluate the communication more and more unfavorably, resulting in some level of negative message evaluation with a concomitant negative change in attitude toward the issue.

Implications for Further Research

In the past communication researchers have focused attention on various source and receiver variables assumed to influence the communication process. Only recently has attention been directed to various aspects of the language processes used in communicative interactions. If we wish to understand the various facets of the communication process, we must continue to study the effects of various language variables that influence the communicative process.

The results of the present investigation suggest several potentially fruitful research directions. First, as suggested above, the differential effects of both transformational and structural complexity on comprehension and attitude change are in need of study. The results of the present investigation suggest that transformational complexity does not have any significant influence on information processing or attitude change, at least until some optimal level of complexity is attained. Beyond this optimal level, information processing may suffer significantly. For example, significant information loss may not occur until messages are employed which contain doubly and triply embedded sentences, as well as greater numbers of passive and nominalized constructions. This possibility invites further research.

The effect of structural complexity on information gain and attitude change also warrants further investigation. Here, structural complexity would be defined as the combining of two or more sentences, clauses, and phrases into a single sentence, thus increasing the length of the sentences. While transformational complexity may not affect information processing and attitude change, structural complexity may. This possibility is suggested by the present findings, as well as by the findings reported by Okatcha (1968).

A further research implication is suggested by the source credibility-message complexity finding. In the supplemental analysis, when subjects actually perceived the message complexity manipulations as intended, the source of the low complexity message was seen as significantly more qualified and safe than the source of the high complexity message. Consequently, the source of the low complexity message produced significantly greater attitude change than did the high complexity source. This finding suggests a future study in which credibility level is manipulated, as well as transformational and/or structural complexity. On the basis of the present study, an interaction hypothesis between credibility level and complexity level would seem warranted.

The manipulation of message intensity used in the present investigation appears to be a functional method of operationalizing this variable. However, additional research should investigate the effects of language intensity on other independent and dependent variables. For example, the possible interactive effects of language intensity and manipulated source credibility on recipient attitude change have not previously been investigated. From the results of the Miller and Baseheart (1969) investigation of source trustworthiness and opinionated language, one might speculate that a high intensity message (assumed here to be somewhat analogous to the opinionated language message) coupled with

high credible source would produce greater attitude change than would a low
intensity message (assumed to be analogous to the non-opinionated language
message) coupled with a high credible source. And conversely, that a low
intensity message coupled with a low credible source would produce greater
attitude change than would a high intensity message coupled with a low credible
source.

One final implication suggested by the present investigation concerns
the possible differential effects that mode of message presentation (i.e.,
messages presented orally or in written form) might have on information
processing and attitude change. The present study presented messages in written
form only, which allowed subjects time to re-read all or various portions of the
messages. Messages presented orally, on the other hand, which allow subjects
to perceive the stimulus materials only once, may influence information processing
quite differently than messages presented visually. Thus, it is conceivable
that messages differing in transformation complexity and language intensity pre-
sented orally may influence comprehension and attitude change in quite a different
manner than the same messages presented visually. This possibility invites
investigation.

Other investigations which manipulate transformational complexity and
language intensity could be formulated, but the preceding suggestions indicate
the amount of work needed in these areas before any generalizations concerning
t h e effects of complexity and intensity on recipient attitude change and in-
formation gain can be made.

Thus, while the present investigation sheds some light on the effects of
two language variables on the communication process, it represents only an initial

step toward an understanding of the complexities associated with the language
process, per se. Communication researchers in the future might well profit
by directing significant portions of their research energies toward investigating
these and various other language variables which may have a significant influence
on the communication process.

REFERENCES

Berlo, D.K., Lemert, J.B., and Mertz, R.J. Dimensions for evaluating the acceptability of messages sources. OCD research report, Department of Communication, Michigan State University, June, 1964.

Blumenthal, A.L. Observations with self-embedded sentences. _Psychonomic Science_, 1966, 6, 453-454.

Bowers, J.W. Language intensity, social introversion, and attitude change. _Speech Monographs_, 1963, 30, 345-352.

Bowers, J.W. Some correlates of language intensity. _Quarterly Journal of Speech_, 1964, 50, 415-420.

Bowers, J.W. and Osborn, M.M. Attitudinal effects of selected types of concluding metaphors in persuasive speeches. _Speech Monographs_, 1966, 33, 146-155.

Carmichael, C.W. and Cronkhite, C.L. Frustration and language intensity. _Speech Monograph_, 1965, 32, 107-111.

Chomsky, N. _Syntactic Structures_. The Hague: Mouton, 1957.

Cliff, N. Adverbs as modifiers. _Psychological Review_, 1959, 66, 27-44.

Coleman, E.B. The comprehensibility of several grammatical transformations. _Journal of Applied Psychology_, 1964, 48, 186-190.

Coleman, E.B. The learning of prose written in four grammatical transformations. _Journal of Applied Psychology_, 1965, 49, 332-341.

Coleman, E.B. and Blumenfeld, J.P. Cloze scores of nominalization and their gramatical transformations using active verbs. _Psychological Reports_, 1963, 13, 651-654.

Dixon, T.R. and Dixon, J.F. The impression value of verbs. _Journal of Verbal Learning and Verbal Behavior_, 1964, 3, 161-165.

Dodd, S.C. and Gerbrick, T.R. Word scales for degree of opinion. _Language and Speech_, 1960, 3, 18-31.

Dollard, J., Dobb, L.W., Miller, N.E., Mowrer, O.H., and Sears, R.R. _Frustration and Aggression_. New Haven: Yale University Press, 1939.

Epstein, W. Some conditions of the influence of syntactical structure on learning: Grammatical transformation, learning instructions, and "chunking". _Journal of Verbal Learning and Verbal Behavior_, 1967, 6, 415-419.

Farr, J.N. and Jenkins, J.J. Tables for use with the Flesch readability formula. _Journal of Applied Psychology_. 1949, 33, 275-278.

Fiske, D.W. and Maddi, S.R. A conceptual framework, in _Functions of Varied Experience_ (eds.) D.W. Maddi and S.R. Maddi. Homewood: Dorsey Press, 1961.

Flesch, R. _The Art of Readable Writing._ New York: Harper, 1949.

Fodor, J.A. and Garrett, M. Some syntactic determinants of sentential complexity. _Perception and Psychophysics_, 1967, 2, 289-296.

Gough, P.B. Grammatical transformations and the speed of understanding. _Journal of Verbal Learning and Verbal Behavior_, 1965, 4, 107-111.

Gough, P.B. The verification of sentences: The effects of delay of evidence and sentence length. _Journal of Verbal Learning and Verbal Behavior._ 1966, 5, 492-496.

Greenberg, B.S. On relating attitude change and information gain. _Journal of Communication_, 1964, 14, 157-171.

Howe, E.S. Probabilistic adverbial qualifications of adjectives. _Journal of Verbal Learning and Verbal Behavior_, 1962, 1, 225-242.

Howe, E.S. Verb tense, negatives, and other determinants of the intensity of evaluative meaning. _Journal of Verbal Learning and Verbal Behavior_, 1966, 5, 147-155.

Huttenlocher, J., Eisenberg, K., and Strauss, S. Comprehension: Relation between perceived actor and logical subject. _Journal of Verbal Learning and Verbal Behavior_, 1968, 7, 527-530.

Insko, C. Primacy versus recency in persuasion as a function of the timing of arguments and measures. _Journal of Abnormal and Social Psychology_, 1964, 69, 381-391.

Insko, C.A. _Theories of Attitude Change._ New York: Appleton-Century-Crofts, 1967.

Kochevar, J.J. The effects of message intensity on evaluations of the source, the message and the topic. Unpublished Master's Thesis, Michigan State University, 1967.

Lees, R.L. _International Journal of American Linguistics._ Bloomington: Indiana University, Vol. 26, No. 3, 1963.

Mehler, J. Some effects of grammatical transformations on the recall of English sentences. _Journal of Verbal Learning and Verbal Behavior_, 1963, 2, 346-351.

Miller, G.A. Some psychological studies of grammar. _American Psychologist_, 1962, 17, 748-762.

Miller, G.A., and Isard, S. Some perceptual consequences of linguistic rules. _Journal of Verbal Learning and Verbal Behavior_, 1963, 2, 217-228.

Miller, G.A., and Isard, S. Free recall of self-embedded English sentences. _Information and Control_, 1964, 7, 292-303.

Miller, G.R. and Baseheart, J.R.   Source trustworthiness, opinionated statements, and response to persuasive communication.   Speech Monographs, 1969, 36, 1-7.

McEwen, W.J.   Message intensity effects on receiver evaluations of source, topic, and message.   Journal of Experimental & Social Psychology (in press).

McKean, K.O., Slobin, D., and Miller, G.A.   in Miller, G.A.   Some psychological studies in grammar.   American Psychologist, 1962, 17, 748-762.

Okatcha, F.M.   Recall and comprehension as a function of mode of presentation and transformational complexity in connected discourse.   Unpublished Ph.D. Thesis, Michigan State University, 1968.

Osgood, C.E., Saporta, S. and J.S. Nunnally.   Evaluative assertion analysis. Littera, 1956, 3, 47-102.

Osgood, C.E., Suci, G., and Tannenbaum, P.H.   The Measurement of Meaning, Urbana: University of Illinois Press, 1957.

Polsby, N.W. and Wildavsky, A.B.   Presidential Elections: Strategies of American Electoral Politics.   New York: Charles Scribner's Sons, 1964.

Rosnow, R.L. and Robinson, E.J.   Experiments in Persuasion (eds.)   New York: Academic Press, 1967.

Savin, H.B. and Perchonock, E.   Grammatical structure and the immediate recall of English sentences.   Journal of Verbal Learning and Verbal Behavior, 1965, 4, 348-353.

Slobin, D.I.   Grammatical transformations and sentence comprehension in childhood and adulthood.   Journal of Verbal Learning and Verbal Behavior, 1966, 5, 219-227.

Turner, E.A. and Rommetveit, R.   The acquisition of sentence voice and reversibility.   Child Development, 1967, 38, 649-660.

Turner, E.A. and Rommetveit, R.   Focus of attention in recall of active and passive sentences.   Journal of Verbal Learning and Verbal Behavior, 1968, 7, 543-548.

Watts, W. and McGuire, W.   Persistance of induced opinion change and retention of the inducing message contents.   Journal of Abnormal and Social Psychology, 1964, 63, 233-241.

APPENDIX A

PRETEST ATTITUDE QUESTIONNAIRE

OPINION PROFILE

You are participating in an opinion survey being conducted by the Department
of Communication. Because of the large size of our sample, we are asking
that you record directly all your responses on the accompanying IBM Scoring
Sheet with the pencil that has been provided.

Now turn to the Scoring Sheet. Please enter the following information in the
appropriate places:

>   Your Name (please print clearly)
>   Course Name
>   Course Section
>   Your Student Number (Important) -- make sure to write

in the space and then mark as illustrated below:

	STUDENT	NUMBER								
	0	1	2	3	4	5	6	7	8	9
4	===	===	===	===	███	===	===	===	===	===
8	===	===	===	===	===	===	===	===	███	===
0	███	===	===	===	===	===	===	===	===	===
1	---	███	===	===	===	===	===	===	===	===
2	===	===	███	===	===	===	===	===	===	===
3	===	===	===	███	===	===	===	===	===	===

Please be assured that all information will be kept strictly confidential.
Only the research personnel directly involved in this survey will have access
to it. All data will be analyzed in terms of group scores, and no person's
responses will be singled out.

Your cooperation is greatly appreciated. Thank you.

INSTRUCTIONS: On the following pages we are asking you to make a number of judgments. Please mark the items as fast as you can. Record your first impression. Do not go back to change a mark.

Record your answers on the IBM Scoring Sheet -- not in this question booklet.

Here is an item like those you will see on the following pages:

Elimination of all athletic scholarships.

25. Good· Bad

(1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad; (5) Slightly Bad; (6) Bad; (7) Very bad.

25. 1--- 2--- 3--- 4--- 5--- 6■■ 7--- 8--- 9--- 10---

You are asked for your opinion on the issue: "Elimination of all athletic scholarships." If you feel, for example, that this is "Bad," then you would carefully blacken space "6" for item number 25 on your Scoring Sheet (as above).

It should be possible to complete this part in approximately 10 minutes. Please be sure to answer every question. Now turn the page and begin.

<u>Part I</u>

Appearing below are some topics about which people have different opinions.
Each topic is followed by five items. Use these items to express your
feelings about the topic. On your <u>Scoring Sheet</u> please blacken the
appropriate numbered space for <u>each</u> of the items.

There are no "correct" answers. We are interested only in your personal
opinions about the issues.

<u>The establishment of a national popular-vote primary as a method
of choosing Presidential candidates.</u>

1. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

2. Honest: Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

3. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

4. Wise: Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

5. Favorable: Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

<u>Replacement of the present draft system with a national lottery system.</u>

6. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

7. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

8. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair: (7) Very Unfair.

9. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

10. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

Making the sale and use of marijuana legal.

11. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

12. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

13. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

14. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

15. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable
    (7) Very Unfavorable.

Lowering the voting age to 18 years for all citizens.

16. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

17. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

18. Fair:Unfair
    (1)Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

19. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

20. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

Federal control of the sale and possession of firearms.

21. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good: (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

22. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

23. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

24. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

25. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

Making the sale of cigarettes illegal.

26. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

27. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

28. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

29. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

30. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

An editorial staff writer for a Midwestern daily newspaper.

31. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

32. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

33. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

34. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

35. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

Board chairman for a large industrial manufacturing company.

36. Good:Bad
    (1) Very Good; (2) Good; (3) Slightly Good; (4) Neither Good or Bad;
    (5) Slightly Bad; (6) Bad; (7) Very Bad.

37. Honest:Dishonest
    (1) Very Honest; (2) Honest; (3) Slightly Honest; (4) Neither Honest or
    Dishonest; (5) Slightly Dishonest; (6) Dishonest; (7) Very Dishonest.

38. Fair:Unfair
    (1) Very Fair; (2) Fair; (3) Slightly Fair; (4) Neither Fair or Unfair;
    (5) Slightly Unfair; (6) Unfair; (7) Very Unfair.

39. Wise:Foolish
    (1) Very Wise; (2) Wise; (3) Slightly Wise; (4) Neither Wise or Foolish;
    (5) Slightly Foolish; (6) Foolish; (7) Very Foolish.

40. Favorable:Unfavorable
    (1) Very Favorable; (2) Favorable; (3) Slightly Favorable; (4) Neither
    Favorable or Unfavorable; (5) Slightly Unfavorable; (6) Unfavorable;
    (7) Very Unfavorable.

APPENDIX B

PRETEST COMPREHENSION EXAMINATION

COMMUNICATION SKILLS

Part II

On the following page is a short passage of prose material. We want you to read this passage and answer 15 questions concerning various aspects of the material presented in the passage.

First, before reading the passage, however, please quickly read the 15 questions to familiarize yourself with the nature and type of questions asked. After you have scanned the questions, read the passage carefully. Then return to the questions and answer all of them.

It is very important that you do the very best you can on this part of the task. Please work carefully, therefore, answering all of the 15 questions.

Mark all of your answers to the questions on the IBM Scoring Sheet you used for Part I. Do not mark on the booklet. Mark only one answer per question.

You may refer back to the passage as often as you like while answering the test questions. However, work as rapidly as you can as you have only about 15 to 20 minutes to complete this part.

When you have answered all of the questions, please raise your hand and someone will collect your booklet and answer sheet.

Thank you very much for your help and cooperation. Please begin working.

READING PASSAGE

The first common mistake to get rid of is that mankind consists of a great mass of religious people and a few eccentric atheists. It consists of a huge mass of worldly people, and a small percentage of persons deeply interested in religion and concerned about their souls and other people's; and this section consists mostly of those who are passionately attacking it, the genuine philosophers being very few. Thus, you never have a nation of millions of Wesleys[1] and one Tom Paine[2]. You have a million Mr. Worldly Wisemans, one Wesley, with his small congregation, and one Tom Paine, with his smaller congregation. The passionately religious are a people apart; and if they were not hopelessly outnumbered by the worldly, they would turn the world upside down, as St. Paul was reproached, quite justly, for wanting to do. Few people can number among their personal acquaintances a single atheist or a single Plymouth Brother[3]. Unless a religious turn in ourselves has led us to seek the little societies to which these rare birds belong, we pass our lives among people who, whatever creeds they may repeat, and in whatever temples they may avouch their respectability and wear their Sunday clothes, have robust consciences, and hunger and thirst, not for righteousness, but for rich feeding and comfort and social position and attractive mates and ease and pleasure and respect and consideration; in short, for love and money. To these people one morality is as good as another provided they are used to it and can put up with its restrictions without unhappiness; and in the maintenance of this morality they will fight and punish and coerce without scruple. They may not be the salt of the earth, these Philistines; but they are the substance of civilization; and they save society from ruin by criminals and conquerors as well as by Savonarolas[4] and Knipperdollings[5]. And as they know, very sensibly, that a little religion is good for children and serves morality, keeping the poor in good humor or in awe by promising rewards in heaven or threatening torments in hell, they encourage the religious people up to a certain point; for instance, if Savonarola only tells the ladies of Florence that they ought to tear off their jewels and finery and sacrifice them to God, they offer him a cardinal's hat, and praise him as a saint; but if he induces them to actually do it, they burn him as a public nuisance.

George Bernard Shaw: Preface to
Androcles and the Lion

(Footnotes)

1. Wesleys: followers of John Wesley, the founder of Methodism.
2. Tom Paine: an ardent free-thinker in religious and political subjects.
3. Plymouth Brother: a member of the Plymouth Brethren, a small and very ardent religious sect.
4. Savonarola: a fanatic Italian monk, reformer, and martyr.
5. Knipperdolling: a fanatic German religious leader.

All answers are to be marked on the answer sheet only. Mark only one response per item, and please do not skip any items.

41. By Philistines, Shaw refers to

    1. ancient Biblical peoples.
    2. modern theologians.
    3. a smug middle class.
    4. "clothes horses."
    5. Tom Paine's followers.

42. How do the Philistines keep "criminals and conquerors" from ruining society?

    1. By repressive penal codes.
    2. By neutralizing them through using fanatic religious leaders.
    3. By exiling them from the community.
    4. By maintaining a conventional moral and religious code.

43. At the beginning of line 6 the antecedent of "it" must be religion. To make sense in this context religion must mean

    1. the deepest convictions of an individual.
    2. the conventionally accepted religion of a society.
    3. the narrow religions of fanatical religious leaders.
    4. the pseudo-religious beliefs of atheists.

44. According to the passage, the Philistines

    1. hunger and thirst for righteousness.
    2. are the salt of the earth.
    3. are deeply religious.
    4. are not deeply religious, but encourage the religious people indefinitely.
    5. hunger and thirst for love and money.

45. Shaw says there are as many

    1. Savonarolas as there are Knipperdollings.
    2. Tom Paines as there are Plymouth Brothers.
    3. St. Pauls as there are Worldly Wisemans.
    4. Wesleys as there are St. Pauls.
    5. Wesleys as there are Tom Paines.

46. According to this passage, the genuine philosophers

    1. passionately affirm the established religions.
    2. passionately attack the established religions.
    3. neither passionately affirm nor passionately attatck the established religions.
    4. always attack religions other than their own.
    5. never attack religions other than their own.

Items 47 through 55 are statements which might be inferred from the content and reasoning of this passage. Mark them according to the following key:

> KEY: 1. A statement which agrees with the arguments presented.
> 2. A statement which disagrees with the arguments presented.
> 3. A statement which has no relevance to the arguments presented.

47. Most people are Philistines.

48. Most people are unacquainted with anyone who is passionately religious.

49. If a minister today induced his large congregation to tear off their jewels and finery and sacrifice them to God, they would offer him some reward for his good deed.

50. Most people do not want the truly religious people to become powerful and influential.

51. Children should be reared in deeply religious homes.

52. A little religion does not serve morality.

53. The huge mass of people do not know those who are passionately attacking the religious philosophers.

54. To most people one morality is as good as another provided it does not interfere with their worship of God.

55. Savonarola saved society from ruin by criminals and conquerors as well.

APPENDIX C

EXPERIMENTAL MESSAGES

HIGH COMPLEXITY, HIGH INTENSITY MESSAGE

A National Popular-Vote Primary?

The past Presidential election has definitely given rise to objections about the way candidates are chosen. One of the most often heard cries for change in candidate selection has been repeatedly voiced by persons proposing the use of a national popular-vote primary for choosing Presidential candidates. However, there are definitely disadvantages with it, although this method looks desirable on the surface, which render it positively untenable for choosing Presidential candidates.

First, it is extremely likely that as many as ten candidates will definitely get enough names on nominating petitions to get on the ballot. Nor is it surprising if the vote is split by them equally. Thus, any person is denied an absolute majority vote. The victor obviously then has to be chosen in a special run -off primary. Using this method, Presidential candidates must undeniably always be restricted by the United States to wealthy persons only. Raising the millions required for the nominating petition, the first primary, the run-off primary, and the national election could certainly never be done by anyone without great financial means. Surviving the extremely demanding pace of all these campaigns will be accomplished by no one who is not very superbly conditioned.

An unquestionable weakening of the party system will definitely also be produced by national primaries. Since remaining continually in office for a very long period of time is very usual, and as state experience with primaries is definitely a proven guide here, this results repeatedly in a decided movement of very interested voters into the primary of the winning party where their votes unquestionably always count more. It is largely only the adamant die-hards,

as the losing party is continually deserted by the voters, who are left. Candidates will obviously be nominated who definitely please these die-hards. The election, however, will undoubtedly not be won by these candidates since they are definitely unappealing to the country's masses. Ultimately, the losing party will undoubtedly atrophy. The two-party system, as well as the prospects of competition among parties, is unquestionably greatly weakened by this. Signs of decided internal weakness, resulting from the complete lack of opposition required to keep it unified, will definitely be shown by the winning party.

The appearance of extremist candidates and demagogues will definitely be produced by a national primary. They undeniably have, with absolutely no allegiance to any fixed party organization, little to lose by continually stirring up extreme mass hatreds or making positively wild promises. A very fertile field in a national primary will unquestionably be found by a Huey Long. This is obviously a chance, even though he did not win, sufficient enough to instantly raise the anger of American politics to unusually explosive levels. These extremists are positively ruled out by the convention system. Responsibility is definitely placed totally in the hands of decided party leaders who definitely have a stake in the good name and integrity of their organization. Looking at the situation in any Southern states, where voters definitely vote only in the Democratic primary and where winning in that primary is unquestionably tantamount to election, shows an immediate view into this problem. The result, in which there are very few or no fixed party leaders, is an extremely wild, factional politics. The unquestionable distinction between the "ins" and the "outs" is completely blurred. To hold any person totally responsible is extremely hard. Demagogues, who make decided use of this situation by strident appeals, repeatedly

arise. In some primary systems the place of the party is unquestionably often taken by an extremist. A minimal structure is given by him to the state politics. Total pause, therefore, must definitely be given to the advocates of a national primary by this.

Thus, the party system is definitely weakened by any use of direct primaries since a large number of them are able positively to be entered by only the very richest candidates. Prospective candidates are definitely encouraged by them to continually bypass regular party organizations for campaigns stressing completely personal publicity. Also, the nominations are thrown totally into the hands of those whose stake in the political process working's is definitely not great enough to ensure that the final nominee is unquestionably qualified for the Presidency by qualifications of experience, qualities of mind, or political allainces with others professionally engaged in political actions.

Some light, using state level primaries which certainly produce some abnormal experiences as examples, is definitely thrown on the problems involved in a national popular-vote primary by data from some state level primaries. For example, totally unqualified candidates whose names resemble noted politicians are nominated by completely naive voters in primaries. One example of this is certainly shown by the nomination by Massachusetts Democrats in 1954 of John Kennedy as candidate for state treasurer. Kennedy, who was a minor clerical worker of a safety razor firm, had the same name as the junior United States Senator. Kennedy's name is unquestionably strong medicine in Massachusetts politics. The primary nomination was won by Kennedy in a contest with the person endorsed by the Democratic pre-primary convention. The Democratic State Committee described Mr. Kennedy's unusual political success, in its campaign

literature, as "very American." The spirit and interest of his fellow citizens, it was said, had obviously been caught by Mr. Kennedy. His election was without doubt definite proof that in Massachusetts democracy certainly works and that their best talent for leadership is always drawn from the rank and file of the people. Mr. Kennedy won.

Further, attempts by party leaders to offer a totally "balanced ticket" are very often defeated by ethnic minorities grouped in parties, thus dooming to total defeat their whole ticket in the general election. Also, very responsible candidates for public office are repeatedly defeated by palpable demagogues. That the use of a direct primary is definitely and unquestionably not desirable is clearly shown by all of the results. We positively must not, since we certainly want political parties, cut them off from the process of choosing candidates for public office. They definitely must not be deprived of motives to organize. They certainly must not be repeatedly set by us prematurely at the mercy of hordes of people whose knowledge at the primary stage is extremely poor.

That this is not an elitist doctrine is undeniably apparent. The fact must certainly be faced by responsible political analysts and advocates that the safe cognitive anchorage around which political preferences are always organized is definitely provided by party identification for most people. Set completely adrift from this anchorage, as they definitely are when faced with an intra-party primary election, most voters have very little or nothing to guide their choices. Many voters undeniably are given the only clues to choice by chance knowledge about a famous name or stray feeling of ethnic kinship under these conditions.

Thus, definitely one must, considering the extremely low level of popular
interest and participation in political activities which obviously prevails today,
thoughtfully question the throwing of the future of the party system completely
and perilously into the hands of primary electorates. It is extremely clear
that the establishment of a national popular-vote primary as a means for selecting
Presidential candidates at this time is definitely and undeniably infeasible
and undesirable, and therefore, must definitely not be adopted.

HIGH COMPLEXITY, LOW INTENSITY MESSAGE

A National Popular-Vote Primary?

The past Presidential election has supposedly given rise to objections about the way candidates are chosen. One of the more often heard cries for a change in candidate selection has been occasionally voiced by persons proposing the use of a National popular-vote primary for choosing Presidential candidates. However, there appears to be perhaps some disadvantages with it, although this method seems desirable on the surface, which render it possibly untenable for choosing Presidential candidates.

First, it seems somewhat likely that as many as ten candidates might get enough names on nominating petitions to get on the ballot. Nor would it be surprising if the vote split among them equally. Thus, any person could be denied a possible majority vote. The victor would then probably have to be chosen through a special run-off primary. Using this method, Presidential candidates might conceivably eventually be restricted by the United States to wealthy persons only. Raising the millions required for the nominating petition, the first primary, the run-off primary, and the national election could probably seldom be done by anyone without great financial means. Surviving the rather demanding pace of all these campaigns may be accomplished by no one who was not somewhat superbly conditioned.

A conceivable weakening of the party system might also be produced perhaps by national primaries. Since ultimately remaining in office for a somewhat long period of time seems somewhat usual, if state experience with primaries can perhaps guide us here, this could result sometimes in a possible movement

of partially interested voters into the primary of the winning party where their votes perhaps would sometimes count more. It would be largely a few die-hards, as the losing party is eventually deserted by the voters, who are left. Candidates would probably be nominated who seemingly please these die-hards. The election could probably not be won by these candidates since they would probably be unappealing to the country's masses. Ultimately, the losing party would probably atrophy. The two-party system, as well as the prospects of competition among parties, could possibly be greatly weakened by this. Signs of some internal weakness, resulting from the partial lack of opposition required to keep it unified, would possibly be shown by the winning party.

The appearance of extremist candidates and demagogues might possibly be produced by a national primary. They would have, with seemingly no allegiance to any fixed party organization, little to lose by occasionally stirring up some mass hatreds or seemingly making wild promises. A somewhat fertile field in national primaries might well perhaps be found by a Huey Long. This might conceivably be a chance, even if he did not win, sufficient to eventually raise the anger of American politics to somewhat explosive levels. These extremists are supposedly ruled out by the convention system. Responsibility seems placed, partially at least, in several party leaders' hands who seem to have a stake in the good name and integrity of their organization. Viewing the situation in some Southern states, where most voters probably vote only in the Democratic primary and where primary victory may be perhaps tantamount to election, may indicate some partial view into this problem. The result , in which a few or no fixed party leaders exist, may be a slightly wild, factional politics. The conceivable distinction between the "ins" and "outs" may be somewhat blurred. To hold anyone

partially responsible may be somewhat hard. Demagogues, who make some use of this situation by strident appeals, occasionally arise. In some primary systems the place of the party can perhaps be taken by an extremist. A minimal structure can sometimes be given by him to the state politcs. Some pause, therefore, should perhaps be given to the advocates of a national primary by this.

Thus, the party system would probably be weakened even some by using direct primaries since a large number of them could possibly be entered by probably just the somewhat richest candidates. Prospective candidates would perhaps be encouraged to sometimes bypass various regular party organizations for campaigns stressing somewhat personal publicity. Also, the nominations would possibly be thrown partially into the hands of those whose stake in the political process workings may not perhaps be great enough to ensure that the final nominee seems qualified for the Presidency by experience, qualities of mind, or political alliances with others professionally engaged in political actions.

Some light, using state level primaries which have seemingly produced some abnormal experiences as examples, may perhaps be thrown on the problems involved in a national popular-vote primary by data from some state level primaries. For example, unqualified candidates whose names resemble noted politicians have been nominated by somewhat naive voters in primaries. One example of this is seemingly shown by the nomination by Massachusetts Democrats in 1954 of John Kennedy as candidate for state treasurer. Kennedy, who was a minor clerical worker of a safety razor firm, had the same name as the junior United States Senator. Kennedy's name seems to be somewhat strong medicine in Massachusetts politics. The primary nomination was won by Kennedy in a contest with the person endorsed by the Democratic pre-primary convention. The Democratic State Committee described Mr. Kennedy's ultimate political success, in its campaign

literature, as "very American." The spirit and interest of his fellow citizens, it was said, had probably been caught by Mr. Kennedy. His election would probably be some proof that in Massachusetts democracy seems to work and that their best talent for leadership is sometimes drawn from the rank and file of people. Mr. Kennedy won.

Further, party leaders' attempts to offer at least a somewhat "balanced ticket" are sometimes defeated by ethnic minorities grouped in parties, thus probably dooming to possible defeat their whole ticket in the general election. Also, rather responsible candidates for public office are sometimes defeated by palpable demagogues. That the use of a direct primary probably may not be desirable seems to be suggested by all of these results. We perhaps ought not, if we possibly want political parties, cut them off from the process of choosing candidates for public office. They probably should not be deprived of motives to organize. They should not sometimes be set by us prematurely at the mercy of hordes of people whose primary stage knowledge may be somewhat poor.

That this may not be an elitist doctrine seems somewhat apparent. The fact probably should be faced by responsible political analysts and advocates that the safe cognitive anchorage around which political preferences are organized may conceivably be provided by party identification for people. Set partially adrift from this anchorage, as they seemingly are when faced with an intra-party primary election, most voters have perhaps little or nothing to guide their choices. Many voters are probably given the only clues to choice by chance knowledge about a famous name or stray feeling of ethnic kinship under these conditions.

Thus, probably one should, considering the somewhat low level of popular

interest and participation in political activities which seemingly prevails today, thoughtfully question the throwing of the future of the party system even partially and perilously into hands of primary electorates. It seems somewhat clear that the establishment of a national popular-vote primary as a means for selecting Presidential candidates at the present time may possibly be infeasible and undesirable, and therefore, should probably not be adopted.

LOW COMPLEXITY, HIGH INTENSITY MESSAGE

A National Popular-Vote Primary?

The past Presidential election has definitely given rise to some objections about the way in which candidates are chosen. Persons continually proposing the use of a popular-vote primary on a national basis as a means for choosing Presidential candidates have often repeatedly voiced cries for change in the selection of candidates. This method looks desirable on the surface of things. However, there are definitely disadvantages with this method which render it positively untenable as a viable means for choosing Presidential candidates.

First, it is extremely likely that as many as ten candidates will definitely get enough names on nominating petitions to get on the ballot. Nor is to too surprising if they split the vote equally. This definitely denies any one person an absolute majority vote. The victor obviously then has to be chosen in a special run-off primary. Using this method, the United States must undeniably always restrict its prospective Presidential candidates to wealthy persons only. Anyone without great financial means could certainly never raise the millions required for the nominating petition, the first primary, the run-off primary, and the national election. No one who is not very superbly conditioned will survive the extremely demanding pace of all these campaigns.

National primaries will definitely also produce an unquestionable weakening of the party system. It is very usual for a party to remain continually in office for a very long period of time. State experience with primaries is definitely a proven guide here. This results repeatedly in a decided movement of the very interested voters into the primary of the winning party where their individual votes unquestionably always count more. Doubtlessly as voters

continually desert the losing party, it is largely only the adamant die-hards who are left. They will obviously nominate candidates who definitely please them. These candidates, however, will undoubtedly not win the election since they are definitely unappealing to the large masses in the country. Ultimately, the losing party will undoubtedly atrophy. This unquestionably weakens the two-party system decidedly and the prospects of competition among parties. The winning party definitely will soon show signs of decided internal weakness as a result of the complete lack of opposition required to keep it unified.

A national primary will definitely produce the appearance of extremist candidates and demagogues. With absolutely no allegiance to any fixed party organization, they have undeniably little to lose by continually stirring up extreme mass hatreds or making positively wild promises. A Huey Long will un-questionably find a very fertile field in a national primary. This is obviously a chance sufficient enough to instantly raise the anger of American politics to unusually explosive levels even though he did not win. The convention system positively rules out these extremists. It definitely places the responsibility totally in the hands of decided party leaders who very definitely have a lasting stake in the keeping of the good name and integrity of their organization. An immediate view into this problem is had by looking at the situation in any of the Southern states. Here voters definitely vote only in the Democratic primary. Winning in that primary is unquestionably tantamount to elections. The result of this is an extremely wild, factional politics in which there are very few or no fixed party leaders. This completely blurrs the unquestionable distinction between the "ins" and the "outs". It is extremely hard with this to hold any-one totally responsible. Demagogues repeatedly arise who make decided use of this

situation by strident appeals. In some primary systems an extremist unquestionably always takes the place of the party. Thus, he always gives a type of minimal structure to the state politics. This must definitely give total pause to the advocates of a national primary.

Thus, any use of the direct primaries definitely weakens the party system. Only the very richest candidates are able positively to enter a large number of them. They definitely encourage the prospective candidates to continually bypass all regular party organizations in favor of campaigns stressing completely personal publicity. Also, they undeniably throw the nominations totally into the hands of those whose stake in the workings of the political process is definitely not great enough to ensure that the final nominee is unquestionably qualified for the Presidency by qualifications of experience, qualities of mind, or political alliances with others professionally engaged in political actions.

Data from the state level primaries definitely throws decided light on the problems involved in a national primary system. The use of primaries at the state level definitely produces abnormal experiences. For example, completely naive voters in primaries nominate totally unqualified candidates whose names resemble noted politicians. The nomination of John Kennedy by Massachusetts Democrats in 1954 as their candidate for state treasurer certainly shows one example of this. A minor clerical worker of a safety razor firm, Kennedy happened to have the same name as the junior United States Senator. The name of Kennedy is unquestionably strong medicine in the politics of Massachusetts. Kennedy won the primary nomination in a contest with the person the Democratic pre-primary convention endorsed. The Democratic State Committee swallowed its surprise. In its campaign literature it described Mr. Kennedy's unusual political success as "very American." It was said that Mr. Kennedy had obviously caught the spirit and interest of his

fellow citizens. His election was without doubt definite proof that in Massa-
chusetts democracy certainly works and that Americans definitely always draw their
best talent for leadership from the rank and file of the people. Mr. Kennedy won.

Further, the ethnic minorities grouped in one party perpetually defeat the
attempts by party leaders to offer totally "balanced tickets." Thus, the whole
ticket in the general election is unquestionably doomed to toal defeat. Also,
palpable demagogues repeatedly defeat very responsible candidates for public
office. All of these results clearly show that the use of a direct primary is
definitely and unquestionably not desirable. Since we certainly want political
parties, we positively must not cut them off from the process of choosing can-
didates for public office. We definitely must not deprive them of motives to
organize. We must certainly not repeatedly set them prematurely at the mercy
of hordes of people whose knowledge level at the primary stage is extremely poor.

It is undeniably apparent that this is not an elitist doctrine. Responsible
political analysts and advocates must certainly face the fact that party
identification for most people definitely provides the safe cognitive anchorage
around which people certainly always organize political preferences. Most
voters have very little or nothing to guide their choices when set completely
adrift from this anchorage, as they definitely are when faced with a system of
intra-party primary elections. Chance knowledge about a famous name or stray
feelings of ethnic kinship under these conditions undeniably gives many voters
the only clues to choice.

Thus, definitely one must thoughtfully question the throwing of the future
of the party system completely and perilously into the hands of primary electorates
considering the extremely low level of popular interest and participation in

political activities which obviously prevail today. It is extremely clear that

the establishment of a national popular-vote primary as a means for selecting

Presidential candidates at this time is definitely and undeniable infeasible and

undesirable, and therefore, must definitely not be adopted.

LOW COMPLEXITY, LOW INTENSITY MESSAGE

A National Popular-Vote Primary?

The past Presidential election has supposedly given rise to some objections about the way in which candidates are chosen. Persons proposing the use of a popular-vote primary on a national basis as a means for choosing Presidential candidates have occasionally voiced some cries for change in the selection of candidates. This method may seem desirable on the surface. However, there appears to be perhaps some disadvantages with it which render it possibly untenable as a means for choosing Presidential candidates.

First, it seems somewhat likely that as many as ten candidates might possibly get enough names on nominating petitions to get on the ballot. Nor would it be surprising if they split the vote equally. This could deny any one person a possible majority vote. The victor would then probably have to be chosen in a special run-off primary. Using this method, the United States might conceivably eventually have to restrict its Presidential candidates to wealthy persons. Anyone without great financial means could probably seldom raise the millions required for the nominating petition, the first primary, the run-off primary, and the national election. No one who was not rather superbly conditioned could survive the demanding pace of all these campaigns.

National primaries might also produce perhaps a conceivable weakening of the party system. It seems somewhat usual for a party to ultimately remain in office for a fairly long period of time. State experience with primaries can perhaps be a guide here. This could result sometimes in a possible movement of partially interested voters into the primary of the winning party where their votes perhaps would sometimes count more. As voters eventually desert the losing

party, it would be largely a few die-hards who would be left. They would probably nominate candidates who seemingly pleased them. These candidates, however, could probably not win the election since they would probably be unappealing to the masses in the country. Ultimately, the losing party could perhaps atrophy. This possibly could weaken the two-party system and the prospects of competition among parties. The winning party would possibly soon show signs of some internal weakness as a result of the partial lack of opposition required to keep it unified.

A national primary might possibly produce the appearance of extremist candidates and demagogues. With seemingly no allegiance to any fixed party organization, they would have little to lose by occasionally stirring up some mass hatreds or seemingly making wild promises. A Huey Long might perhaps find a somewhat fertile field in a national primary. This might conceivably be a chance sufficient to eventually raise the anger of American politics to somewhat explosive levels even if he did not win. The convention system supposedly rules out these extremists. It seems to place responsibility partially at least in the hands of several party leaders who seem to have a lasting stake in keeping the good name and integrity of the organization. Some partial view into this problem may be had by looking at the situation in some Southern states. Here most voters probably vote only in the Democratic primary. Winning in that primary may perhaps be tantamount to election. The result may be a slightly wild, factional politics in which there are a few or no fixed party leaders. This may blurr somewhat the conceivable distinctions between the "ins" and the "outs". It may be somewhat hard to hold anyone even partially responsible. Demagogues occasionally arise who make some use of this situation by strident appeals. In some primary systems

an extremist can perhaps take the place of the party. He can sometimes give a kind of minimal structure to the state politics. This should perhaps give pause to the advocates of a national primary system.

Thus, even some use of direct primaries would probably weaken the party system. Probably only the somewhat richest candidates could possibly enter a large number of these primaries. They would perhaps encourage prospective candidates to sometimes bypass various regular party organizations in favor of campaigns stressing somewhat personal publicity. Also, they possibly would throw nominations partially into the hands of those whose stake in the workings of the political process may not perhaps be great enough to ensure that the final nominee seems qualified for the Presidency by qualifications of experience, qualities of mind, or political alliances with others professionally engaged in political actions.

Data from state level primaries may perhaps throw light on the problems in-volved in a national popular vote primary. The use of primaries at the state level seemingly produces abnormal experiences. For example, somewhat naive voters in the primaries nominate unqualified candidates whose names resemble noted politicians. The nomination of John Kennedy by Massachusetts Democrats in 1954 as their candidate for state treasurer seemingly shows one example of this. A minor clerical worker of a safety razor firm, Kennedy happened to have the same name as the junior United States Senator. The name of Kennedy seems to be somewhat strong medicine in Massachusetts politics. Kennedy won the primary nomination in a contest with the person the Democratic pre-primary convention endorsed. The Democratic State Committee swallowed its surprise. In its campaign literature it described Mr. Kennedy's ultimate political success as "very American." It was said that Mr. Kennedy had probably caught the spirit and interest of his fellow citizens.

His election would probably be some proof that in Massachusetts democracy seems to work and that Americans sometimes draw their best talent for leadership from the rank and file of the people. Mr. Kennedy won.

Further, ethnic minorities grouped in one party sometimes defeat attempts by party leaders to offer at least somewhat "balanced tickets." Thus, the whole party ticket in the general election seems doomed to possible defeat. Also, palpable demagogues sometimes defeat rather responsible candidates for public office. All of these results seem to suggest that the use of a direct primary probably may not be desirable. If we possibly want political parties, we perhaps ought not cut them off from the process of choosing candidates for public office. We probably should not deprive them of motives to organize. We probably should not sometimes set them prematurely at the mercy of hordes of people whose knowledge at the primary stage may be somewhat poor.

It seems somewhat apparent that this may not be an elitist doctrine. Responsible political analysts and advocates probably should face the fact that party identification for most people conceivably provides the safe cognitive anchorage around which people sometimes organize political preferences. Most voters have perhaps little or nothing to guide their choices when set at least partially adrift from this anchorage, as they seemingly are when faced with an intra-party primary election. Chance knowledge about a famous name or stray feelings cf ethnic kinship under these conditions probably gives many voters the only clues to choice.

Thus, probably one should thoughtfully question throwing the future of the party system even partially and perilously into the hands of primary electorates considering the somewhat low level of popular interest and participation in

political activities which seem to prevail today. It seems somewhat clear that the establishment of a national popular-vote primary system as a means for selecting Presidential candidates at this time may possibly be infeasible and undesirable, and therefore, should probably not be adopted.

APPENDIX D

POSTTEST ATTITUDE QUESTIONNAIRE

MESSAGE INTENSITY RATINGS

MESSAGE CHARACTERISTIC RATINGS

SOURCE CREDIBILITY RATINGS

POSTTEST ATTITUDE QUESTIONNAIRE

Now that you have read the article, we would like to know your attitude, as of right now, toward the topic discussed in the editorial. Please make one, and only one, mark on each scale. Please do not omit any scales.

The establishment of a national popular-vote primary as a method of choosing Presidential candidates.

Bad ___:___:___:___:___:___:___ Good
Very   Quite Slightly Neutral Slightly Quite Very

Honest ___:___:___:___:___:___:___ Dishonest
Very   Quite Slightly Neutral Slightly Quite Very

Wise ___:___:___:___:___:___:___ Foolish
Very   Quite Slightly Neutral Slightly Quite Very

Unfair ___:___:___:___:___:___:___ Fair
Very   Quite Slightly Neutral Slightly Quite Very

Favorable ___:___:___:___:___:___:___ Unfavorable
Very   Quite Slightly Neutral Slightly Quite Very

****

Now we are interested in what you thought of the article. Please make a check mark according to how you feel about the editorial.

How strong or weak was the general tone of the writer's statements?

Strong ___:___:___:___:___:___:___ Weak
Very   Quite Slightly Neutral Slightly Quite Very

How uncertain or certain was the writer about what he was saying?

Uncertain ___:___:___:___:___:___:___ Certain
Very   Quite Slightly Neutral Slightly Quite Very

How hesitant or emphatic was the language that the writer used?

Hesitant ___:___:___:___:___:___:___ Emphatic
Very   Quite Slightly Neutral Slightly Quite Very

How would you rate the logic of the arguments presented?

Logical ___:___:___:___:___:___:___ Illogical
Very   Quite Slightly Neutral Slightly Quite Very

How would you rate the <u>readability</u> of the editorial?

Un-
readable_____:_____:_____:_____:_____:_____:_____Readable
　　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How would you rate the <u>clearness</u> of writing of this editorial?

Clear_____:_____:_____:_____:_____:_____:_____Vague
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How would you rate the <u>quality</u> of the information in this article?

Bad_____:_____:_____:_____:_____:_____:_____Good
　　　　Very　　　Quite　　Slightly　　Neutral　Slightly　Quite　　Very
　　　　　　　　　　　　　　　　　********

Finally, we would like to know what you think of the writer of this

editorial. Make only one mark on each scale, and do not skip any scales.

How <u>unjust</u> or <u>just</u> do you think the writer is?

Unjust_____:_____:_____:_____:_____:_____:_____Just
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How <u>unqualified</u> or <u>qualified</u> do you think the writer is?

Un-
qualified_____:_____:_____:_____:_____:_____:_____Qualified
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How <u>uninformed</u> or <u>informed</u> do you think the writer is?

Un-
informed_____:_____:_____:_____:_____:_____:_____Informed
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How <u>aggressive</u> or <u>meak</u> do you think the writer is?

Aggressive_____:_____:_____:_____:_____:_____:_____Meak
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very

How <u>hesitant</u> or <u>emphatic</u> do you think the writer is?

Hesitant_____:_____:_____:_____:_____:_____:_____Emphatic
　　　　Very　　　Quite　　Slightly　Neutral　Slightly　Quite　　Very
　　　　　　　　　　　　　********

Have you made one check mark on <u>every</u> scale?

When you are finished, please raise your hand. We will begin the
second part very shortly.

APPENDIX E

POSTTEST COMPREHENSION EXAMINATION

INSTRUCTIONS

On the following pages are a number of questions concerned with the content of the editorial you have just finished reading. Please answer each of these questions only on the IBM Scoring Sheet provided, using the pencil we have provided for you. Do not skip any questions, please. You will have a maximum of 30 minutes from the time you are instructed to begin to complete this part of the study.

The only information you need put on the Scoring Sheet is your name, student number, and instructor's name.

When you have completed this part of the study, please raise your hand and someone will collect your materials.

We thank you very much for your help and cooperation on this project.

DO NOT TURN THE PAGE UNTIL YOU ARE INSTRUCTED TO DO SO.

INSTRUCTIONS: Answer all of the following questions on the IBM Scoring Sheet provided. Please do not skip any questions.

1. One consequence of a national popular-vote primary would probably be

   1) strengthening of the internal structure of the winning party.
   2) the possibility of the weakening of the two-party system.
   3) an increase in the competition among the various parties.
   4) all of the above are likely consequences.

2. As the term "atrophy" was used in the selection, it probably meant

   1) cohesiveness
   2) demagoguery
   3) degeneration
   4) the selection gives no clues to its meaning.

3. According to the article, state level experiences with primaries suggests that a national primary would quite possibly

   1) increase the participation of individuals in the general election.
   2) place the nominations into the hands of only a small number of individuals who are best qualified to judge the qualifications of the nominee for the Presidency.
   3) produce candidates who are more acceptable and desirable to the general voting electorate than the present convention system does.
   4) produce movement of the interested voters into the primary of the winning party.

4. Which of the following probable consequences of a national popular-vote primary was not suggested in the article?

   1) perhaps as many as a dozen or so candidates could secure enough signatures on petitions to get on the ballot.
   2) party responsibility would be placed squarely in the hands of the party leaders.
   3) there could be an equal division of votes among a number of candidates.
   4) a degeneration of intra-party opposition within the winning party.

5. In the selection, the term "demagogue" probably refers to

   1) individuals who resort to force and coersion upon occasion to achieve various political ambitions.
   2) individuals who restrict their allegiance to a single permanent party organization without regard to candidates or issues.
   3) individuals who use the passions and prejudices of people for their own political advancement.
   4) individuals who employ strong party identification as a means to sway voters to the party regardless of the consequences involved.

6. A convention system for selecting Presidential candidates rules out the possible influence of extremists because

   1) there are few, if any, permanent party leaders established.
   2) the distinctions between the "ins" and the "outs" becomes blurred.
   3) the responsibility for the party is placed in the hands of party leaders.
   4) none of the above are applicable.

7. One might infer from the selection that strong identification with a particular political party by voters

   1) serves as a cognitive anchor for the organization of political preferences.
   2) tends to perpetuate straight ticket voting in direct primaries.
   3) increases the voting strength of the ethnic minorities in a direct primary.
   4) could result in the election of a completely unqualified candidate.

8. According to the selection, various state level primaries have in the past produced all of the following anomalous experiences except

   1) the emergence of a demagogue as spokesman for the majority party.
   2) totally unqualified candidates who have been nominated by the voters.
   3) ethnic minorities have produced defeat for the entire party ticket in the general election.
   4) extremist candidates have defeated responsible candidates for office.

9. According to the article, Huey Long was an example of

   1) a type of candidate strong enough to withstand the rigors of a popular primary.
   2) an explosive man in American politics.
   3) the pre-convention favorite of the Massachusetts Democratic party for state treasurer.
   4) a politician with little allegiance to any permanent party organization.

10. The article points out that one means to guard against such occurrances as ethnic ties determining selection of a political candidate is

    1) education of the electorate concerning the candidates.
    2) strong party identification.
    3) a campaign stressing extensive personal publicity by candidates.
    4) a direct popular-vote primary.

11. According to the article, a party generally remains in power for relatively long periods of time. Eventually interested voters move into the primary of this winning party. This leaves only the die-hards in the party not in power.
    From the above stated relationships, which of the following conclusions appears most warranted?
    1) the losing party would begin to show signs of internal weakness.
    2) a strong nucleus of minority party members could select a strong candidate to run for office.
    3) the losing party would perhaps demonstrate some degree of degeneration.
    4) none of the above conclusions appear warranted.

12. Without exception, a national popular-vote primary process would require all of the following <u>except</u>

  1) a primary.
  2) a national election.
  3) a run-off primary.
  4) nominating petitions.

13. The winning party in a national popular primary would, according to the article.

  1) ultimately show signs of internal weakness.
  2) ensure a stronger political system than would occur under a convention system.
  3) easily acquire, generally, a disproportionately large majority of the popular vote.
  4) all of the above would quite possibly occur.

14. The example from the selection concerning a Mr. Kennedy winning the Democratic primary election in Massachusetts demonstrates one problem of direct primaries of

  1) educating the voters with respect to the qualifications and abilities of the candidates running for office.
  2) how easily the general voting public can be influenced toward a particular party candidate by a clever engineering of a campaign strategy.
  3) questionably qualified persons being nominated by innocent voters in a primary.
  4) the influence of the most powerful political party in a state on the outcome of a primary election.

15. The most deleterious effect on the losing political party under a system of a national popular-vote primary would be to produce

  1) atrophy.
  2) increased internal unity within the party.
  3) stagnation.
  4) an internal weakness within the party structure.

16. In the direct primaries, one of the greatest dangers to the "balanced ticket" is

  1) palpable demagogues and extremists.
  2) wealthy and influential candidates.
  3) a totally unqualified candidate.
  4) ethnic minority groups.

17. According to the selection, qualifications for the Presidency include all of the following except

    1) qualities of mind.
    2) political alliances.
    3) experience.
    4) physical stamina.

18. By the "ins" and "outs" referred to in the selection, the author probably meant

    1) those individuals who are, and are not, members of a particular political party.
    2) the particular parties presently in power and out of power.
    3) the extremist candidates versus the non-extremist candidates.
    4) the party leaders of the majority party versus the party leaders of the minority party.

19. One disadvantage of a national primary system pointed out in the article is

    1) that possible candidacy would be restricted to only the more affluent upper-middle and upper economic classes of individuals.
    2) that regular party organizations and procedures would be bypassed in favor of personal publicity.
    3) that party responsibility would be placed in the hands of a number of party leaders.
    4) none of the above are significant disadvantages.

20. According to the selection, extremist candidates under a national primary system

    1) could possibly produce some degree of cognitive anchorage, and hence party identification, for a significant number of voters.
    2) might actually take the place of the party by giving structure to the political system.
    3) would quite possibly upset the "balanced ticket" of a party, resulting quite likely in defeat of the general party ticket.
    4) all of the above possibilities could be produced by an extremist candidate.

* *

Mark the following items according to the following key:

    KEY: 1. A statement which agrees with the arguments and information presented.
          2. A statement which disagrees with the arguments and information presented.
          3. A statement which has no relevance to, or cannot be logically drawn from, the arguments and information presented.

21. One major advantage of a direct popular primary is that it is very unlikely that an extremist candidate could dupe enough of the voters to defeat the more responsible party candidates.

22. One undesirable consequence of a national primary would be the weakening of <u>both</u> the intra-party as well as inter-party competition within and among the various political parties.

23. In the convention system for nominating candidates, it is often the case that unattainable promises to the voters concerning policies and issues are made by candidates.

24. One possible disadvantage of a national primary is that the winning party would quite probably show signs of internal weakness and deterioration over a period of time.

25. A direct state primary system has the advantage of making it difficult for extremists to assume control of the party and hence give structure to the state's politics.

26. In the case of an intra-party primary election, most voters have little or nothing to guide their choices since they have little party identification.

27. Huey Long is an example of an extremist who, through a state level popular vote primary, gained and controlled a Southern State's politics for many years.

28. National popular-vote primaries would be to the advantage of the more educated electorate since they would know more about the various candidates.

29. The present convention system used by some states for selecting a Presidential candidate is particularly susceptible to the influence of extremists and demagogues.

30. It would be extremely dangerous to put the selection of Presidential candidates into the hands of an electorate who have been shown conclusively to be highly uninformed about party policies, as well as candidates, of various political organizations.

31. An advantage of the present state level primary system is that it allows for qualified persons to be nominated.

32. Mr. Kennedy, mentioned in the article, won the primary nomination for Democratic state senator against the pre-primary convention candidate endorsed by the Democratic party of that state.

33. One advantage of the present convention and state primary system is that both upper-middle and upper class individuals are able to afford the financial expense involved in waging a political campaign.

34. The recent Presidential primaries clearly point out the need in this country for a revision of the present system of selecting Presidential candidates.

35. In various Southern states, victory in a Democratic primary is the same as election, this process producing a stable and orderly party system with relatively permanent leadership.

36. In the event that a clear majority vote is not received by any candidate in a national primary election, individual state run-off primaries would be necessary to limit the number of candidates prior to a national run-off primary election.

37. Extremist candidates, having strong allegiances to their party organizations, may present such a unified party front that nomination via a direct primary on a national basis could be a very likely occurrance.

38. One of the greatest assets to any party in a national popular primary is the participation of various ethnic minority groups who tend to engage in "block" voting.